Henryk Grossman Works, Volume 3

Historical Materialism Book Series

VOLUME 233

The titles published in this series are listed at *brill.com/hm*

Henryk Grossman Works, Volume 3

The Law of Accumulation and Breakdown of the Capitalist System: Being also a Theory of Crises

By

Henryk Grossman

Edited and introduced by

Rick Kuhn

Translated by

Jairus Banaji
Rick Kuhn

BRILL

LEIDEN | BOSTON

Library of Congress Cataloging-in-Publication Data

Names: Grossmann, Henryk, 1881-1950, author. | Kuhn, Rick, 1955- editor. | Banaji, Jairus, 1947- translator.
Title: Henryk Grossman works : the law of accumulation and breakdown, of the capitalist system: being also a theory of crises / by Henryk Grossman ; edited and introduced by Rick Kuhn ; translated by Jairus Banaji, Rick Kuhn.
Other titles: Akkumulations- und Zusammenbruchsgesetz des kapitalistischen Systems. English
Description: Leiden ; Boston : Brill, [2021] | Series: Historical materialism book series, 1570-1522 ; volume 233 | Includes bibliographical references and index.
Identifiers: LCCN 2021031147 (print) | LCCN 2021031148 (ebook) | ISBN 9789004351974 (v. 3 ; hardback) | ISBN 9789004449978 (ebook)
Subjects: LCSH: Capitalism. | Capital. | Business cycles. | Marxian economics.
Classification: LCC HB501 .G713 2021 (print) | LCC HB501 (ebook) | DDC 330.12/2–dc23
LC record available at https://lccn.loc.gov/2021031147
LC ebook record available at https://lccn.loc.gov/2021031148

Typeface for the Latin, Greek, and Cyrillic scripts: “Brill”. See and download: brill.com/brill-typeface.

ISSN 1570-1522
ISBN 978-90-04-35197-4 (hardback)
ISBN 978-90-04-44997-8 (e-book)

This book is printed on acid-free paper and produced in a sustainable manner.

Contents

Acknowledgements

Without invaluable emotional, practical and intellectual support from Mary Gorman, Gerda Kuhn, Alyx Gorman and my closest friends, this volume and my larger Grossman project, of which it is a part, would have been impossible. The political framework and inspiration that sustained my work came from Socialist Alternative, the revolutionary Marxist organisation in Australia. Jairus Banaji and Stavros Mavroudeaus provided insightful comments about my introduction. Stavros also let me test calculations and conclusions on him. Andrew Kliman, despite his conclusion that it is not useful in explaining capitalist crises, generously worked out the formulae which Otto Bauer seems to have used in the table on p. 123. Thomas Weiss assisted in the translation of particularly obscure words. Sam Pietsch identified the mistake in Grossman's equation specifying when capitalists' personal consumption share of surplus value is zero and subsequent equations, on page 185. Dougal McNeill, Paul Flewers and workers in the libraries of the Australian National University and University of Sydney helped me overcome some of the limitations of the internet and my antipodean location. John Ravenhill, when he was Chair of the School of Politics and International Relations at the Australian National University, where I was employed for 26 years, provided funding and other support for the entire Grossman project. I am particularly grateful to my co-translator of *The Law of Accumulation*, Jairus Banaji for his dedication and patience.

Work on this volume, the third of four, was undertaken in the ANU's School of Sociology, where I was an honorary associate professor between 2013 and late 2020, and in the Department of Political Economy at the University of Sydney, when I was a visiting fellow there during the first half of 2018. 2020 saw widespread attacks on the pay, conditions and job security of workers, union resistance, in which I remain very involved, and the erosion of freedom of speech in Australian universities. In this context, continued support for my research, apart from access to the library collection I had helped develop, was denied by the ANU without official explanation.

Editor's Introduction

Rick Kuhn

The Law of Accumulation and Breakdown[1] was Henryk Grossman's greatest hit. The book attracted immensely more attention than the other monographs in the series issued by the Institute for Social Research (IfS).[2] Despite its mainly hostile reception, until the 1940s it was better known than the research work of the IfS's other, still active members. This was due to the volume's content and the timing of its appearance, shortly before the great New York stock market crash of 1929 and the following profound depression, both of which it foreshadowed.

In his book, Grossman recovered Marx's theory of the tendency for capitalism to break down, due to the very mechanism which has led to repeated revolutionary increases in the productivity of human labour in the course of capitalist development, and the way in which it is expressed in recurrent economic crises. In his exposition, Grossman also provided profound insights into the logical structure of Marx's *Capital*. While the book focussed on economic questions, its purpose was also profoundly political: to identify circumstances in which revolutionary working-class struggles were most likely to arise and be successful.

The first section of this Introduction, below, places *The Law of Accumulation* in the context of Grossman's life and work. As the history of Marxist economic theory before Grossman has already been examined multiple times,[3] it will not be repeated here, before the second section, where the book's main arguments are outlined. The third section provides a survey of its initial reception, translations, republications and later discussions of it. Substantive criticisms of the book, and theoretical and empirical responses to them by Grossman and others, are considered in the fourth section. The conventions employed in the following translation of his work are set out in the final section.

1 First published as Grossmann 1929.

2 In German: 'Institut für Sozialforschung'.

3 See, in particular, Howard and King 1989. Also, for example, see Sweezy 1962, pp. 190–209; Shaikh 1978; Clarke 1994, pp. 14–58.

 | DOI:10 1163/9789004449978 002

Context

Grossman was born in Kraków, then partitioned Poland's cultural capital in the Austro-Hungarian province of Galicia, in 1881.[4] Still in high school, he joined the socialist student movement and soon became a member of the Polish Social Democratic Party of Galicia (PPSD).[5] While a student at Kraków's Jagiellonian University, Grossman helped organise Yiddish-speaking, Jewish workers into political and union associations for several years. On May Day 1905, he became the founding secretary and leading theoretician of the Jewish Social Democratic Party of Galicia (JSDP).[6] This Marxist organisation split from the PPSD in order to express the interests of Jewish workers, whom the Polish party had neglected. Shortly after its foundation, the JSDP had around 2,000 members. The new Party participated in the intense class struggles in Austria-Hungary of the period from 1905 until 1907. These resonated with the experience of the revolution in the Russian Empire. Grossman also helped to smuggle literature across the border for Rosa Luxemburg's revolutionary Marxist Party, the Social Democracy of the Kingdom of Poland and Lithuania.

In moving a motion at the JSDP's 1906 Congress, endorsing the General Austrian Social Democratic Party's call for a general strike over the demand for universal male suffrage, Grossman declared

> But the use of power takes different forms. There were times when the proletariat fought with weapons on the barricades. Then weapons gave way to voting slips. Now we are preparing for a mass strike which is again the prelude to active revolutionary struggle. That is the dialectic of history: after a period of active revolution there is a period of legal struggle that again gives way to revolutionary struggle. We can therefore say that legal struggle prepares for illegal struggle. That is, a period of *accumulating* forces prepares the way for the moment when a revolutionary outbreak opens a period when rights are extended.[7]

In 1907, in an account of his Party's history, Grossman made his longstanding adherence to a fundamental Marxist idea explicit: 'So, as far as the Jews are concerned, the words of the *Communist Manifesto* "the emancipation of the working class must be the act of the working class itself …" mean that

4 Unless otherwise indicated, information below about Grossman's life is from Kuhn 2007.
5 In Polish, Polska Partia Socjalno-Demokratyczna.
6 In Yiddish, ייִדישער סאָציאַל-דעמאָקראַטישער פּאַרטיי, Yidishe sotsial-demokatishe partey.
7 Grossman 2020b.

their liberation can only be the product of their own political struggle'.[8] He identified class struggle as the decisive element in the dialectic between the transformation of subjective working-class consciousness and objective circumstances. This publication, *Bundism in Galicia*, also included a theoretical justification for the practical priority he had been giving to revolutionary organisation: 'The class interests of the proletariat find their expression in the consciousness of the party (in a program) or when this party consciousness is the multi-faceted expression of the proletariat's class interests and the most far reaching conception of the implications drawn from the objective trends of previous social development.'[9] This commitment to the ideas of revolutionary, working-class self-emancipation and the importance of effective political organisation remained features of Grossman's outlook for the rest of his life.

As the level of class struggle subsided, Grossman devoted more attention to his university studies and, in late 1908, moved to Vienna to undertake research under Carl Grünberg, the first Marxist professor at a German-speaking university.

In the meantime, he had formed a relationship with Janina Reicher, the daughter of a wealthy Jewish industrialist in the Russian-occupied Kingdom of Poland. She was in Kraków to study painting. According to family tradition, at a public meeting of the JSDP,

> he made a fiery speech, attacking the Central Government. He was arrested and kept for a while in police custody. During this time he received a package of candies from a young woman, who was present at the meeting and apparently fell in love with him.[10]

Henryk and Janke were married, in Vienna, in 1907 and took a two-year honeymoon in Paris, returning with their first son.[11]

The largest fruit of his Vienna-based research was *Austria's Trade Policy for Galicia during the Period of Reform, 1772–1790*, an implicitly Marxist work which was eventually recognised as the thesis component of Grossman's higher doctorate (*Habilitation*), which was a prerequisite for teaching at a university. He intended to publish a sequel, which never appeared,[12] a pattern of unfulfilled

8 Grossman 2020c.
9 Grossman 2020c.
10 Thorn 1962.
11 Thorn 1962.
12 Grossman 1914, p. vii.

good intentions about writing projects, repeated on several later occasions, including at the start of his introduction to the *Law of Accumulation*.

Conscripted into the Austro-Hungarian army during World War I, Grossman saw active service on the eastern front, before being seconded to engage in war-related research, first in Lublin, a Russian-Polish city then occupied by Austro-Hungarian troops, and later in Vienna. His first post-war work, on which he had presumably been engaged for some time, was a paper on 'The Theory of Economic Crises', delivered in 1919 in Kraków. It contained a series of insights which he expanded in *The Law of Accumulation*. The presentation identified the significance of Marx's method of abstraction from less important aspects of the real world in order to understand fundamental relations. This was the basis for criticising explanations of crises in terms of capitalism's inability to realise surplus value already produced. Although her name was not mentioned, this was the theory most famously advocated by Rosa Luxemburg. Grossman's brief paper also stressed the importance of the distinction between use value and value in a critique of the other Marxist account of crises then influential. Otto Bauer and Mikhail Tugan-Baranovsky had formulated a reformist theory of economic crises, which Grossman later labelled 'neo-harmonist', in terms of avoidable disproportionality in the value allocated to different branches of production. Under capitalism the dual nature of commodities as at once material objects with specific applications and values, measured in money, Grossman argued, makes crises inevitable.[13]

Deemed ineligible for citizenship by the racist policies of the post-war, rump Austrian state's first government, led by social democrats, Grossman was unable to take up the offer of a senior post in its Central Statistical Commission. Now a Polish citizen, he moved to Warsaw in 1919. He was appointed to a position in the Polish Central Statistical Office there and charged with the organisation of the new Republic's first census. He also joined the Communist Workers Party of Poland (KPRP), the success of the Russian revolution and the policies of the Soviet state having persuaded him to abandon the Bundist elements of his politics.

Unwilling to fudge the results of the census in favour of ethnic Poles, Grossman left the Statistical Office for a full professorial post in economic policy at the non-governmental Free University of Poland (WWP) in 1922. His most substantial publication while at the WWP was a monograph on Simonde de Sismondi's economic theories. This highlighted the Swiss author's influence on

13 Grossman 2019b.

Marx, including his grounding of crisis theory in the contradiction between use value and value.[14]

Almost from its inception, the KPRP was an illegal organisation. Grossman helped organise some of its above-ground, front activities. In early 1922, he was the secretary and later the chairperson of the People's University, a Communist-dominated institution, which engaged in extensive educational activities. He also taught a course on Marxist economic theory at the WWP. For his political views and activities, Grossman was subjected to police repression, including five arrests between 1922 and 1925, and, although he was never convicted, periods of 'investigative custody', the longest for eight months in Warsaw's infamous Pawiak Prison. During these periods he was suspended from his university post and no longer paid.

Apart from statistical and academic publications, while living in Warsaw, Grossman wrote for the legal Communist press. He translated and introduced Marx's *Critique of the Gotha Program* and letters to Ludwig Kugelmann for a book issued by a publishing house controlled by the Party.[15] Continuing a tradition that the JSDP's newspaper had observed on the anniversaries of the publication of *Capital*, he also wrote a short article about Marxist economics, on the fortieth anniversary, for a Communist journal. The article included criticism of the intellectual capitulation of Rudolf Hilferding, Otto Bauer and Karl Kautsky[16] to the harmonious equilibrium approach of bourgeois economics. It concluded that 'Marxist economics *is the only scientific theory* which predicted the process that is now under way, analysed it and formulated the laws of its historical development, *the historical process of the breakdown and disintegration of the capitalist system*. The opportunist literary attempts to distort Marxist theory, constantly undertaken, must always fail when confronted with the reproach of real developments.'[17]

In the course of his research in Warsaw, Grossman identified the nature of the mechanism through which this historical process takes place. From unpublished manuscripts, it is apparent that, by December 1924, he had extended Otto Bauer's version of Marx's reproduction schemas in the second volume of *Capital*. Intended by Bauer to demonstrate capitalist equilibrium, Grossman discovered that when pursued over more cycles the model broke down. This discovery was closely associated with Grossman's recovery of Marx's theory of economic crisis and breakdown.[18]

14 Grossman 2019d.
15 Marks 1923; Grossman's introduction is Grossman 2020d.
16 Hilferding 1981; Kautsky 1911; Bauer 2012b.
17 Grossman 2019c.
18 Grossman 1924; and Grossman 1924–26.

He only had the opportunity to elaborate on this result after moving to Frankfurt am Main in November 1925, in a form of qualified exile, which allowed him to visit Poland if he did not engage in political activity. He was therefore a close sympathiser but not a member of the Communist Party of Germany (KPD).

Grünberg, now the Director of the Institute for Social Research, which was associated with the university in Frankfurt, had arranged for his former student to become one of his assistants. His political situation along with the comfortable income and time for research afforded by this post insulated Grossman from two pressures. From the discipline of the KPD, as it succumbed to the effects of the Russian revolution's degeneration. And from some of the pressures associated with employment by a publicly financed university. After a bureaucratic battle between the university's Faculty of Economics and Social Sciences and conservative Prussian state police and officials, however, he was granted a higher doctorate in 1927, thanks to the intervention of the state's Minister for Science, Culture and Public Education, a social democrat. He began to teach courses, related to his research, at the university.

In 1926 Fritz Sternberg, at that time a Marxist intellectual in the space between the Social Democratic Party of Germany (SPD) and KPD, published a fat tome, *Imperialism*, which presented his own ideas, including on economic crisis and revolution, as improvements on Marx's theories.[19] The book attracted considerable attention on the German left.[20] In a long review article, Grossman cleared the ground for and offered a preliminary account of his recovery of Marx's crisis theory, by subjecting Sternberg's book to a devastating critique.[21] This included earlier insights into the inadequacy of Luxemburg's underconsumptionist analysis, which Sternberg invoked, and the relationship between Marx's (and hence Grossman's) theory of capitalist breakdown and socialist revolution.

Failing to grasp Marx's method, Luxemburg and Sternberg misunderstood the significance of the reproduction schemas in the second volume of *Capital*. Capitalism's tendency to break down arises not from problems in *realising* surplus value, i.e. insufficient markets, but from the insufficient surplus value

19 Sternberg 1971.

20 For example, see reviews in the bourgeois/academic *Archiv für Sozialwissenschaft und Sozialpolitik*: Oppenheimer 1927; the social democratic *Die Gesellschaft*: Neisser 1931; as well as the Communist journals *Die Internationale*: Ludwig 1927; Fried 1928; and *Unter dem Banner des Marxismus*: Goldstein 1930.

21 Grossman 2019e.

produced. Here Grossman was referring to the depression of the rate of profit (the ratio of the new value squeezed out of workers to capitalists' total outlays) by the rising organic composition of capital (the ratio between the value of outlays on means of production and living labour in the production process, to the extent that it reflects the ratio between the concrete amounts of means of production and labour),[22] which his work in Warsaw had already identified as the core of Marx's explanation of capitalism's breakdown tendency.

The fall in the rate of profit is the result of capitalists trying to undercut their competitors by investing in more and more capital-intensive production techniques to raise the productivity of the workers they employ. Capitalists who innovate first are able sell their products at prices less than those of their competitors, which reflect the average costs of production. The amount of labour embodied in each of the commodities produced by innovators is lower than the industry's average, so they are able to sell them at prices which are below average prices but still above their production costs. The innovators not only make higher than average profits, as a result, but also have scope to expand their output. Once most of the industry has gone over to the new techniques, the innovators, like the other capitalists who have emulated them, are now constrained to sell their commodities at prices reflecting their actual costs of production. In the industry as a whole, the organic composition of capital has risen: the proportion of outlays on constant capital, i.e. machinery, equipment, buildings etc., has increased compared with outlays on variable capital, i.e. labour power, the only source of new value. Assuming that the rate of surplus value is constant, i.e. no more surplus value is squeezed out of each worker every hour they work, this means that the innovators' higher rates of profit not only disappear but the average rate of profit in the industry will now be below its previous level. A modified and extended version of Otto Bauer's model of accumulation, soon set out in *The Law of Accumulation*, implicitly underpinned the analysis in 'A New Theory'.[23]

Grossman made his Leninist conception of working-class politics quite explicit in the article's account of the relationship between economic crisis and socialist revolution. According to Sternberg, a revolution had to be made soon, even under unfavourable circumstances, because a new imperialist war would soon render a successful revolution forever impossible. Intellectuals and the revolutionary party could overcome this difficulty by 'hammering' 'correct consciousness' into working-class brains, irrespective of objective economic cir-

22 Marx 1976b, p. 762.
23 Grossman 2019e, p. 169.

cumstances and the state of the class struggle. 'Because Sternberg wishes to present himself as completing Rosa Luxemburg's thought, the wicked abuse of this great fighter's name has to be asserted here too.'[24] Drawing on her critique of the revisionists' idealism, Grossman demonstrated that Sternberg's position had nothing to do with Marx's materialism. Against Sternberg's voluntarism he quoted 'an expert in revolutionary matters who was also a Marxist', Lenin, on the nature of revolutionary situations, which must include a confluence of objective and subjective changes.[25] Grossman presented this argument again in the final chapter of *The Law of Accumulation*.

This book included more detailed elaborations of Grossman's arguments about economic theory, discussed so far. At its core was the recovery of Marx's analysis of the tendency for the rate of profit to fall and how it is temporarily offset or even reversed by countertendencies. When the countertendencies are no longer sufficient to overcome the fundamental tendency, crises eventually occur. The next section sets out this analysis in a more substantial summary of Grossman's argument.

A companion article to *The Law of Accumulation*, published during the same year, also discussed Marx's method and the significance of his reproduction schemas, in the course of analysing why and when he changed his initial plan for *Capital*.[26]

The treatment of Rosa Luxemburg's identification of 'mistakes' in Marx's reproduction schemes was extended to her understanding of gold production, in an essay by Grossman which appeared in 1932. On the basis of his grasp of Marx's method, he illuminated the transformation problem in an article also published in 1932. Grossman had started to formulate responses to hostile reviews of *The Law of Accumulation* soon after they appeared[27] and this article provided an opportunity to answer one criticism publicly, if briefly.

Grünberg was incapacitated by a stroke in 1928 and was eventually succeeded as the Institute's Director by the philosopher Max Horkheimer. But it was Grossman who took over Grünberg's responsibility for revising old and writing new entries on labour movement organisations, personalities and theories, in the fourth edition of Ludwig Elster's three-volume *Dictionary of Economics*, a standard reference work, published between 1931 and 1933.[28] He wrote the final part, on the 'Progress of Marxism to the Present', of the long entry

24 Grossman 2019e, p. 142.
25 Grossman 2019e, p. 143.
26 Grossman 2019f.
27 Grossman 2019i; Grossman 2019j; Grossman 2019g.
28 Elster 1931–33.

'Socialist Ideas and Theories (1. Socialism and Communism)'. That part was also published as a pamphlet, *Fifty Years of Struggle over Marxism*. In its final section, Grossman outlined his own recovery of Marxist economic theory and included implicit responses to criticisms.[29] He stated his position on the relationship between economic crisis and revolution very clearly in this section and his Leninist conception of the role of a revolutionary party in entries on Bolshevism and Lenin.[30]

The Institute and most of its members went into exile early in 1933, after the Nazis were handed power in Germany. Grossman went to Paris and then London, while most of the other members were in New York by the end of 1934. He joined them there in 1937. The veteran of the JSDP and KPRP tried to persuade Horkheimer of the essential connection between theory and practical political activity, in which the Institute's Director had, in 1918–19, only fleetingly engaged.[31] Urging Horkheimer to expand a journal article about Marxist philosophy into a book, to make it more publicly accessible, Grossman reminded him that 'Precisely from the standpoint of activism, you should have an interest in addressing broader layers of youth. It should never be forgotten that the triumph of Cartesianism, in its time, was not simply promoted in university halls by the force of a pure idea but by the fists and sticks of the Dutch students, who answered the brutal power of the scholastics with the same kind of power, of their fists!'[32]

In Paris, while writing about the origins of the modern, scientific world view,[33] Grossman associated with exiled members and leaders of the Social-

29 Grossman 2019k, pp. 380–6.

30 Grossman 2020e; Grossman 2020f.

31 See Abromeit 2011, pp. 42–6.

32 Grossman 2019l, p. 433. Grossman's blandishment apparently had no impact on Horkheimer's trajectory from the theory of historical materialism to idealism, exemplified by his assertion, in 1950, that: 'In the history of civilization there have been not a few instances when mass delusions were healed not by focused propaganda but, in the final analysis, because scholars, with their unobtrusive yet insistent work habits, studied what lay at the root of the delusion. Their intellectual contribution, operating within the framework of the development of society as a whole, was decisively effective. … The superstitious belief in witchcraft was overcome in the seventeenth and eighteenth centuries after men had come more and more under the influence of the results of modern science. The impact of Cartesian rationalism was decisive. This school of philosophers demonstrated – and the natural scientists following them made practical use of their great insight – that the previously accepted belief in the immediate effect of spiritual factors on the realm of the corporal is an illusion. Once this scientifically untenable dogma was eliminated, the foundations of the belief in magic were destroyed' (Horkheimer 1950, pp. ix–x).

33 Grossmann 2009a; Grossmann 2009b.

ist Workers Party of Germany. He was critical of the disastrous policies of the Communist International and KPD, which undermined effective working-class resistance to the rise of the Nazis. In 1936, however, apparently influenced by Russia's (ambiguous) support for the Republican side in the Spanish Civil War, he became an essentially uncritical supporter of the Soviet Union and the policies of the Communist International, which had swung from branding social democrats as 'social fascists' to the pursuit of alliances with 'progressive' bourgeois parties. But, despite his sympathies for Stalinist politics before 1933 and from 1936, Grossman did not abandon his own contributions to Marxism, which contradicted the Stalinist orthodoxy in economic theory, nor his subjective faith in the working class, even though working-class interests were objectively undermined by Stalinism.

Originally intended to commemorate the seventieth anniversary of the publication of *Capital* in 1937, Grossman's next substantial work was a monograph on Marx's break with classical political economy, whose fundamentally static approach continued to underpin contemporary, bourgeois economics, the 'neoclassical', marginalist theory still taught in universities and schools today. *Marx, Classical Political Economy and the Problem of Dynamics*[34] contained material earlier destined for the sequel to *The Law of Accumulation*. The monograph elaborated on the importance of the distinction between the use value and value of commodities as an unavoidable cause of economic crises. It explained the possibility and inevitability of economic crises even under circumstances of simple reproduction, i.e. when there is no new investment to expand the scale of production. Capitalism was characterised not by a tendency to equilibrium, a concept smuggled into Marxism by proponents of the neo-Ricardian economist Ladislaw von Bortkiewicz's solution to the 'problem' in Marx's theory of transforming values into prices of production (and eventually popularised among English-reading leftists by Paul Sweezy),[35] but to disequilibrium. The impact of the contradictory, dual character of commodities on the organic composition of capital also gives rise to the tendency for the rate of profit to fall. Drawing on Marx's early 'Economic and Philosophic Manuscripts of 1844', he also stressed the importance of 'the subjective factor, humanity itself' in the achievement of socialism.[36]

The monograph appeared in a very limited, duplicated edition in 1941. There was soon a rupture between Grossman and the Institute. It resulted from the

34 Grossman 2019m.

35 Bortkiewicz 1949; Sweezy 1962, pp. 109–30. For the history of this theoretical development, see Kliman 2007, pp. 41–54.

36 Grossman 2019m, pp. 529–30. Marx 1975.

unsuccessful attempt by the economist Fritz Pollock, Horkheimer's childhood chum and the Institute's administrator, to drive Grossman off its books, a cut in his pay and political differences between his historical materialist approach and Stalinist sympathies, on the one hand, and Horkheimer's and his immediate circle's pessimistic liberalism on the other. Horkheimer had a very low opinion of a two-part article by Grossman,[37] which appeared in 1943 and developed material excised from drafts of *Marx, Classical Political Economy and the Problem of Dynamics*. 'The Evolutionist Revolt against Classical Economics' focussed on the development of the concept of modes of production, in France and Britain, culminating in Marx's work. It included a dialectical account of the relationship between Marxist theory and 'the historical role of the proletariat as the carrier of the transformative principle and the creator of the socialist society'.

> On the one hand, [the Marxist theory of the class struggle] is an expression of the existing conflict of interests between classes. At the same time, it transcends the mere statement of an existing factual condition, not as a fatalistic expectation of evolution, but as a guide to the active participation of the working class in the historical process. By this activity the objective tendencies can be realised and the forces of a reactionary but powerful minority that stand in the way of further development and progress overcome. In this latter sense the class struggle has always been a decisive subjective factor in history.[38]

These formulations were obviously intended to encompass Grossman's understanding of his own contributions to Marxist economic theory and to refute accusations of 'fatalism' against him.

In 1948, Grossman's final publication, 'William Playfair, the Earliest Theorist of Capitalist Development', appeared in English. The article was a further investigation of Marx's antecedents in economic theory and drew attention to Playfair's insights into capitalism's developmental tendencies and ultimate transience. It concluded with a reference to the fundamental logic of capitalism, which Grossman's own earlier work had recovered: 'these insights remained mere observations until Marx showed them to be the inevitable result of another long-term fundamental tendency, which he discovered – the tendency of capital, as technology advances, to increase its so-called "organic composition".'[39]

37 See Kuhn 2016.
38 Grossman 2019n, p. 598, also pp. 596–7.
39 Grossman 2019o, pp. 623.

In 1949, Grossman left the United States of America to take up a professorial chair at Leipzig University in Communist East Germany. This was part of a short-lived effort to re-establish the University's prestige by recruiting prominent German academics who had been in exile in the west. Grossman died in Leipzig in 1950.

Grossman's Argument

The following outline focuses on the main steps in Grossman's argument in *The Law of Accumulation* and does not reflect the way he successfully integrated empirical material, including historical and contemporary statistical data, into his largely deductive, theoretical analysis. The summaries of chapters' sections and subsections are preceded by their numbers in Grossman's work.

Introduction

Marx's method, which structured *Capital*, was a process of successive approximation (*Annäherungsverfahren*). Marx made a series of assumptions that bracket out less fundamental aspects of capitalism's economic mechanism, in order to study the system's essential logic. In subsequent steps, these assumptions were lifted and the consequences examined, bringing the analysis progressively closer to the features and movements of capitalism which can be observed empirically. '*All phenomena and problems are thus tackled at least twice*, initially under a set of simplifying assumptions and later in their final form.'[40]

Chapter 1 Previous Discussions

1 In contrast with previous discussions of the downfall of capitalism, Grossman followed Marx in identifying the crux of the matter as the way in which one mode of production succeeds its predecessor, whose relations of production have become fetters on the forces of production. Under capitalism this arises from the contradiction between use value and value: between the creation of the material conditions of human life and society, and the process of creating values for sale. Failure to grasp this has given rise to misunderstandings of Marx's work among Marxists and non-Marxists alike.

Marx's labour theory of value entailed a theory of breakdown but this was rejected by both the 'revisionists', like Eduard Bernstein and Tugan-Baranovsky,

40 See below, p. 50.

and apparently orthodox Marxists, like Kautsky and Hilferding. But 'It was Rosa Luxemburg's great historical contribution that she – in conscious opposition to and protest against the distortions of the neo-harmonists – held fast to the fundamental insight of *Capital* and sought to support it by proving that there is an *absolute economic limit* to the further development of the capitalist mode of production'.[41] Her explanation of that limit, based on the progressive disappearance of non-capitalist markets, was, however, mistaken. Quoting Lenin, Grossman stressed that, for capitalism '*There is no such thing as an absolutely hopeless situation*'. Having recovered Marx's theory, in whose elucidation the reproduction schemas of *Capital*'s second volume played a crucial role, rather than being faulty as Luxemburg argued, Grossman returned to the relationship between capitalism's tendency to break down and working-class struggle in the concluding chapter of *The Law of Accumulation*.

2 The rest of the chapter outlined the deficiencies of, first, non-Marxists' accounts and criticisms of Marx's breakdown theory, then the views of Marxists who either misunderstand it or, in the case of the neo-harmonists, deny there is a tendency for capitalism to break down at all.

3 This denial culminated in Kautsky's compendium of Marxism in 1927.

Chapter 2 The Law of Breakdown

1 The rest of the book explained capitalism's tendency to break down and its implications. The outline of the law of breakdown's main features started with a brief demonstration that Marx did indeed argue that there was a tendency for capitalism to break down.

2 Grossman's own argument was organised according to the same methodology as Marx's *Capital*. Initial simplifying assumptions included that the value of money is constant, prices are the same as values, supply and demand balance and that there was no credit (borrowing or lending). The consequences of lifting them were examined subsequently, bringing the account of capitalism closer to concrete reality.

3, 4 Otto Bauer had elaborated a useful model of capital accumulation in a reproduction schema, which he used to refute Luxemburg's contention that capitalism's survival depended on the realisation of surplus value in non-capitalist domains. Realistically, Bauer assumed with Marx that the rate of accumulation of constant capital was more rapid than that of variable capital, i.e. that the organic composition of capital rises. The organic composition of capital is the ratio of the value of machinery, equipment, buildings and

41 See below, p. 66.

raw materials compared to the wages bill, 'in so far as it is determined by' the ratio of the physical quantity of machinery compared to the number of workers.[42] Where possible, arithmetical errors in Grossman's and Bauer's reproduction schemes have been corrected in this book; both the original and corrected figures for tables where these differed significantly are provided in the Appendix (pp. 518–522). The corrections do not contradict the logic of Grossman's argument or the correctness of his conclusions.

5, 6 Both David Ricardo and John Stuart Mill had identified and been justifiably worried about the implications of the tendency for the rate of profit to fall for capitalism's future, although they failed to provide an adequate explanation. They also identified several countertendencies.

7 By continuing Otto Bauer's model beyond the four years of the initial exposition, it becomes apparent that accumulation cannot be sustained forever and breaks down. Given the model's assumptions, the absolute amount of surplus value set aside for the capitalist class's consumption would eventually have to decline if the assumed rates of accumulation of constant and variable capital were to be sustained. Subsequently, even further inroads into and then the elimination of the capitalists' pleasures and subsistence would not suffice to maintain the assumed rates of accumulation. As the model assumed a constant rate of population growth, further accumulation would then result in rising unemployment. If accumulation nevertheless continued, a point would be reached at which there was no scope for investment in further variable capital and additional outlays on constant capital would not, therefore, yield an increase in the mass of surplus value.

A crisis would already set in, however, once the incentive for capitalists to invest disappeared, i.e. when their consumption fund began to decline. Even before that point capitalists would pursue countermeasures: wage reductions and/or a reduction in the rate of accumulation of constant capital.

8 The operation of countertendencies means that in the real world the breakdown tendency is interrupted and transformed into periods of growth punctuated by crises. Contrary to other theories of economic crises, they will recur even when prices remain constant, there is no credit squeeze, no miscalculation by capitalists and there is proportional growth between the two departments of production which create producer goods (department I) and consumer goods (department II).

9, 10 After refuting Gustav Cassel's and Franz Oppenheimer's critiques of Marx's crisis theory, as well as Otto Bauer's and Tugan-Baranovsky's deviation

---

42 Marx 1981, p. 958.

from it, Grossman again invoked Lenin on the absence of 'hopeless situations' for capitalism, given the effect of countertendencies. He then provided a formula for the time at which Otto Bauer's schema broke down. That point would change if the assumptions of the schema were modified by countertendencies.

11 Marx's theory of crises and breakdown only came to light when the third volume of *Capital* was published in 1894, in the midst of a period of buoyant growth. So it was widely believed that reality contradicted Marx's theory. Both revisionists and apparently orthodox Marxists systematised this conclusion into the affirmation that capitalism could expand without limit. Lack of precision, at a crucial point in the third volume, about the role of the *mass* of profit (rather than its *rate*) in the breakdown of capitalism, Grossman conjectured, contributed to the misunderstanding of Marx's position.

12 While previous non-Marxists and Marxists failed to explain the periodicity of economic crises coherently, a series of factors determine it. The higher the level of the organic composition of capital and the rate of accumulation of constant capital, the more rapidly a crisis will set in. The use value aspect of fixed capital is also significant: if fixed capital becomes more physically durable then the onset of a crisis will be delayed. Conversely, the approach of a crisis is accelerated by technological innovations which lead to the 'moral' depreciation of less efficient, older fixed capital before it is worn out physically. The process slows down if more workers are employed compared to outlays on constant capital, so long as wages are unchanged, still more so if the wage rate falls, i.e. there is a higher rate of surplus value.

13 Developments in production impact on money and labour markets. Some of the surplus value created in production is appropriated by money capitalists to become loan capital, instead of being consumed or invested by the productive capitalists in whose enterprises it was created. Because this slows the rate of accumulation, it leads to higher rates of profit than would otherwise have been the case. The slower rate of accumulation of variable capital also means that a reserve army of unemployed workers forms and expands, putting downward pressure on wages, raising the rate of surplus value and thus the rate of profit. But improved profitability accelerates accumulation to the point at which it cannot be sustained merely from the funds immediately set aside for investment in constant and variable capital. So the amount of loan capital is depleted, pushing up interest rates. Eventually there are insufficient funds to sustain accumulation at the rates assumed in the model; a crisis ensues and interest rates fall. In time, more rapid accumulation also absorbs the reserve army, leading to higher wages and a lower rate of surplus value. The introduction of credit therefore influences the shape of the growth phase of the economic cycle but does not prevent the onset of a crisis. Movements in the rate of profit and interest rates in turn shape cycles of speculation in bonds and shares. This speculative 'investment' does not create new value but merely redistributes it among participants in financial exchanges.

14 Contrary to the assertions of various critics, notably Luxemburg, Marx's reproduction schemas can accommodate sudden bursts of more rapid accumulation. Those schemas were both consistent and suitable means of analysing important aspects of the process of capital accumulation. Furthermore, the same combined outlays on constant and variable capital can result in different quantities of commodities being exchanged between departments I and II, depending on the organic composition of capital.

15 The breakdown tendency expresses the way in which the capitalist relations of production constitute a fetter on the development of the forces of production. The tendency for the rate of profit to fall, as the foundation for Marx's theory of breakdown and crisis, is itself an expression of the contradiction between the relations and forces of production. The output of the *labour process* creating use values knows no limits, as productivity grows. But, under capitalism, this labour process is subordinated to the *valorisation process* (the process of value creation) in the pursuit of profits. New technology is not applied wherever it can save the expenditure of labour but only where such expenditure is outweighed by savings on wages. Moreover, as the amount of accumulated capital increases and hence the rate of profit falls, the incentive to invest in new, more expensive technology declines. Capitalists in Britain, for example, only adopted long-available innovations in steel production when forced to do so by competition from the United States of America (USA) and Germany, which were at lower overall levels of capital accumulation. The unemployment not only of machinery and equipment but also the most fundamental force of production, human labour power, as a consequence of economic crises is another expression of the way capitalism fetters society's productive forces.

16 While Luxemburg argued that capitalism's breakdown occurs because there is more surplus value in the form of commodities available than can be sold, it actually derives from an insufficiency of surplus value. Where bourgeois economists could only sustain their argument that crisis-free growth is possible because the capitalist system tends to equilibrium, the problem of insufficient valorisation arises in Marx's analysis even when his preliminary assumption of equilibrium (which can be lifted subsequently) is in place.

Chapter 3 Countertendencies

This chapter examined capitalism's tendency to break down more concretely, by considering a series of countertendencies; first those that operate domestically and then those that occur on the world market. '*The crisis is thus a tendency towards breakdown which has been interrupted and has not fully unfolded.*'

1 a, b The technological improvements associated with the process of capital accumulation, as demonstrated by examples from the maritime freight industry, cheapen the costs of constant capital and thus improve profit rates. The same is true of consumer goods. As their prices fall, so does the price of labour power, even as workers' consumption of use values remains the same or even improves.

1 c, d Improved transportation technology and shorter storage times facilitate more rapid turnover of capital, i.e. the time between its initial investment and recovery in the form of money, when products are sold. In a given period, more profit can therefore be made on capital outlayed if its turnover time is reduced. More rapid turnover also provides an additional source of money capital which can be invested in the expansion of production.

1 e The cheapening of constant capital means that more workers can set in motion a larger number of use values, in the form of machinery and equipment, and can therefore create more surplus value.

1 f New industries with a lower organic composition of capital can also emerge and improve the average social rate of profit. New industries producing artificial limbs, electrical fitting and mixed pickles, for example, were less capital-intensive than the older iron and steel, and heavy manufacturing industries.

1 g h i Productive capitalists have sought to increase their rates of profit by reducing deductions from their returns by landowners, in the form of rents; by wholesalers and retailers in the form of their mark-ups; and by other industries or sectors that do not create surplus value, including state institutions, funded by taxation. At the same time, however, there is a tendency for the numbers employed in commercial activities to expand. Grossman labelled this layer of employees a 'new middle class'.

1 j Although, over time, competition pressures capitalists to employ technologies with a higher organic composition of capital, accumulation and the expansion of output can also occur on the basis of existing technology. This slows down the rate at which the organic composition of capital rises and the rate of profit falls.

1 k Accumulation on the basis of new technology, however, leads to the devaluation of old, superseded means of production. This represents a loss to owners of the old means of production, but subsequently, to the extent that they are still used to produce the same amount of surplus value, it raises the rate of profit for the capitalist class as a whole, on the basis of their now lower value. If the losses of the owners of devalued productive assets drives them out of business, their productive assets may be purchased at the devalued prices and their new owners will then achieve a better rate of profit.

The destruction of means of production by war creates space in which new accumulations can occur. Surplus value devoted to producing commodities whose value is not recycled into production, as means of production or means of consumption of the working class, slows down the rise in the organic composition of capital and the fall in the rate of profit. Such 'unproductive consumption' includes expenditure on armaments.

1 l To the extent that capitalists are owners of shares, satisfied with a rate of return lower than the rate of profit on productive capital, enterprises will retain more funds than would otherwise be the case, thus extending the time before retained funds are insufficient to sustain the accumulation process.

1 m, n Against Bauer, Grossman argued that accumulation does not adjust to the rate of population growth but has an independent dynamic. Population growth lower than the rate of accumulation, will limit the production of surplus value and accelerate the breakdown tendency. This is the case even when the organic composition of capital is high. When capitalism was just beginning and the rate of accumulation was low, there was generally a reserve army of labour because there was insufficient capital available to invest in enough of the cheap means of production of the period.

Under advanced capitalism, with its high organic composition of capital, a reserve army periodically re-emerges because of overaccumulation: the amount of surplus value available is insufficient, even though its mass has dramatically increased, compared to the outlays on the expensive means of production necessary to sustain accumulation. There was therefore a contrast between the situation in advanced capitalist countries, where there is a reserve army, and those at a lower level of capital accumulation, including Australia, European colonies in Africa, as well as in the rubber industries of Brazil and colonial Asia.

Labour policy in early European colonies in Central and South America, and the Caribbean, Grossman demonstrated, was geared to the needs of production, particularly the need for labour power, not to finding consumers of otherwise unrealisable surplus value, as Luxemburg argued.

2 Lifting the preliminary assumption of a single capitalist economy opens the way to analysis of foreign trade, world monopolies and the export of capital, which affect the breakdown tendency. Marx did not ignore foreign trade, contrary to Luxemburg's contention.

2 a i, ii Foreign trade enables value to be expressed in new use values, only available abroad, and opens up additional scope for capital accumulation associated with them. It also counteracts the tendency for the rate of profit to fall by facilitating economies of scale, which can in turn lead to increased industrial and financial specialisation, through the expansion of markets.

2 a iii Trade between industries with different organic compositions of capital in different capitalist countries involves 'unequal exchange':[43] the transfer of value to the country which exports the products of industries with higher levels of capital accumulation.

This process can be explained with reference to the discussion of the formation of the average rate of profit in the third volume of *Capital* and other observations by Marx, once the assumption that commodities are sold at their values is lifted. Through competition, an average rate of profit is established and experienced by industries with different organic compositions of capital within a single country. This means that commodities produced by labour-intensive industries are sold below, those by capital-intensive industries above their values. The same process operates internationally to the benefit of countries whose export industries have a higher organic composition of capital, and boosts the rate of profit in them. There is therefore intense imperialist competition among advanced capitalist powers, by means of technological innovation (to cheapen their output) and organisational measures, to win markets in less developed countries and thus secure this advantage.

2 a iv For Luxemburg, the industrialisation of less developed countries was bringing the breakdown of capitalism nearer, by closing off non-capitalist outlets for the realisation of surplus value. On the contrary, advanced capitalist countries, so long as they maintain a technological lead, have nothing to fear from less developed countries which are industrialising. In any case, the industrialisation of less developed countries actually expands outlets for commodities from the more developed, whose best markets are other developed countries. This high level of economic integration leads, however, to increased synchronisation of their economic cycles.

2 b Another aspect of competition among imperialist powers is apparent in efforts to achieve monopolistic control over sources of raw materials for themselves or to undermine others' monopolies. Through high, monopoly prices for important raw materials, surplus value can be squeezed out of rivals. This was particularly the case for oil and rubber. Monopolistic access to them also provides increased opportunities for accumulation in industries which process them or use them extensively.

43 See below, p. 374.

2 c i While various non-Marxist and Marxist writers acknowledged that the export of capital from the most developed capitalist countries accelerated from the late nineteenth century, they failed to attempt an explanation or offered inadequate ones. Otto Bauer and others argued that capital export is driven by higher profit rates abroad. But the rate of profit is equalised on an international level so that it is not necessarily higher in countries with lower overall levels of capital accumulation. Furthermore, capitalism develops unevenly so that industrialising countries can take advantage of the latest capital-intensive technologies in some industries, such as the extraction and reticulation of oil.

2 c ii Despite his insights, Lenin did not solve the problem of capital exports theoretically in his *Imperialism: The Highest Stage of Capitalism*. Capital exports become important when there is 'overaccumulation of capital', i.e. when further domestic investment at the assumed rate can only happen by cutting into the surplus value set aside for the capitalists' private consumption. Instead of cutting their own consumption, capitalists will reduce local investment below the assumed rate and export funds instead: there will be both excess capital and unemployment. Additional surplus value is obtained by means of interest on loans abroad and, associated with them, trade deals, which commit borrowers to purchase commodities at above-market prices. Like the export of commodities, the export of capital is a means to obtain rather than realise surplus value. The same mechanism provides an impulse to speculation in shares, financial instruments and real estate.

2 c iii An account of the timing of capital exports from and speculative activity in the Netherlands, Britain, Germany, France and, most recently, the United States of America confirmed the previous theoretical analysis empirically. This led Grossman, in early 1929, to predict the New York Stock Market crash.

2 c iv The incentive to export capital and the intensity of crises increase with the advance of capital accumulation. The advent of additional countries, particularly the USA, with high levels of accumulation which are therefore compelled to export capital was resulting in greater international competition over spheres for investment and hence an increased threat of war.

The preceding historical account enabled identification and explanation of the changing relationship between productive and bank capital, in the course of capital accumulation. At low levels of accumulation, productive capitalists are dependent on banks for the mobilisation of the funds they invest. The domination of industrial by banking capital, a state of affairs which Hilferding, in 1910, called 'finance capital',[44] was true of that phase. But the description was

44 Hilferding 1981.

no longer accurate once capital accumulation reached high levels. In Germany (Hilferding's prime example), before the World War I, industry was already less dependent on funds provided by the banks. A third stage in which industry dominated banks had already become apparent after the War, when the level of accumulated capital was still higher.

Conclusion

1 Marx's theory of breakdown and crisis had implications for the class struggle and socialist strategy. Previous, attempts to elucidate Marx's theory of wages were deficient. There have been distinct stages in the movement of wages, governed by the state of capital accumulation. With higher levels of skill and the increased intensity of labour, as capitalism develops and productivity rises, real wages go up, on average. But this trend can only continue so long as there are no problems with the valorisation of capital. Beyond the point of overaccumulation, i.e. of economic crisis, accumulation at the assumed rate can only continue if wages are cut and fall below the value of labour power. Capitalism then undermines the reproduction of labour power, the fundamental force of production. Impoverishment of the working class is a cyclical phenomenon which prompts working-class resistance. To the extent that capitalists and their state are able to force wages down, the life of capitalism is extended; successful working-class defence of living standards accelerates the breakdown process.

2 Hilferding had argued that planned production could eliminate crises under capitalism and the transition to socialism could be consummated by subordinating a 'general cartel', which embraced the whole of society's production, to democratic, parliamentary control. But greater regulation of the economy by cartels does not resolve the underlying problem, which derives from the accumulation of capital in pursuit of profits, that is a fundamental feature of capitalism. The elimination of competition by monopolies and cartels on domestic markets only stimulates greater competition on international markets and the system's inherent tendency to break down cannot be avoided.

The impossible situation where exchange is abolished while wage labour continues was an important feature of Hilferding's argument. But so long as labour power is a commodity, the production of value governs economic development and the contradiction between use value and value persists. Under a general cartel, there would not only be antagonism over distribution, as Hilferding conceded, but also in production, which he asserted it would overcome. Socialism, however, entails the complete supersession of the commodity form, which conceals the process of exploitation. Marx's discussion of commodity fetishism highlighted the contrast between Hilferding's internally inconsistent, reformist utopia and socialism: 'The *veil* [of value, concealing 'the practical relations of everyday life between man and man, and man and nature'] *is not removed* from the countenance of the social life-process, i.e. the process of material production, until it becomes production by freely associated men, and stands under their conscious and planned control'.[45]

Initial Reception, Translations, Republications and Later Literature

Initial Reception

Within a few years of its publication, well over twenty reviews and review articles, and one whole volume were devoted to *The Law of Accumulation*, mainly written in German but also in Russian, French, English and Italian. Several were by economists whom Grossman had treated less than gently in his book.

Social democrats fundamentally rejected his arguments because Grossman maintained that capitalism was inherently crisis prone, could not be peacefully reformed into socialism and because he took particular aim at Hilferding and Otto Bauer, who were at once senior political leaders and very influential theoreticians in the German and Austrian parties, respectively. Hilferding did not reply, although the journal he edited carried two hostile articles, one of them by the prominent social democratic economist Alfred Braunthal. Nor did Otto Bauer respond publicly. But another social democratic economist, his wife Helene Bauer, did in the Austrian Party's theoretical journal. When a member of the PPSD, in 1905, she had opposed the formation of the JPSD. There were at least half a dozen direct responses to *The Law of Accumulation* in German-language, social democratic journals.[46]

By the time *The Law of Accumulation* was published, the last vestiges of the Russian revolution had been eliminated by Stalin's dictatorship, which controlled the Communist International (CI) and shaped the policies of its constituent parties. Unchallengeable Communist dogmas were being established in areas ranging from politics, through literary criticism, and eventually to the natural sciences. Stalin anointed Jenö Varga, a refugee in Russia from the

---

45 See below, p. 513. Marx 1976b, p. 173. Grossman's emphasis. Editor's interpolation, which includes part of Marx's previous sentence.

46 Braunthal 1929; Helene Bauer 1929; Schmidt 1929; Otto 1929; Gurland 1930; Neisser 1931. Lauterbach 1931, p. 584, was a summary dismissal of Grossman's position in the course of a discussion of imperialism by an Austrian social democrat. Fritz Sternberg was then politically to the left of the SPD but not associated with the KPD; Sternberg 1930 was a book-length critique of Grossman and defence of his own idiosyncratic positions, while Sternberg 1929 (pp. 167–8 and 212–18) had been a whole volume devoted to defending his own analysis against various critical reviews, including Grossman 2019e.

defeated Hungarian revolution, as his economic oracle. And Varga's account of economic crisis was a debased version of Luxemburg's theory, although the relationship with her work was not acknowledged because, in the process of subordinating the KPD to Moscow from 1924, she had been anathematised by KPD leaders and the CI, and was only partially rehabilitated in the late 1920s. Grossman not only criticised doctrines endorsed by Stalin but also demolished Varga's arguments and identified him as one of 'Marx's epigones'. So he had to be wrong and at least another six, German and Russian refutations of *The Law of Accumulation* were therefore published in Communist journals. Varga's own response appeared in both languages.[47]

The most prominent council communist, Anton Pannekoek, using arguments and quotations, lifted unacknowledged from Varga, and the well-known left communist Karl Korsch, eventually decried Grossman's approach as mechanical and a denial of the role of class struggle in the overthrow of capitalism. Without bothering to inquire into his opponent's politics, Pannekoek argued that 'Grossmann's mistake is that of a bourgeois economist who has never had practical experience of the struggle of the proletariat and who is consequently not in a position to understand the essence of Marxism'.[48]

Most but not all anti-Leninist communists were likewise hostile to Grossman's analysis, as were the dissident Austro-French and Polish-French communists and economists Lucien Laurat and Jean Duret.[49] A significant exception was Paul Mattick (senior), a German-US revolutionary, who corresponded with Grossman during the 1930s, and was a life-long proponent of Grossman's explanation of economic crises, which he repeatedly explained, defended and applied.[50] Grossman's book was also reviewed favourably in France by the Algerian-French writer Mohand Tazerout.[51]

Attention to *The Law of Accumulation* was not, however, confined to the left. Its arguments were also reviewed and mainly rejected in at least seven reviews, including one in the *American Economic Review*, expressing various shades of bourgeois political and economic opinion.[52] A review in the respectable

47 Benedikt 1929; Livshits1929; Kraus 1930; Varga 1930a; Varga 1930b; Ragol'sky 1930; Poznyakov 1929. The *Great Soviet Encyclpaedia* entry on Grossman provided a very brief, accurate account of his economic theory of breakdown but labelled it 'mechanical', Shmidt 1930.

48 Pannekoek 1977, p. 79. Korsch 1973a (there is a very weak English translation of this work: Korsch 1977); Korsch 1973b.

49 Laurat 1931, p. 8; Duret 1977, pp. 66–9. Pollock, a colleague at the IfS, was also implicitly critical of Grossman's analysis, Pollock 1932, p. 16.

50 See Grossman's letters to Mattick Sr., Grossman 2019h; and, for example, Mattick Sr. 1931; Mattick Sr. 1934.

51 Tazerout 1932.

52 Bober 1929, in the *American Economic Review*; Caspary 1930; Miksch 1930, in a principal

journal *Economia* by the Hungarian-Italian demographer Stefano Somogyi, however, concluded that Grossman 'has succeeded in presenting a complete and, in many places, very precise picture of our troubled economic life, which will also be of great help to those, who, like us, do not share all his conceptions of class relations'. Through Somogyi's account, rather than reading book itself, the imprisoned Italian Communist leader Antonio Gramsci was attracted to it.[53]

Translations and Republications

The first two translations of Grossman's book resulted, in part, from personal contact with him. Yoshitaro Hirano, a Japanese Marxist academic, became a friend during a visit to Germany in 1928–29. Close to the Communist Party of Japan, he organised the Japanese translation, published in 1932, for which Grossman wrote a preface, and soon translated and prefaced Grossman's *Fifty Years of Struggle over Marxism* himself.[54] Veselin Masleša studied economics in Frankfurt and associated with members of the IfS from 1925 to 1927. In the 1930s, he and another Yugoslav Communist, Mara Fran, began to translate *The Law of Accumulation* into Serbo-Croatian but, during World War II, he died in combat and she had to destroy her work. Fran started the translation all over again in the early 1950s and the result appeared in 1956. The publication of this translation was a small expression in Marxist economic theory of the break, in 1948, between Stalin's Russia and Josip Broz Tito's independent Stalinist regime in Yugoslavia.[55] The publication of further translations, into Italian, Spanish (in Mexico) and, eventually, English (in abridged form in India and then Britain) were stimulated by the advent of the new left, after it was republished in German, in 1967 and 1970. The Indonesian revolution of 1998 was a precondition for the publication of an Indonesian translation (from the abridged English edition) in 2003.[56]

---

newspaper of the liberal German bourgeoisie; Muhs 1931; Oppenheimer 1931; Vogel 1931. Brauer 1929 was a favourable review.

53 Somogyi 1931, p. 332. Gramsci 2008, pp. 133, 184. Gramsci's first reference to Grossman is translated in Gramsci 1995, pp. 430.

54 Grossman 1932; Grossman 1933. Scheele 2017a, pp. 20–1 and Scheele 2017b include useful information about the publication, republication and translation of Grossman's works.

55 Grossmann 1983; Fran 1983.

56 German: Grossmann 1967 and Grossman 1970, with a brief biographical note, Hennings 1970; brief extracts related to imperialism were included in a collection of Marxist texts, (which went through several editions), Grossmann 1964; an extract on unequal exchange was included in a collection of texts on the theory of foreign trade, Grossmann 1976. Italian: only the book's conclusion Grossmann 1975 (originally published 1970), Gross-

Subsequent Literature

Discussions of Grossman's analysis, let alone Marx's account of the tendency for the rate of profit to fall, are too numerous to cover comprehensively here. Instead, some typical and some significant treatments of *The Law of Accumulation* will be mentioned, in a roughly chronological order, modified by grouping together of works by the same author, from the same theoretical current or with the same focus. There may be gaps in the following overview because there are relevant works which have neither been translated into nor referenced in languages with which I am familiar.

The Nazi takeover in Germany in 1933 and then Engelbert Dolfuß's imposition of a one-party dictatorship in Austria the following year severely limited the scope for Marxist discussions in German. Natalie Moszkowska, a Polish-Swiss Marxist living in Zurich, however, devoted 15 pages in her *On Modern Crisis Theories* to disputing Grossman's and Marx's identification of the importance of the tendency for the rate of profit to fall, while vindicating her own underconsumptionist theory.[57]

At the end of the 1930s, published evidence of interest in Grossman's work shifted across the Atlantic to the United States. In his *Elements of Marxian Economic Theory and its Criticism*, Bill Blake, who with his partner the Australian novelist Christina Stead became a close friend in New York, paid tribute to Grossman's defence of the coherence of *Capital*, without addressing the treatment of crisis and breakdown in *The Law of Accumulation*. Paul Sweezy's 1942 *The Theory of Capitalist Development* covered the same ground, much more effectively. Along with an outline of the analysis in *Capital*, it provided a summary of debates, principally in German, about the transformation of values into prices, the process of accumulation, crises and imperialism, and became a highly influential textbook on Marxist economics, especially in the USA. Sweezy recommended Grossman's account of Marx's method and praised other insights in *The Law of Accumulation*. He denied that Grossman attributed crises to the tendency for the rate of profit to fall, allocating him to 'the same school of thought with Tugan-Baranovsky' (because of his recourse to Marx's and Bauer's reproduction schemas). Grossman was guilty of 'mechanistic thinking'. But Marx was also wrong in arguing that there was a tendency for

mann 1977, with a preface mainly describing the book's contents, Buttiglione 1977, and Grossmann 2010. Spanish: only the book's conclusion Grossmann 1978 (a translation of Grossmann 1975), Grossmann 1979b, reissued 1984, 2004 and 2010. English: Grossman 1979a (mimeographed edition) and Grossmann 1992, Grossmann 1994 (the first section of Grossman's concluding chapter, all of which was omitted from Grossmann 1992).

57 Moszkowska 1935, pp. 45–59.

the rate of profit to fall. Sweezy attributed crises to underconsumption.[58] In his 1948 critique of *The Law of Accumulation*, Shigeru Aihara set a similar tone in Japan, where little attention was subsequently paid to explanations of crises in terms of the tendency for the rate of profit to fall. Aihara dismissed Grossman's account of Marx's method and condemned his theory of crises as mechanical and based on arbitrary assumptions.[59]

During the 1940s there was a substantial work which elaborated on and applied Grossman's approach in *The Law of Accumulation*: Bernice Shoul's Radcliffe College (now part of Harvard University) PhD thesis, *The Marxian Theory of Capitalist Breakdown* of 1947. It is likely that there was personal contact between them when they both lived in New York during the 1940s. While her thesis was not published, she wrote a couple of articles, a decade and more later, which also drew on Grossman's approach.[60]

Nor, having been denounced by Varga and other Russian economists on its appearance, was *The Law of Accumulation* taken particularly seriously, republished or translated in Russia and the Eastern Bloc. It was generally passed over in silence.[61] But, in the context of his recruitment by Leipzig University in 1949 when the thorough Stalinisation of East Germany and purging of those suspected of not slavishly following the party line had already begun, further criticisms were deemed necessary in the Communist Germany Democratic Republic (DDR). Fritz Behrens, who had been primarily responsible for Grossman's appointment, was already accused of being a Trotskyist in 1949. To avoid serious repercussions, Behrens repented his alleged sins and committed himself to learning Russian. His 1952 book *On the Method of Political Economy* included an extensive critique of Grossman's explanation of the change in the plan for the structure of *Capital*, as a prelude to the rejection of his 'undialectical', 'mechanistic, anti-Marxist' and 'purely economic' breakdown theory, according to the established Stalinist formula.[62] By contrast, the Marxist economist Walter

58 Blake 1939, pp. 513, 579, 673; Sweezy 1962, pp. 18, 103, 209–13, 268, 303. Sweezy 1987 repeated his argument that there is no tendency for the rate of profit to fall. Winslow 1948, pp. 182–3, made the same points as Sweezy about Grossman's refutation of Hilferding's account of finance capital and affinity with Tugan-Baranovsky. Also see Sweezy 1981, pp. 46–54. Unsurprisingly, Keynesian economists endorsed Sweezy's critique of Grossman, when they much later paid attention to Bauer's schema, Orzech and Groll 1983, p. 533. In the United States, Harris 1945, p. 336 also very briefly acknowledged Grossman's identification of Marx's method in *Capital*.

59 Aihara 1949; Itoh 1980, pp. 37 and, repeating Aihara's argument, 127–9; likewise Tsuru 1956, pp. 68–9.

60 Shoul 1947; Shoul 1957, p. 628; Shoul 1965, p. 292.

61 Thus Grossman is a symptomatic absence in Day 1981.

62 Behrens 1952, pp. 45–8. Behrens repeated this characterisation in his history of Marx-

Braeuer, an anti-Stalinist who fled the DDR for the Federal Republic of Germany in 1950, was supportive of Grossman's positions in brief accounts of his work.[63] Braeuer had been a student and friend of Grossman. An active Communist, he had settled in the DDR after his release from a Nazi prison.

There were, in Poland, exceptions to the neglect of Grossman's work in the Eastern Bloc. In 1959, Oscar Lange, who had known Grossman when both lived in the United States, defended him against Behrens's criticisms of his insights about Marx's method.[64] Tadeusz Kowalik, a historian of economic thought influenced by Lange, published an article in a Polish bi-weekly magazine about Grossman and his ideas, in 1960. It not only outlined his life in more detail than any publication up until the 1990s, but made some favourable comments on his breakdown theory, by misleadingly suggesting it was similar to Stalin's![65]

There was a controversy over Grossman's analysis during the mid-1950s, pitting the Ukrainian revolutionary Roman Rosdolsky, who was living in the United States, against Martin Trottmann in Switzerland. Trottmann had assembled a series of mainly old but some new criticisms in a monograph on Grossman's breakdown theory.[66] The most innovative of these concerned subsidiary issues: the treatment of credit; the contextual adequacy of his quotations from Marx; and the identification of an essentially typographical error in his mathematical formula for the timing of breakdown. Rosdolsky had recently published an article that refuted criticisms of Marx's theory of the tendency for the rate of profit to fall, which was at the core of Grossman's analysis, by Joan Robinson and Sweezy. In a review of Trottmann's work, Rosdolsky followed up by defending Grossman's and Marx's theory of breakdown against standard objections. He regarded Grossman's approach as fine in its argument that the tendency for the rate of profit to fall led to breakdown but, citing the bourgeois reviewer of *The Law of Accumulation*, Karl Muhs, argued that it was one-sided in its insistence that the realisation of surplus value was not a problem and that capitalism therefore impeded the expansion of the productive forces in only one way.

---

ist political economy, Behrens 1976, pp. 332–6. A later East German history of economic thought textbook labelled Grossman's politics 'reformist' and deferred to Behrens's assessment of his theory, Krause and Rudolph 1980, p. 321.

63 Braeuer 1952; Braeuer 1954; and Braeuer 1966.

64 Lange 1963, pp. 118–19.

65 Kowalik 1960. After the collapse of 'Communism' in Poland, Kowalik went over the same ground but expounded Grossman's theory in a more detail, without the Stalin comparison, although not entirely accurately, Kowalik 1992, pp. 128–30.

66 Trottmann 1956.

A further article by Rosdolsky, in 1959, identified Grossman as an exception to the neglect of use value in Marx's economic analysis in the Marxist literature.[67] Rosdolsky's articles were part of the project which culminated in his magisterial, posthumous *The Making of Marx's 'Capital'*, published in 1968.[68] The book was a systematic discussion of the content of Marx's economic manuscript of 1857–58, *Outlines of the Critique of Political Economy* (widely known in English as the *Grundrisse*, the first word in its German title), its significance and relationship to *Capital*.[69] It drew on Grossman's work, particularly *The Law of Accumulation*, in relation to the role of competition in Marx's analyses; Marx's method; unequal exchange; criticism of the neo-harmonists; Luxemburg's misunderstanding of Marx's reproduction schemas; and his insistence that Marx had a theory of capitalist breakdown, confirmed by extending Bauer's reproduction schema.[70] In this work, Rosdolsky's only criticism of Grossman was over his explanation for the change in Marx's plan for *Capital*.[71]

In his massive history of European socialism, the German-US economist Carl Landauer also provided an accurate account of Grossman's theory of breakdown and very effectively defended it in 1959 against the criticisms of Sweezy and Helene Bauer.[72]

Apart from Kowalik's magazine article, the early 1960s were generally a barren period for discussion of Grossman's contributions. Displaying an impressive capacity for superficiality, in his two-volume 1962 account of Marxist economics the orthodox Belgian Trotskyist Ernest Mandel summarily dismissed the line of argument in *The Law of Accumulation* as 'a perfectly useless and sterile game' of establishing a law of 'inevitable collapse' and Grossman as theorist of disproportionality, like Hilferding and Bauer.[73] A decade later, in his eclectic *Late Capitalism*, which attracted wider attention in the new left, Mandel did address and purportedly refuted the substance of Grossman's argument, in unoriginal terms.[74]

Only from the late 1960s did the emergence of the new left revive interest in Grossman. As we have seen, *The Law of Accumulation* was republished in

67 Rosdolsky 1977b; Rosdolsky 1957; Rosdolsky 1977c, pp. 73, 87–8. The first reference to Grossman in Rosdolsky 1977c was in an opening paragraph which was not in the original publication and referred to Grossman 2018m, rather than *The Law of Accumulation*.

68 Rosdolsky 1977a, p. 355; Muhs 1931, p. 2.

69 Marx 1986b; and Marx 1987a.

70 Rosdolsky 1977, pp. 43, 310–11, 382, 399, 452, 492, 502–3.

71 Rosdolsky 1977, pp. 23–6.

72 Landauer 1959, pp. 1590–5.

73 Mandel 1971, pp. 328, 366.

74 Mandel 1975, pp. 31.

German in 1967. Over the following decades, new translations into a series of languages appeared, most prefaced with substantial introductory essays. The first German republication included an introduction which, however, repeated Moszkowska's and Trottman's criticisms and, not grasping Marx's and Grossman's method, accused it of being insufficiently empirical.[75] Wider audiences for Grossman's own analyses and as they were recounted by Rosdolsky and particularly Mattick Sr. nevertheless emerged. Mattick Sr.'s most influential work, *Marx and Keynes*, was published in 1969 and employed Grossman's explanation of crises.[76]

Further interest in *The Law of Accumulation* was stimulated, in the early 1970s, by the faltering of the long post-war boom and hence the dwindling credibility of then dominant Keynesian economic theories, whose proponents had claimed the boom was a result of Keynesian wisdom. Those circumstances and the existence of a revived revolutionary left made this period particularly fruitful for the discussion and use of Grossman's insights. Valuable contributions were made in German, English, Italian and French.

David Yaffe and Rudi Schmiede, who collaborated, explicitly drew on Grossman, Mattick Sr. and Rosdolsky, in outlining Marx's theory of breakdown and crisis, making some criticisms of it and arguing for its relevance to contemporary capitalism. They nevertheless attributed the long post-war boom to governments' unproductive expenditure, particularly on arms, in essentially underconsumptionist terms.[77] In seeking to develop the critique of Keynesianism in greater detail, Christoph Deutschmann likewise made critical use of Grossman's and Mattick's work and attempted a synthesis of Grossman's breakdown theory and Luxemburg's underconsumptionism, via the effects of the rate of profit on the availability of credit.[78] At that time, Yaffe was a member of the International Socialists in Britain, Schmiede and Deutschmann of its sister organisation, the Sozialistische Arbeitergruppe, in Germany.

---

75 Rosenbaum 1967.

76 Mattick Sr. 1974a, pp. 57–95. Also see, for example, the 1934 discussion by Mattick Sr. of Marx's theory of accumulation and breakdown, which was republished in 1973, and Mattick Sr. 1974b, pp. 43–77.

77 Yaffe 1973; Schmiede 1973; Schmiede and Yaffe 1972. In in the same period: Kostede 1974, with reference to discussions of accumulation by Grossman and others, inconclusively discussed the relationship between capital accumulation and the growth of the new middle classes; Kühne 1979, pp. 287–8 repeated Neisser's social democratic critique of *The Law of Accumulation*; and Steitz 1977, pp. 216–17, argued that through state intervention countertendencies could overwhelm the tendency for the rate of profit to fall.

78 Deutschmann 1973, pp. 143, 168–79; Deutschmann 1974, pp. 175–81.

During the same period, Hans-Jürgen Krahl identified the compatibility between Grossman's and Marx's conceptions of the laws of capitalist development and active revolutionary politics. On a more technical economic question, while drawing on Grossman's analyses in some respects, Christel Neusüss argued that his treatment of the world market was deficient because it supposedly contradicted Marx's assumption that 'national capital is the only real form of capital's existence'.[79]

Giacomo Marramao provided an original and revealing account of the content and context of *The Law of Accumulation*. He also outlined an important periodisation of the changing significance of breakdown theory in the labour movement up to the 1930s. Insightfully, Marramao observed that Grossman's book was the 'equivalent' in Marxist political economy of Lukács's contribution to Marxist philosophy.[80] Challenges to the Marxist underconsumptionism of Paul Baran and Sweezy by Mario Cogoy, originally published in French and German, paralleled the critiques of Keynesian underconsumptionism by Schmiede, Yaffe and Deutschmann. Like them, Cogoy drew on Marx's, Mattick Sr.'s and Grossman's explanations of crises in terms of the tendency for the rate of profit to fall.[81]

Despite the presence of Rosdolsky and Mattick Sr. there, discussions of crisis theory among Marxists in the United States from the 1940s until the 1970s were dominated by underconsumptionist approaches and especially the influential approach of Baran and Sweezy.[82] Subsequently more attention was paid to the work of Rosdolsky and Mattick, and translations of articles by Marramao were published. In 1975 there appeared Russell Jacoby's pioneering outline in English of Grossman's major works and, less accurately, his political orientations during the 1920s and 1930s, which preceded a discussion of how Mattick Sr. assimilated Grossman's economics to his own quite different council communist politics.[83] Anwar Shaikh's very valuable survey of Marxist crisis theories, pub-

79 Krahl 2008 (first published 1971, written 1967–68), pp. 88–9, 213. Neusüss 1972, particularly p. 101. Although she criticised Grossman, in this regard, for discussing the formation of an international average rate of profit, Neusüss herself concluded that there was tendency for a 'world-wide rate of profit to form' in the post-World War II period, p. 204.

80 Marramao 1975, p. 64; Marramao 2008. Also see Marramao 1975–76. Hermanin 1973, also written in Italian (although originally published in German), was essentially a summary of Grossman and Mattick Sr. on crisis and breakdown.

81 Cogoy 1987a; Cogoy 1987b, p. 60 for the reference to Grossman's warning that the organic composition of capital was not simply a matter of value proportions; and Cogoy 1987c, pp. 104–5 for Cogoy's reliance on Grossman and Mattick Sr.

82 Attewell 1984, pp. 172–81. Sweezy 1962; Baran and Sweezy 1976.

83 Jacoby 1975, pp. 29–43. An essay, originally published in Italian, Bonacchi 1976, pp. 57–

lished in 1978 by the Union for Radical Political Economics in a widely distributed reader, gave leftist economists and others access to a far more favourable presentation of Grossman's theory of crises than Sweezy's still influential critique.[84]

The preface to the Spanish translation of *The Law of Accumulation* placed the work in the context of the preceding debate over breakdown theory, outlined Grossman's contribution and extended his critique of earlier Marxists' misunderstanding of Marx's method to Sweezy.[85] In Mexico, writers in Spanish only seem to have begun to pay attention to the book after it was published in their language, reversing the order of initial discussion in Italian followed by a full translation. The influential Ecuadorian-Mexican Marxist theorist Bolívar Echeverría, in his introduction to a seminar course at the Universidad Nacional Autónoma de México, published in 1984, drew attention to Grossman's contributions, particularly his theory of imperialism, in general terms.[86] More specifically, Enrique Dussel, an Argentine-Mexican philosopher, highlighted Grossman's identification and application of Marx's analysis of unequal exchange between industries with different organic compositions of capital in the formation of the average rate of profit, to exchange between countries with different organic compositions of capital.[87]

A substantial study examining the significance of Marx's reproduction schemas, published in 1980, situated Grossman's approach in the history of Marxist and non-Marxist attempts to deploy them.[88] He was also mentioned in passing or briefly in the course of later historical accounts of other specific aspects of Marxist theory: the debate over the tendency for the rate of profit to fall,[89] the contributions of Austrian Marxists;[90] critical theory;[91] and breakdown theory.[92]

63, provided a further account of Grossman influence on Mattick Sr.'s economic analysis.

84 Shaikh 1978, pp. 232–7.

85 Tula 1979.

86 Echeverría 1984. Gómez 1999 draws on but hardly goes beyond Echeverría's contribution; similarly Gómez 1999. Also see Guerrero 1989; and Caligaris 2018, pp. 194–7.

87 Dussel 2001, pp. 207, 225.

88 Turban 1980, pp. 181–5. For an attempt to refute Grossman's criticisms of Luxemburg's attempt to demonstrate and overcome a gap in Marx's reproduction schemas – their neglect of foreign trade – see Zarembka 2002, pp. 10–18.

89 Parijs 1980, p. 1; Cullenberg 1994, p. 7; Clarke 1994, p. 67; Milios, Dimoulis and Economakis 2002, pp. 148–9; Chesnais 2016, pp. 31–2.

90 Glaser 1981, pp. 236–8.

91 Plumpe 2006, a stunningly inaccurate account.

92 Hansen 1980, pp. 65, 142; Melrose 2018, pp. 73–6.

The mid-1980s saw the start, with Manfred Gangl's work, of more extensive responses to Grossman's crisis theory from the perspective of Horkheimer's late critical theory, which condemned it as a 'positivist' development of Marx's concepts of value and their empirical application. This was the approach of Jürgen Scheele, in his Master's thesis and particularly his published PhD thesis, which also significantly expanded readily available information, in German, about Grossman and his work.[93]

An early task of the 'critique of value' theory sect in Germany, during the second half of the 1980s, was to dismiss Grossman's account of economic crisis and breakdown. This was because the caricature of his theory as one of capitalism's mechanical, automatic collapse was among the current's fundamental tenets, along with an insistence that any effort to use Marx's value categories for quantitative empirical analysis of capitalism was to misunderstand what, they asserted, should have been Marx's unambiguous position.[94]

In the tradition of a different branch of German 'value form' theory descended from Horkheimer's late critical theory, the 'new reading of Marx', the erudite Michael Heinrich also dealt briefly with Grossman's crisis theory, in the course of dismissing most of the foundations of Marx's economic analyses.[95] While critical of Grossman, for 'naturalising' Marx's economics, Christoph Henning defended Marx's theorisation of the tendency for the rate of profit to fall and responded powerfully to its 'value form' critics.[96]

Beyond the 'critique of value' sect and outside the 'value form' tradition, there have been other hostile engagements with Grossman by small groups of

93 Gangl 1987, pp. 98–121. Scheele 1990; Scheele 1999. Scheele also edited and introduced a collection which included previously unpublished manuscripts by Grossman, Grossmann 2017a. The fundamental differences which emerged between between Horkheimer's and Grossman's approaches to Marxism at the end of the 1930s are discussed in Kuhn 2016. For a brief, more trivial critique of Grossman's crisis theory, in a similar vein, see Sablowski 2003, p. 109.

94 Kurz 2014, first published in 1986, offered a crude version of Grossman's and Mattick Sr.'s expanation of crises and breakdown, minus the significance of class struggle; denounced Grossman's theory for being 'restricted to a highly dubious value-immanent mathematical example'; and asserted that capitalism was currently in the process of breaking down. Lohoff 1988 attempted a more in-depth demolition job on Grossman's theory. For a brief introduction to 'critique of value' theory see Trenkle 2014. The current's most famous product is Kurz 1999. Diederichs 2004, pp. 43–7, endorsed Lohoff's critique. Fuchs 2012 was critical of both Kurz and Grossman, whom he inaccurately conflated.

95 Heinrich 2014, originally published in 1991, was his most comprehensive work, see particularly pp. 176, 359–70. Also see Heinrich 2013. For a defence of Marx's law of the tendency for the rate of profit to fall against Heinrich and others see Henning 2005.

96 Henning 2014, pp. 121–80.

theoretically inclined, current or former Marxist activists. For example, former members of defunct Maoist K Gruppen (Communist groups) in Germany, who coalesced around *Aufsätze zur Diskussion* in 1979, objected to Grossman's initial assumptions and, in common with the 'critique of value' position, accused him of ignoring the use value aspect of social processes.[97] *Aufheben* in England, from 1992, resuscitated Pannekoek's criticisms of Grossman.[98]

The chapter on Grossman in Michael Howard and John King's useful *A History of Marxian Economics* provided a substantial summary in English of his analysis and the main criticisms of it, concluding that its 'defects undermine the entire basis of the supposed breakdown theory'.[99] In 1994, Kenneth Lapides endorsed this judgement but argued that, while his answers were wrong, Grossman at least raised the right questions about Marx's theory of wages.[100]

Lapides took issue with Rick Kuhn's 1995 article, which summarised and defended Grossman's analysis.[101] This was the first of Kuhn's many publications about Grossman, including the to-date, definitive biography of him, introductions to translations of his writings, many of which had not previously been accessible in English, and applications of his approach to contemporary developments.[102] Meanwhile, the appearance of the abridged translation *The Law of Accumulation* in 1992, with a supportive introduction by Tony Kennedy, finally made many of Grossman's arguments directly accessible to English reading audiences for the first time.[103] From the end of the 1990s and particularly after the start of the global financial crisis in 2007, there were other expositions and effective, if sometimes qualified, defences of Grossman's views and/or their explicit application, notably by Tony Smith, Paul Mattick Jr., Michael Roberts and Chris Harman.[104]

97 E.g. Maurer 1988.

98 E.g. Anonymous 1993.

99 Howard and King 1989, pp. 331. The chapter is an expanded version of Howard and King 1988. Nachtwey 2005, pp. 99–103 essentially repeated Howard and King 1989. Also see Tarbuck 1994, an outline and more favourable assessment of Grossman's analysis in a substantial review of the abridged English translation of *The Law of Accumulation*; and Milios 1994, which repeated Moszkowska's criticism and the 'mechanistic, deterministic' trope.

100 Lapides 1994, pp. 245–6.

101 Lapides 1997; Kuhn 1995. Also see the reply to Lapides, Kuhn 1997.

102 For example, Kuhn 1995; Kuhn 2004; Kuhn 2004; Kuhn 2007 (Grossman biography); Kuhn 2008; Kuhn 2009; Kuhn 2016; Kuhn 2019.

103 Kennedy 1992. The summary translation published by Pluto in 1992 was first made in Bombay in 1979, Grossman 1979a, as part of discussions among comrades of the Platform Tendency. A hundred cyclostyled copies were produced and the greater part of those despatched to Anwar Shaikh in New York.

104 For example, Smith 1999; Mattick Jr. 2002; Mattick Jr. 2018; Mattick Jr. 2019; Mavroudeas

Before that crisis hit, there was a controversy over an implausible attempt to refute Grossman's schemas by assimilating them into an essentially Keynesian framework. Marxists' responses included discussions of the significance of capitalists' personal consumption.[105]

In the wake of the global financial crisis, Sweezy's acolytes, who have made important contributions in other areas, responded to the recovery of Marx's and Grossman's crisis theory by repeating their mentor's judgements, bolstered by Heinrich's highly questionable argument that Marx was in the process of revising his account of the tendency for the rate of profit to fall when he died and should have abandoned it.[106]

Criticisms and Responses

A plethora of objections has been raised against Grossman's arguments. Here only the most widespread and substantive ones are considered, excluding those that are not only seldom raised but also farfetched or contrived.

---

and Ionnides 2006; Roberts 2009; Harman 2009; Roberts 2016; Reese 2019. Harman 1995, p. 70 also quoted Grossman on the effect of war on the rate of profit. The absence of references to Grossman and Mattick Sr. in Harman's earlier discussions of the tendency for the rate of profit to fall, back to the 1970s, may have been related to their invocation of by Yaffe against the dominant economic analysis of the International Socialists, to which both Harman and Yaffe belonged, in a faction fight in the early 1970s. Kliman 2011, McNally 2012, Roberts 2016 also used the framework of Marx's theory of the tendency for the rate of profit to fall in their discussions of the global financial crisis and its aftermath.

105 The initial attempt was Trigg 2004. Also see Trigg 2006a and Trigg 2006b. Marxist responses were Mavroudeas and Ionnides 2006b, Park 2006 and Bhandari 2008.

106 See, for example, Foster and McChesney 2010, pp. 53–4; Foster 2013, p. 131; Heinrich 2013, p. 28. In stark contrast to the weakness of their comments on the relationship between the tendency for the rate of profit to fall and economic crises, see, for example, Foster 2000, an outstanding contribution to the recovery of Marx's ecological thought, and McChesney 2008, which provided insights into the operations of the capitalist media. Carchedi and Roberts 2013a was a devastating reply to Heinrich. Also see Kuhn 2013, p. 126. On Marx's development of his theory of the falling rate of profit, also see Moseley 2018. On the related issue of the alleged distortion of Marx's arguments in the third volume of *Capital* by Engels, the questions raised by Ollman 1995 have still not been satisfactorally addressed by Engels's critics. Vollgraf and Jungnickel provided a detailed account, with examples, of the approach Engels adopted to the editing of the third volume of *Capital* and refer to Grossman's observations about the adequacy of the unedited original and Engels's editorial work, 2002, pp. 47–8, 64. From a council communist perspective, Giussani 2012 plucked Grossman's principal reproduction schema out of context in order to discredit it mathematically. The non-Marxist Boldizzoni remarked that Grossman made a "crudely mechanistic" attempt to demonstrate that breakdown was inevitably, 2020, p. 82.

A Mechanical Theory of Automatic Breakdown?

Marx has long been portrayed as a crude determinist, on the basis of trivial readings and/or ignorance of his works.[107] Otto Bauer, in a similar vein, accused Luxemburg of making the economic argument that 'Capitalism will … founder on the mechanical impossibility of realising surplus-value', an assessment which Bukharin repeated.[108] And Grossman went along with this: 'Luxemburg's conception is based on the assumption that capitalism will come to a *mechanical end*'.[109] Hardly an accurate or fair charge, given Luxemburg's own political activity, her important published interventions, notably *Social Reform or Revolution* and *The Mass Strike*, and her explicit statements about the relationship among Marxist theory, capitalism's breakdown and class struggles.[110]

The same accusation was made against Grossman himself, in the strongest form: that his theory of capitalism's tendency to break down was not only mechanical but also led to the conclusion that the class struggle was irrelevant. Critics of his book on a left spectrum from council communism, through to Stalinism and social democracy, asserted that he had a mechanical theory of capitalism's breakdown.[111] It is absolutely clear, on the basis of his personal political commitments and engagement from his youth through to his old age, that this was not how he formulated or understood his own arguments. At two points in *The Law of Accumulation*, as we have seen, he was also quite explicit that capitalism will not face a 'hopeless situation' in the absence of successful revolutionary class struggles. The book's conclusion affirmed that 'The final goal for which the working class struggles is not, therefore, some ideal that is brought into the workers' movement "from the outside", in a speculative manner, whose realisation is reserved for the distant future, quite independently of the struggles that occur in the present. It is, on the contrary, as the law of breakdown developed here demonstrates, a result that flows from immediate day to day class struggles and whose realisation is accelerated by these struggles.'[112]

---

107 Barth 1967, particularly p. 61, was an early example. Ferdinand Tönnies, the bourgeois sociologist, already identified how incorrect this charactisation was, Tönnies 1894, pp. 502–12. See Berlin 2013, particularly, pp. 121 and 129; and Popper 1947, particularly, pp. 97 and 127; and Israel 2019, p. 918 for more recent versions of this accusation of determinism.

108 Otto Bauer 2012b, p. 273. Bukharin 1972, p. 149.

109 See below, p. 67.

110 For example, Luxemburg 2008a; Luxemburg 2015b, pp. 362, 375.

111 Just a few examples follow. Council communist: Pannekoek 1977, pp. 77–8. Stalinist: Varga 1930, pp. 62, 95; Behrens 1952, pp. 27, 46. Social democratic: Braunthal 1929, 304, Helene Bauer 1929, p. 280. Also Sweezy 1962, pp. 11–20; Foster and McChesney 2010, pp. 53–4; Milios, Dimoulis and Economakis 2002, p. 149.

112 See below, 499.

Grossman's account, like Marx's, identified how the system's tendency to break down did not result in monotonic decline but in cyclical economic crises. These, he maintained, were the circumstances in which revolutionary working-class action had the greatest likelihood of arising and of success. Hence his statements, not only in letters and manuscripts, and *The Law of Accumulation* itself, but also in publications before and after the appearance of the book. For example, before:

> 'The totality of all these objective changes is called a revolutionary situation.' It is not merely revolutionary consciousness (which, incidentally, cannot be produced outside a revolutionary situation, merely by hammering the final goal into heads) that only figures in addition as a further condition with a subjective character. It is rather something entirely different: '*the ability of the revolutionary class to take revolutionary mass action*', which presupposes an *organisation* of the coherent will of the masses and *extensive experience in the class struggles* of everyday life.[113]

And after: 'The point of breakdown theory is that the revolutionary action of the proletariat only receives its most powerful impetus *from the objective convulsion* of the established system and, at the same time, only this creates the circumstances necessary to successfully wrestle down the ruling class's resistance.'[114]

But were the arguments in his book so sloppily formulated that they invited the conclusion that he advanced a theory of capitalism's automatic breakdown? This can only be asserted if unqualified statements by Grossman, such as 'a relative decline in the mass of profit necessarily results in the capitalist system's breakdown',[115] are plucked from the context of their repeated qualifications, in discussions of countervailing factors to the *tendency* to breakdown. For Grossman, the law of capitalism's breakdown is, undoubtedly, a corollary of Marx's law of the tendency for the rate of profit to fall. 'Even though the breakdown tendency is periodically interrupted and weakened, more and more the mechanism as a whole necessarily approaches its end, with the progress of capital accumulation, because the valorisation of this expanded capital becomes progressively more difficult as the accumulation of capital grows absolutely. If these countertendencies are themselves weakened or brought to a halt the

113 Grossman 2019e, p. 143, quoting Lenin 1964c, pp. 213–14, Grossman's emphasis.
114 Grossman 2019k, p. 385. Also see Grossman 2019n, pp. 596–7.
115 See below, p. 238.

breakdown tendency gains the upper hand and is realised in the *absolute* form of the "last crisis".'[116]

The 'last crisis' is contingent. Increases in the rate of surplus value, as a consequence of ruling class victories in the class struggle, constitute a significant countertendency. Given that capitalism knows no 'hopeless situations', the 'last crisis' is best understood as class struggle which results in a successful working-class revolution. Many commentators, including critics of Grossman's work, have had no difficulty in recognising that he was not arguing that capitalism would collapse without conscious working-class intervention.[117] The evidence that he argued capitalism's downfall would occur independently of working-class struggle is as thin as that supporting the attribution of the same view to Marx and Engels on the basis of rhetorical flourishes, such as the assertion in the *Communist Manifesto* that the bourgeoisie's 'fall and the victory of the proletariat are equally inevitable'.[118] On this issue, Grossman's position was the same as that expressed by Marx, in a text only published after the appearance of *The Law of Accumulation*: 'regularly recurring catastrophes lead to their repetition on a higher scale, and finally to its [capital's] violent overthrow'.[119]

Countertendencies

Before Grossman, Marxists had noted Marx's 'law of the tendential fall in the rate of profit' but failed to attribute significance to it in the explanation of crises and capitalism's tendency to break down. Criticisms of Grossman's discussion of the law opened the way to the same criticisms being directly targeted against Marx *by Marxists*. The objections raised early by the social democratic Marxist Helene Bauer have often been repeated. They focus on two factors which countervail the tendency for the rate of profit to fall: the way improved technology increases the productivity of labour and therefore reduces the value of both means of consumption and means for production.[120] Sweezy explicitly argued against Marx that the balance between rises in the organic composition of cap-

116 See below, pp. 154 and 173.

117 Mattick Sr. 1934, pp. 19–20; Marramao 1975, p. 63; Krahl 2008, pp. 88–9, 213; Shaikh 1978, p. 236; Tula 1979, pp. xxx, xxxvi–xxxvii; Glaser 1981, p. 237; Howard and King 1989, pp. 329, 331–2.

118 Marx and Engels 1976, p. 496.

119 Marx 1987a, p. 134. My emphasis.

120 Helene Bauer 1929, p. 274. The conservative Muhs 1931, pp. 14–15, asserted that increases in relative surplus value 'at least' offset rises in the organic composition of capital. Much earlier, Tugan-Baranowski 1901, pp. 211–15, had attempted to refute the law of the tendency for the rate of profit to fall in terms of a rising rate of surplus value as a consequence of the introduction of new technology.

ital and increases in the rate of surplus value was indeterminate and that the tendency for the rate of profit to fall could only be maintained on the basis of a falling rate of surplus value.[121]

Hans Neisser, a mainstream economist and social democrat, was a pioneer in explicitly extending criticisms of Grossman to Marx, within a social democratic framework. While Bortkiewicz in 1907 had maintained that new technology would *never* reduce the rate of profit, Neisser in 1931 argued that the introduction of new technology does *not necessarily* result in a higher organic composition of capital and hence a lower rate of profit, because it increases the productivity of labour and hence cheapens the value of commodities, including means of production.[122] Bortkiewicz's categorical argument was repeated against Grossman and Marx by the conservative Marxologist Karl Muhs[123] and, more recently via the mathematical demonstration of Nobuo Okishio, by leftists and Marxists.[124]

Marx and Grossman included a higher rate of surplus value and cheapening of constant capital in their discussion of countervailing factors. The scope for increasing absolute surplus value (making workers labour longer for the same pay) is limited by the fact that there are only 24 hours in a day; and for increasing relative surplus value (by increasing the proportion of the day workers labour to create the value appropriated by capitalists, as opposed to the value of their wages, that is the value of what they consume) by the length of the working day. Both must be under 100 per cent. The value composition of capital, understood as the relationship between dead and living labour in the production process, on the other hand, can rise indefinitely, overwhelming increases in the rate of surplus value.[125]

The notion that not only the technical but also the organic composition of capital, simply expressed as the ratio of investment in constant capital to outlays on wages, has not risen in the long run under capitalism is simply fanci-

121 Sweezy 1962, pp. 100–6.

122 Bortkiewicz 1952, pp. 58–74; Neisser 1931, pp. 79–80. The bourgeois economist Miksch 1930, made the same point against Marx and Grossman.

123 'There is no doubt that a higher organic composition only becomes a reality, even it can be achieved technically, if it yields higher profits. *A falling rate of profit and rising organic composition are therefore in fundamental contradiction with each other*'. Muhs 1931, p. 17.

124 Okishio 1961. Accepting the Okishio theorem were, for example, Parijs 1980; and, citing Parijs in support, Harvey 1982, p. 185; Heinrich 2014, pp. 339–40; and, citing Heinrich in support, Milios, Dimoulis and Economakis 2002, pp. 150–7.

125 Argued and mathematically demonstrated in Yaffe 1973, pp. 201–2; and Shaikh 1987. Also see Harman 1999, p. 28; and the classic defence of Marx's account of the tendency for the rate of profit to fall, Rosdolsky 1977a, pp. 376–82.

ful. If improvements in productivity due to superior technology are similar in the departments producing means of production and means of consumption then changes in the organic composition of capital will parallel changes in the technical composition of capital.[126] Moreover Grossman, in an unpublished manuscript, later pointed out that: 'the question of whether devaluation is of the same extent as the growth in the mass of the MP [means of production] and thus the growth in mass is paralysed by the decline in value, or rather whether devaluation is not as great and consequently that despite the devaluation of the MP, *its value in relation to L* [*labour*] *grows*, cannot be abstractly, deductively decided and has to be decided through *empirical observation. Experience*, indeed experience of more than one hundred years, teaches that the value of constant capital, thus also of the total capital, in relation to variable capital *grows more quickly* than variable …'[127]

The refutation of the Bortkiewicz/Okishio contention that technological change cannot reduce the rate of profit is relatively straightforward. Technological innovation can raise the rate of profit for the first capitalists to invest in it, because they can sell their products at prices, determined by the average costs of production in the industry, above their lower costs of production, i.e. above their values. In order to stay in business, competitors have to adopt the new technology too. But once the bulk of the industry is using that technology, the average costs of production and hence prices will be close to that experienced by the innovators. The extra profit will evaporate and, other things being equal, the average rate of profit will fall. This temporal process cannot be captured by mainstream economics with its assumption of instantaneous adjustments.[128]

A different countertendency to those discussed by Grossman's critics was particularly important during the 1950s and 1960s. Massive, competitive arms spending helped sustain the long post World War II boom. Unlike the products of departments producing means of production and means of consumption, the output of the arms industry cannot return to the circuit of capital. The expansion of the arms industry therefore slowed down accumulation and the tendency for the rate of profit to fall, by diverting surplus value which could otherwise have been invested and thus raised the organic composition of capital.[129]

126 Shaikh 1978, p. 251.

127 Grossman 2019g, p. 212.

128 For an extensive and mathematical refutation of the 'Okishio theorem' and outline of its history see Kliman 2007, especially pp. 44–5, 113–38. Carchedi and Roberts 2013b provided a systematic defence of Marx's theory of the tendency for the rate of profit to fall against Okishio's and other criticisms.

129 Harman 2009, pp. 129–32, 166–8. Harman had previously explained the effect of military

A Permanently Falling Rate of Profit

Neisser and Pannekoek argued that accumulation of both constant and variable capital could grow forever in Grossman's schema, but at lower rates. The schema only gave rise to idle machinery, equipment and buildings with insufficient workers to set them in motion because Grossman had made the arbitrary assumption that constant capital would be prioritised over variable capital in the allocation of surplus value for investment.[130] This objection ignored the point of Grossman's argument. Where Otto Bauer's reproduction schema, with its equally arbitrary assumptions, was intended to show that capital accumulation could continue forever, Grossman's schema, based on Bauer's, effectively demonstrated that accumulation cannot be maintained indefinitely at any given rate of additional investment. The allocation of additional investment was not, furthermore, arbitrary in Grossman's schema. Taking use values into account, the production of means of consumption in it became insufficient to sustain accumulation of variable capital first, before production of means of production had a chance to become insufficient to sustain accumulation of constant capital.

A rational *collective* response to a falling average rate of profit would be for the whole of the capitalist class to lower the rate of accumulation in concert. But, as both Grossman himself, earlier, and Harman pointed out, competition among capitals means that the rational response of *individual* capitals may be to maintain or even raise their rates of investment, in order to keep up with or undercut their rivals by reducing the price of their output below the average price for the industry, thus maintaining or improving their share of total surplus value.[131]

The lumpiness of constant capital as use values, Grossman later observed, is also a factor which can disrupt accumulation as the rate of profit falls.[132] Par-

spending on the rate of profit, in part, by invoking Bortkiewicz's neo-Ricardian solution of the 'transformation problem', which meant that a high organic composition of capital in industries producing commodities which are not means of production or of consumption did not undermine the rate of profit in other sectors (for example, Harman 1999, pp. 81, 167). Schmiede and Yaffe 1972, p. 8 criticised this argument. In his 2009 book Harman tacitly abandoned that approach and simply argued that unproductive expenditure on arms slowed the rise in the organic composition of capital, referencing Grossman as well as Marx.

130 Neisser 1931, pp. 83–4; Pannekoek 1977, pp. 69–70. Also see the suggestion that the personal consumption fund for capitalists can be maintained at the expense of unemployment (and hence the rate of accumulation) in Trottmann 1956, pp. 26–8.

131 Grossman 2019b, p. 47; Harman 2009, p. 78.

132 Grossman 2019m, p. 532.

ticularly at very low rates of profit, the amount of surplus value created in a single year may not be sufficient to purchase the minimum unit increments of constant capital, embodied in a large productive complex, like open cut coal mines or chemical plants, which can generate new commodities and maintain the circuit of capital.

Impoverishment

The social democrats Alfred Braunthal and Helene Bauer both joked that Grossman had derived the breakdown of capitalism from the impoverishment of the capitalists rather than of the proletariat.[133] Another of Grossman's unpublished manuscripts included the response that

> Nowhere did I say that capitalism will go under due to the impoverishment of the capitalists. I showed, rather, that an increasingly large part of surplus value (a_c)[134] is, under the assumptions of Bauer's schema, devoted to accumulation. The remainder available for the consumption of the capitalists and workers does not suffice. As a consequence an increasingly sharp struggle between workers and entrepreneurs over the level of wages necessarily flares up. *If* workers continue to receive the same wage, then nothing *remains* for the entrepreneurs. If, however, the latter maintain and, where possible, even increase their living standard then they force down the level of wages, i.e. from this point on the *impoverishment of the workers* necessarily sets in. That, however, drives the workers to revolution and, as a result of this impoverishment of the workers, and [sic] capitalism will go under.[135]

Method

There have been debates over Grossman's account, in *The Law of Accumulation* and his essay on 'Change in the Original Plan for Marx's *Capital*', of Marx's method and the structure of *Capital*. That debate and evidence supporting Grossman's assessment have been discussed at some length elsewhere.[136] Overall, his explanation of the structure of *Capital*, in terms of Marx's method of

133 Braunthal 1929, p. 294; Helene Bauer 1929, p. 275; similarly: Muhs 1931, p. 23.

134 While the proportion of surplus value devoted to the accumulation of constant capital grows most rapidly, the proportion consumed by accumulation of variable capital (a_v) also grows compared to that available for the capitalists' consumption, until it too is eroded in order to maintain the growth of constant capital.

135 Grossman 2019g, pp. 216–17.

136 Kuhn 2013.

successive approximation, along with the logic of the change in Marx's plan for *Capital*, if not its timing, have withstood criticism.[137]

One-Sidedness

According to Arkadij Gurland and Rosdolsky, Grossman's analysis was one-sided, because it ignored capitalism's realisation problems.[138] This is true and it could be added that he also ignored, for example, capitalism's transient problems in maintaining proportional outputs among industries, economic disruption caused by war and difficulties that arise in the credit system (not to mention the economic impact of a deadly global epidemic), all of which can give rise to difficulties in the process of accumulation and trigger crises. But this was deliberate. Grossman's purpose in *The Law of Accumulation* was to carefully identify *fundamental* contradictions of capitalism which emerge from its core in the *process of production* itself.[139] Varga's (erroneous) complaint that the book had not mentioned the Bolshevik revolution or the circumstances in which it occurred, about which Grossman was well aware,[140] was likewise beside the point.

Relevance of the Value-Price Transformation

Neisser argued that Grossman's analysis did not take into account the transformation of commodities' values into prices of production, through the equalisation of profit rates across industries. (According to Marx, market prices fluctuate around prices of production.) Basing his argument on Tugan-Baranovsky's and Bortkiewicz's criticisms of the way Marx handled this transformation, Neisser asserted that the prices-of-production rate of profit could vary from the value rate of profit and that it was therefore 'in no way certain that giving up this assumption [that commodities exchange at their values] must not alone finally lead to the profound modifications of Grossman's theory'.[141] In response, Grossman asserted that his analysis was an aggregate one of general crises embracing all spheres of production, which would not be affected

137 On Marx's method in *Capital*, see Callinicos 2014, particularly p. 130.

138 Gurland 1930, p. 80; Rosdolsky 1957, p. 355. For similar criticisms, which regard additional factors as being of equal importance to Marx's account of the tendency for the rate of profit to fall in the explanation of crises, see Clarke 1994 and Harvey 2016. For a response to the condemnation of 'monocausal explanations' see Carchedi 2010, p. 124.

139 See below p. 119.

140 Varga 1930, p. 62. Bukharin is criticised in *The Law of Accumulation* for neglecting to systematically examine the economic causes of the breakdown which contributed to the Bolshevik Revolution and overgeneralising from the Russian case, see below pp. 84–86.

141 Neisser 1931, p. 74.

by changes in relative prices because total values equal total prices. Elements of his analysis did, however, include the allocation of surplus value between the departments of production. Grossman also noted that the neoharmonists' contention that capital accumulation could continue smoothly, i.e. proportionately, was made on the basis of the reproduction schemes of the second volume of *Capital*. But this conclusion was not justified before the transformation of values into prices of production and even further modifications, which result from the introduction of commercial profit, interest and ground rent, are taken into account.[142]

The 'transformation problem' has subsequently, moreover, been satisfactorily resolved in a way which, contrary to Bortkiewicz, maintains the equivalence of the value and prices-of-production rates of profit.[143]

Inconsistencies

The arguments in *The Law of Accumulation* were not flawless. There were inconsistencies and errors. In places, Grossman sloppily wrote that the mass of surplus value/profit declined in his schema, for example: 'In the final phase of the business cycle, the mass of profit (s), and therefore also its accumulated constant (a_c) and variable (a_v) parts, contract so sharply that it no longer suffices to sustain accumulation on the previous assumptions, that is, in accord with the annual increase in population. In year 35 – to illustrate this phenomenon with our schema – an accumulation 510,953 a_c + 26,267 a_v = 537,220 is required.'[144] Here Grossman conflated an accurate account of what happens during empirical business cycles with an accurate description of his reproduction schema. '[I]n the final stages of the business cycle', but not in Grossman's schema, the mass of profit does contract sharply. The mass of employed variable capital in the 36 years of Grossman's schema never falls and, as the rate of surplus value is constant, the mass of surplus value/profit does not fall either.

The mass of profit does become insufficient to sustain the assumed rate of accumulation in Grossman's schema but it, as opposed to the size of the capitalists' personal consumption fund k, does *not* decline. Likewise, rather than writing 'a decline in the mass of profit', in the following passage, Grossman should have referred to 'too great a *relative* decline in the mass of profit'. '[F]rom the law of accumulation it follows … that with any *given* population [growth rate] capital accumulation encounters an insuperable barrier beyond which any further accumulation is pointless, because it will be accompanied by

142 Grossman 2019j, pp. 311–14.
143 See Kliman 2007; and Moseley 2016.
144 See below, p. 142.

a decline in the mass of profit and therefore also by the emergence of a reserve army.'[145] Elsewhere in his book, Grossman was more careful, stating that 'the breakdown of the system has to follow from a relative fall in the mass of profit, even if it nevertheless can and does increase in absolute terms' and that 'a relative decline in the mass of profit' was the trigger for breakdown.[146]

There was also inconsistency in Grossman's use of the terms 'absolute overaccumulation'[147] 'overaccumulation', and 'overproduction'. They were used to designate both the point in his schema beyond which the capitalists' consumption fund began to decline[148] and the point beyond which, in reality and following Marx, further accumulation produces no additional surplus value.[149] Grossman also conflated the latter with the point in his schema at which the capitalists' consumption fund disappeared and it broke down because its assumed rate of accumulation of constant and variable capital cannot be sustained.[150] This terminological confusion does not invalidate his schema, which demonstrates that capitalism tends to break down given any specific rate of accumulation, his account of capitalism's inevitable experience of economic crises, or his claim to have derived these from Marx's analysis, if more creatively than he implied. In particular, the use of a quotation from Marx to justify Grossman's identification of the pivotal role of capitalists' personal consumption was questionable: 'The fall in the rate of profit would be accompanied this time by an absolute decline in the mass of profit … And the reduced mass of profit would have to be calculated on an enlarged total capital.'[151] Marx's observation was made in the course of a discussion which was not entirely clear and included the possibility of a fall in the rate of surplus value as wages were bid up.

145 See below, p. 173.

146 See below, p. 195, also 238. In 1931, Grossman asserted that 'I do not claim that surplus value becomes smaller. It can become larger. And still it is insufficient …', Grossman 2019h, p. 229. This was true of the claims embodied in his numerical examples but not consistently in his textual argument.

147 As pointed out by Trottmann 1956, pp. 9–10.

148 See below, p. 440–441.

149 See below, pp. 439 and 227–228.

150 See below, p. 140. In the discussion of the formation of a reserve army of labour, below, p. 142, both the points at which the capitalists' consumption fund starts to decline and that at which it disappears seem to be equated with Marx's account of overproduction.

151 See below, pp. 141 and 440.

Credit

Grossman's attempt to encompass credit in a reproduction schema failed. He portrayed the source of credit as a fund made up of deductions from new investment, slowing it over several years, which is subsequently drawn down to sustain investment in later years. This would disrupt the circuit of capital because surplus value, in concrete form, would lie idle for years until it was redeployed back into production.[152] In a different context, after the publication of *The Law of Accumulation*, Grossman himself warned against the introduction of credit into Marx's schemas:

> After all, it is one of the many simplifying assumptions of Marx's reproduction schema that it *abstracts from credit*. The very purpose of the schema is to show the exchange relations between its two departments and to investigate whether *complete sale* is possible. It is not permissible to change the initial assumptions after the fact, once one has encountered difficulties in solving the problem.[153]

Empirical Verification

Since 1957, there have been studies which have attempted to test Marx's law of the tendency for the rate of profit to fall against statistical evidence, especially of trends in the economy of the United States.[154] The translation of the categories of bourgeois economics and statistical collections into aggregates which match Marxist concepts remains a challenge. From the 1980s, statistical studies became more frequent and, in some cases, more sophisticated. Differences in results often arise from different approaches to the translation. That there have not been any attempts to operationalise Grossman's account of the role of capitalists' private consumption statistically is understandable, given that it was an heuristic device to highlight the role of class struggle in patterns of economic growth, the course and the onset of crises.

A 2018 collection, edited by Guglielmo Carchedi and Michael Roberts, in which Grossman's insights were invoked at several points, offered extensive evidence for Marx's account of the tendency for the rate of profit to fall in the long run, due to a rising organic composition of capital, at the level of several national economies and globally. Contributors also related fluctuations in

---

152 See Trottman 1956, pp. 45–7; Howard and King 1989, p. 331.

153 Grossman 2019j, p. 326.

154 See the pioneering work of Gillman 1957 and Mage 1963.

the rate of profit to periods of economic contraction and growth, and provided extensive references to the previous, very substantial empirical literature.[155]

In Summary

Grossman's fundamental arguments about capitalism's tendency to break down, because of the law of the tendency for the rate of profit to fall, and the way this takes the form of recurrent economic crises withstands the criticisms made of it. There are, in *The Law of Accumulation*, some exaggerated statements, some mis-specifications and an inadequate attempt to incorporate credit into Marx's reproduction schemas. But, far more importantly, it grounds Marx's and Engels's proposition that the bourgeoisie 'is unfit to rule because it is incompetent to assure an existence to its slave within his slavery'[156] in a powerful analysis of economic crises arising from the very essence of the capitalist process of production. That analysis also reinforces their conclusion that capitalism can only be superseded through its revolutionary overthrow by the working class.

Conventions

Like many other German writers, Grossman frequently wrote 'England' when he was referring to the United Kingdom, America when referring to the United States of America, and Holland/Dutch when referring to the Netherlands. His terminology has been retained.

In the following 'Zusammenbruch' has mainly been translated as 'breakdown', except in some of Grossman's quotations from texts which are now available in English translations, where 'Zusammenbruch' was rendered as 'collapse'. 'The War' and 'the World War' refer to World War I.

All of Grossman's references have been checked, apart from those to the following periodicals: *Bank-Archiv: Zeitschrift für Bank- und Börsenwesen*, *Deutsche Bergwerkszeitung*, *Frankfurter Zeitung*, *Internationale Rundschau der Arbeit*, *Vierteljahrshefte zur Konjunkturforschung*, *Wirtschaftsdienst*.

Original texts quoted by Grossman have been modified to comply with this book's citation and stylistic conventions. Minor errors in his quotations, spelling of names and citations have been corrected without comment; likewise, the addition of quotation marks around passages he quoted without

155 Carchedi and Roberts 2018. Also see Jones 2014.

156 Marx and Engels, 1976, p. 495.

them. In a few cases where Grossman's use of quotations from Marx seems to differ from their significance in their original contexts, this has been noted. Where possible, errors in Grossman's arithmetical calculations have been corrected. The mathematical equations on page 185 are corrected versions. Straightforward arithmetical and typographical errors in Grossman's tables have been corrected without comment. Grossman's original tables (with straighforward errors noted) as well as the corrected tables, already provided in the main text, are in the Appendix, where there is any doubt about formulae he used.

Where they exist, translations published in English have generally been used for quotations and references. Other things being equal, editions available without charge on websites, such as www.archive.org, have been preferred for references. References in the bibliography include the years of publications' original editions and/or during which they were written in square brackets, where relevant. Words in square brackets in quotations are Grossman's, unless otherwise indicated; elsewhere they are the editor's. Emphasis in quotations is the original author's, unless otherwise indicated. Translations of foreign language words or phrases, which are not quotations, in the body of the book are in footnotes, except for the titles of periodicals. Explanations of abbreviations and basic biographical information about people mentioned in this book are in the index.

Introduction

The present book forms part of a larger work on the tendencies of capitalist development according to Marx's theory. It will appear soon and arose from lectures I gave in 1926–27 at the Institut für Sozialforschung[1] and the University of Frankfurt.

The results of my research are twofold: first the *method* underlying *Capital* is reconstructed and second, on this basis, important areas of *Marx's theoretical system* are presented in a fundamentally new light. One of the new findings is the theory of breakdown, expounded below, which forms the cornerstone of Marx's economic system. For decades this theory was at the centre of fierce theoretical controversies, yet no attempt was ever previously made to reconstruct or define its place in the system as a whole. But it would be a useless task to increase the dogmas surrounding Marxism with a new interpretation and simply reinforce the view of Götz Briefs that Marxism has become purely a matter of interpretation. My view is that the unsatisfactory state of the previous literature on Marx is ultimately rooted in the fact, strange as it may seem, that no one has previously proposed any ideas at all, let alone any clear ideas, about Marx's research method. There has been a general tendency to cling to the *results* of the theory: these have been the focal point of interest, on the part of both critics and defenders. In all this the *method* has been totally ignored. The basic principle of any scientific investigation – that however interesting a conclusion might appear, it is worthless when divorced from an appreciation of the way in which it was established – was forgotten. Only in this way could that conclusion, completely divorced from the cognitive path which led to its formulation, in the course of time become the object of changing interpretations.

The discussion of Marx's research method will have to be left to my major work. The brief methodological remarks that follow appear to me to be indispensable insofar as they bear on the understanding of the arguments of this book.

What has to be investigated is the concrete, empirically given world of appearances. But this is much too complicated to be known in any immediate way. We can approach it only by stages. To this end we make numerous simplifying assumptions that enable us to gain an understanding of the *core structure* of the object under investigation. This is the *first stage of cognition* in Marx's method of successive approximation [*Annäherungsverfahren*]. This methodo-

1 'Institut für Sozialforschung' means 'Institute for Social Research'.

logical principle of Marx is apparent in the *reproduction schemas which form the starting point of his entire analysis and already underpin the arguments of the first volume of Capital.* Among the dozen and a half assumptions most closely connected with the reproduction schemas are the following: that the capitalist mode of production exists in an isolated state, i.e. foreign trade is ignored; that the economy consists of capitalists and workers alone, the analysis abstracts from all so-called 'third persons'; that commodities exchange at their values; that credit is abstracted away; that the value of money is assumed to be constant; etc.

Now it is clear that these fictitious assumptions initially create a distance from empirical reality, even though it is this reality that is to be explained. It follows that insights established in this way can only have a *provisional* character and therefore that this first stage of cognition must be followed by a second, definitive stage. Every simplifying assumption involves a *subsequent correction* that takes account of the elements of actual reality that were disregarded initially. In this way, in a series of stages, the investigation as a whole draws nearer to the complicated appearances of the concrete world and becomes consistent with it.

Yet an almost incredible thing happened: people saw that Marx's method involves working with simplifying assumptions but they failed to notice the purely provisional character of these initial cognitive steps and overlooked the fact that, in the methodological construction of the system, to each of the fictitious simplifying assumptions there corresponds a subsequent modification. Provisional conclusions, intermediate insights, were taken for final results. Otherwise it is impossible to understand [Emil] Lederer's objection to Marx's method. He argues that simplification is part of any theory but he himself does not wish to go as far in this direction as Marx did, because '*excessive simplification* creates problems in the way of our understanding. If, like Marx, we suppose the whole economic universe to be composed only of workers and capitalists, then the sphere of production becomes *too simple*'.[2] [Arthur] Salz also repeats this objection to an excessive simplification of the problem.[3] This absolute misunderstanding of Marx's method explains why [Fritz] Sternberg reproaches Marx for 'having analysed capitalism on an assumption that has never held true, that there is no non-capitalist area. Such an analysis works with unproved *assumptions*'.[4] Finally, [Karl] Muhs goes so far as to write that 'Marx … obvi-

2 Lederer 1925, p. 368.
3 Salz 1925, p. 219.
4 Sternberg 1971, pp. 301, 303. [Grossman's emphasis.]

ously indulged in *orgies of abstraction*' and introduced 'impossible, because irrational, assumptions that were bound to defeat any analysis of the historical process'.[5]

Anyone who has grasped the essence of Marx's method will immediately be struck by the superficial character of these objections and a critique of them seems superfluous. At the same time, it is apparent why the greatest confusion could and *had* to arise in previous discussions of Marx's theory. Marx's method of successive approximation has two stages, sometimes even three. *All phenomena and problems are thus tackled at least twice*, initially under a set of simplifying assumptions and later in their final form. Those for whom this is a mystery will constantly encounter 'contradictions' between the individual parts of the theory. To take just one example, this is the source of the famous 'contradiction' discovered by [Eugen] Böhm-Bawerk between the first and third volumes of *Capital*.[6]

The problem dealt with in what follows was tackled by Marx in *three stages*. To begin, the conditions that define the process of reproduction in its *normal* course, simple reproduction, are investigated. The second stage of the analysis encompasses the effects of the accumulation of capital and its resulting tendency towards *breakdown*. Finally, in the third phase the *factors that modify* this tendency are examined.

In substantive terms, the problem dealt with here is the central problem or rather *the* problem of capitalism. The question examined is whether fully developed capitalism, regarded as an exclusively prevalent and universal economic system relying only on its own resources, is capable of developing the process of reproduction indefinitely and on a continually expanding basis or whether this process of expansion runs into limits of one sort or another which it cannot overcome. In examining this problem, the capitalist mode of production's specific moments[7] cannot be left out of consideration. Since the beginning of human history, technological and economic progress has been reflected in the ability of the individual person with labour power *L* to set into motion an ever greater mass of the means of production *MP*. Technological progress and the development of the productive forces is an immediate expression of the growth of *L* in relation to *MP*. Technological progress will persist in its natural form of *MP* : *L* in the socialist, as in every other economy.

The specific nature of capitalist commodity production is apparent in the fact that it is not simply a *labour process* in which products are created by the

5 Muhs 1927, pp. 10–11. [Grossman's emphasis.]
6 [Böhm-Bawerk 1975.]
7 [The Hegelian term 'moment' means 'aspect', 'phase' or 'element' of a whole.]

elements of production MP and L. Rather, the capitalist form of commodity production is constructed on a *twofold principle* – it is simultaneously a labour process for the creation of products and a *valorisation process*. The elements of production MP and L figure not only in this natural form, but simultaneously also as values c and v. They are used for the production of a sum of [annual] value AV, and indeed only on condition that there is a surplus s over and above the value of the c and v employed, i.e. that $s = AV - (c + v)$. It is characteristic of the capitalist expansion of production or the accumulation of capital that the expansion of MP in relation to *L occurs on the basis of the law of value*, i.e. there is a constant expansion of capital c in relation to total wages v, in the course of which both these components of capital have to be *valorised*. The reproduction process can therefore only be continued and expanded further if the advanced, constantly growing capital $c + v$ can secure a profit, s (surplus value). The problem is whether *such a process* is possible *in the long run*.

The following study is divided into three chapters. The first surveys the existing literature on Marx's theory of breakdown and discusses the views of more recent Marxists about the end of capitalism. The second chapter is an attempt to reconstruct Marx's theory of accumulation and breakdown (which is also a key element of his crisis theory) in its pure form, unconstrained by 'countertendencies'. The third chapter attempts to grasp the tendencies which modify the law of breakdown in its pure form and thus to bring the actual reality of capitalism into accord with the pure law. Here it is not a matter of describing in detail the actual processes that go on in the environment of capitalism. The presentation of extensive and rather exhaustive empirical material is dispensed with. The work is intended to have a theoretical not a descriptive character. To the extent that factual material is presented, the aim is to illustrate the various theoretical propositions and deductions. I have limited myself to showing how various empirically ascertainable tendencies of the world economy, which are regarded as characteristic features of the *latest* stage of capitalist development (and are listed in different writings on imperialism: monopolistic organisations, export of capital, the struggle to divide up the sources of raw materials etc.), are only secondary *surface appearances* that stem from the *essence* of capital accumulation as their primary root. By establishing this connection it is possible to use a *single* principle, Marx's law of value, to provide a clear explanation of all the phenomena of capitalism, without recourse to any special *ad hoc* theories, and to make capitalism's latest, imperialist phase intelligible.[8] That this is the only way in which the tremendous consistency of Marx's economic system can be expressed requires no particular emphasis.

8 ['*Ad hoc*' means 'arbitrarily constructed for a specific purpose'.]

Since I confine myself to describing only the economic presuppositions of the breakdown of the capitalist mode of production in this study, let me start by dispelling any suspicion of 'pure economism'. It is superfluous to waste time discussing the connectedness of economics and politics. Yet while there is an extensive literature in the Marxist camp on the political revolution, the economic side of the problem has been neglected theoretically and the true content of Marx's theory of breakdown has not been recognised. I limit myself to filling this gap in the existing literature.

It is necessary for me to express my thanks here to Professor Carl Grünberg, director of the Institut für Sozialforschung, and to my friends Dr Fritz Pollock and Dr Felix Weil for their invaluable intellectual stimulation; likewise to my students and participants in the working group I led. It was the collaborative framework of the Institut für Sozialforschung that created the intellectual atmosphere in which this work could arise.

Special thanks are due to Miss Selma Hagenauer, who has submitted her PhD dissertation, for reading the proofs and compiling the name index.

CHAPTER 1

The Downfall of Capitalism in Previous Discussions

1 The Points at Issue

The idea that the capitalist mode of production, that is the capital relation, is not some eternal law of nature but a purely *historical*, that is, ephemeral relation was already enunciated before Marx. [Jean Charles Léonard Simonde de] Sismondi was the first, against [David] Ricardo, to stress the historical, transitory nature of the capitalist mode of production (1819). He argued that each earlier mode of production was initially *progressive*, when it replaced its immediate predecessor. This was the case with slavery, feudalism and the guild system. In the course of time, each of these modes of production 'became *intolerable*' and 'social order, threatened so incessantly, cannot be maintained except by violent means'. Given these historical experiences it was not possible to maintain that the wage system signified the *ultimate* stage of human progress, rather it too had a merely historical character and would have to yield to a more advanced system in future.[1]

In relation to capitalism's lifespan, Sismondi based his argument not on an economic analysis of its mode of production but only on historical analogies. Marx is therefore correct in writing that 'at the bottom of his [Sismondi's] argument is indeed the *inkling* that new forms of appropriation of wealth must correspond to productive forces … which have developed within capitalist society; that the bourgeois forms are only transitory … forms.'[2] And a quarter of a century after Sismondi, Richard Jones, who in 1835 succeeded [Thomas Robert] Malthus in his chair at the East India College in Haileybury, would likewise underscore the historical, ephemeral nature of the capitalist mode of production when he described it, in his textbook (1852), simply as 'a transitional phase in the development of social production'. Marx attributes extraordinary significance to this remark by Jones, seeing it as a symptom of 'how the real science of political economy ends by regarding the bourgeois production relations as merely historical ones, leading to higher relations in which the antagonism on which they are based is resolved'. In other words, Jones, like Sismondi, used his analysis of the different economic structures that succeeded one another in the

1 See Grossman 2019c, p. 108. [Grossman's emphasis, citing Sismondi 1991a, p. 629; and Sismondi 1991b, p. 170.]
2 Marx 1989c, p. 248. [Grossman's emphasis, Marx emphasised 'new'.]

 | DOI:10 1163/9789004449978 004

course of history to conclude that the capitalist mode of production too 'is by no means the end result' of economic evolution, even though, 'if one considers the development of the *productive powers* of social labour, [it] constitutes a gigantic advance on all preceding forms'.[3]

The development of the productive powers of social labour is the driving force of historical evolution. 'It is not what is made but *how*, and by what instruments of labour, that distinguishes different economic epochs.'[4] For 'in acquiring new productive forces men change their mode of production; and in changing their mode of production, in changing the way of earning their living, they change all their social relations'.[5]

For the productive forces to develop, the less advanced modes of production were bound to go under and give way to others, once they had proved incapable of developing the productive forces of society any further.

> The original unity between the worker and the conditions of labour has two main forms: the Asiatic communal system (primitive communism) and small scale agriculture based on the family (and linked with domestic industry) in one or the other form. Both are embryonic forms and both are equally *unfitted to develop* labour as social labour and the productive power of social labour. Hence the necessity for the separation, for the rupture, for the antithesis of labour and property (by which property in the conditions of production is to be understood).[6]

These class antagonisms 'were precisely the necessary conditions of existence for the development of productive forces and of the surplus left by labour. Therefore, to obtain this development of productive forces and this surplus left by labour, there had to be classes which profited and classes which decayed'.[7]

Feudal society, for example, was a 'mode of production founded on antagonism'. There too 'wealth was produced within this antagonism' and 'the productive forces were developed at the same time as class antagonisms'. However, while the benefits of this antagonistic development of the productive forces accrued to the ruling class, it was plain that for the other class, 'the bad side, the drawback of society, went on growing until the material conditions for its

3 Marx 1991a, p. 345. [Grossman's emphasis. Editor's interpolation. Marx emphasised 'historical'.]
4 Marx 1976b, p. 286. [Grossman's emphasis.]
5 Marx 1976a, p. 166.
6 Marx 1991a, p. 340. [Grossman's emphasis. Marx emphasised the first use of 'social'.]
7 Marx 1976a, p. 159.

emancipation had attained full maturity'. As 'the main thing', for Marx, 'is not to be deprived of the fruits of civilization, of the *acquired productive forces, the traditional forms in which they were produced must be smashed*'.[8]

Capitalism too is riven by antagonisms that are similar to those of feudal society. 'The most extreme form of this rupture, and the one in which the productive forces of social labour are also most powerfully developed, is capital'.[9]

In the famous chapter of *Capital*'s first volume, on 'The Historical Tendency of Capitalist Accumulation',[10] Marx lays out the *basic idea* behind his materialist conception of history, first in a general way and then specifically with reference to the capitalist mode of production. Every mode of production that replaces a less advanced one, because it promotes the development of the productive forces more, 'at a certain stage of development … brings into the world the material means of its own destruction', because the new productive forces that have emerged 'from that moment … feel themselves to be *fettered* by that society'.[11] It must be and is annihilated. What is true of earlier modes of production holds for the *capitalist* mode as well. Like previous modes, capitalism also rests on the production of surplus labour. 'It is one of the *civilizing aspects of capital* that it extorts this surplus labour in a manner and in conditions that are more advantageous to the development of the productive forces … than was the case under the earlier forms of slavery, serfdom etc.'[12]

At a certain point in historical development, however, this promotion of the social productive forces of labour is obstructed. Under capitalism there comes a point beyond which the development of the productive forces can no longer proceed. At this point, the economic *necessity of capitalism's downfall* becomes economically inevitable, just as the downfall of earlier modes of production did. The bourgeois, capitalist forms of appropriation of wealth – the accumulation of capital – begin from this moment to obstruct the productive forces, instead of developing them. Sismondi already had an 'inkling' of this. Rather than expressing capitalism's inevitable downfall and its causes on the basis of historical analogies, as an 'inkling', in *Capital* Marx set himself the task of providing an exact presentation of it, *through a rigorously scientific analysis of*

8 Marx 1976a, p. 175. [Grossman's emphasis.]
9 Marx 1991a, p. 340.
10 [Marx 1976b, pp. 927–30.]
11 Marx 1976b, p. 928. [Grossman's emphasis.]
12 Marx 1981, p. 958. [Grossman's emphasis.] For the individual capitalist, '[r]elative surplus value … is directly proportional to the productivity of labour', Marx 1976b, p. 436. 'Capital therefore has an immanent drive, and a constant tendency, towards increasing the productivity of labour', Marx 1976b, pp. 436–7.

the capitalist mode of production itself. His scientific advance over the results achieved by Sismondi and Richard Jones lay and could only lie precisely here!

But how is this analysis conducted? How is the development of the productive forces obstructed? Marx states that at a given high stage of development there is a turning point because '[t]he monopoly of capital becomes a *fetter* upon the mode of production which has flourished alongside and under it. The centralisation of the means of production and the socialization of labour reach *a point* at which they become incompatible with their *capitalist integument*. This integument is burst asunder. The knell of capitalist private property sounds.'[13]

What is the conflict between the productive forces and their capitalist integument or shell, which Marx refers to? There is nothing more erroneous than the usual discussion in the Marxist literature that identifies the development of the productive forces with the growth of *c* in relation to *v*. This simply confuses the capitalist integument, in which our powers of production *appear*, with the *essence* of those powers themselves. In and for itself, the development of productive forces has nothing to do with the capitalist valorisation process. Whereas the valorisation process, according to Marx, derives from '*abstract* human labour', 'by "productivity" of course we always mean the productivity of *concrete* useful labour'. All labour, with the 'quality of being concrete useful labour … produces use values'.[14] 'Labour, then, as the creator of use values, as useful labour, is a condition of human existence which is independent of all forms of society; it is an eternal natural necessity which mediates the metabolism between man and nature …'[15] It follows that the antagonism Marx refers to is an antagonism between the productive forces (means of production and labour), as these appear in the technical *labour process*, the eternal process between humanity and nature, in their material shape as the elements *MP* and *L*, completely independent of any specific historical mode of production, and these same forces in their specifically capitalist integument, i.e. insofar as they figure in the *valorisation process* as the values *c* and *v*, because they are private property.[16]

This idea is formulated even more clearly in the third volume of *Capital*. Marx attacks those who view the relations of production corresponding to a

13 Marx 1976b, p. 929. [Grossman's emphasis.]
14 Marx 1976b, p. 137. [Grossman's emphasis.]
15 Marx 1976b, p. 133.
16 Marx 1976b, p. 317: 'The same elements of capital which, from the point of view of the labour process, can be distinguished respectively as the objective and subjective factors, as means of production and labour power, can be distinguished, from the point of view of the *valorisation process*, as constant and variable capital', Marx 1976b, p. 318. [Grossman's emphasis.]

given degree of development of the productive forces not 'historically' but as eternal, boundless categories. This conception is

> based on a confusion and identification of the *social* production process [that is, one characteristic of a specific *social* form of production] with the *simple labour process* … In so far as the labour process is a simple process between man and nature, its simple elements remain common to *all* social forms of its development. But each particular historical form of this process further develops the material foundations and social forms. Once a certain level of maturity is attained, *the particular historical form is shed* and makes way for a higher form. The sign that the moment of such a crisis has arrived is that the contradiction and antithesis between, on the one hand, the relations of distribution, hence also the specific historical form of relations of production corresponding to them, and, on the other hand, the productive forces, productivity, and the development of its agents, gains in breadth and depth. A *conflict* then sets in between the material development of production and its social form.[17]

That is, a conflict between $MP : L$ and $c : v$. The form of the productive forces peculiar to capitalism, their 'capitalist integument' ($c : v$), becomes a *fetter* on the form of the productive forces shared by *all* social modes of production ($MP : L$). The solution of the problem formulated thus is the specific task of this book.

∵

It is quite characteristic of the intellectual crisis, even decay, of contemporary bourgeois economics that for it there is no problem of accumulation at all! Not in the sense that it is not concerned with the question of accumulating or 'saving'. On the contrary, 'saving' becomes one of the Ten Commandments of economic practice and its reflection in bourgeois theory. The literature on 'savings' could fill a whole library.[18] Classical theory at least saw a *problem* here and expanded on the question of whether any given economic organism has a '*saturation point*' for the accumulation and absorption of capitals. But no such questions exist for today's bourgeois theory. It sees no problem here at all. The apologetic optimism of bourgeois economics has extinguished all interest in a deeper understanding and analysis of the existing mechanism of production.

17 Marx 1981, pp. 1023–4. [Grossman's emphasis.]

18 See Pupin 1919; and Boislandy-Dubern 1919; Mombert 1916; Bendixen 1922; Liefmann 1912; Schumpeter 2010; Salz 1924.

As proof of this assertion the principal economic texts of all countries can be cited. For obvious reasons we will confine ourselves to citing one prominent representative each of American and English theory. John Bates Clark devotes a special chapter to our theme, with the title 'On the Law of Capital Accumulation'.[19] Yet there is no trace in Clark of any real law, of the discernment of any law-like pattern in the course of capital accumulation. He devotes his entire attention, rather, to the psychological and individual motivations which drive individuals to be 'abstinent', to 'save', namely to secure a definite, future standard of living for themselves that is as high as possible. According to Clark, the steady progress of capital accumulation is assured thanks to the existence of a subjective tendency to accumulate and to the fact that the number of individuals who provide for the future grows ever larger. 'In so far as the increase of capital is concerned society is secure against the danger of reaching a stationary state.'[20] Alfred Marshall adopts a similar perspective. He asserts that the more man acquires the 'telescopic' qualities of anticipating the future, the more inclined he is to accumulate. 'He is … more inclined to work and save in order to secure a future provision for his family.' That is also why, in England from the seventeenth century down to the present, there has been 'a continuous and nearly steady increase in the amount of accumulated wealth per head of the population.'[21]

---

19 Clark 1907, pp. 339–57.

20 Clark 1907, p. 356.

21 Marshall 1920, p. 680. Arthur Salz, a representative of the 'modern theory' and the translator of Marshall's book into German, repeats the same idea: 'Modern, abstract theory has comparatively little to say about the question of how capital is formed. For it, actually that is *not a problem*'. Salz is more interested in the propensity to save. 'The propensity to save varies at the same level of savings capacity', therefore effective capital formation also varies between two countries with an equal capacity to save. To understand capital accumulation, Salz first undertakes an analysis of the propensity to save among hunters and other primitive communities, finally among the Jesuit-Indians in Paraguay, and reaches the conclusion that if we are going to find a way out of the mess of existing conceptions 'we first have to pose the question correctly'. In other words, 'with reference to our own age' the question of capital formation 'is much less a purely economic one than a general one of sociology'. Capital formation is accomplished 'largely independently of interest rate fluctuations'. The issue 'always is – what are the *motives* that drive different classes to save? *There is no general law-like pattern here*', savings behaviour depends on temperament, on ideas and on ethnic differences. From this it follows that 'economic progress does not cease of itself … that it entails a strengthening, not an abatement of capital forming savings behaviour. The more rationally society … learns to think, the more is its capital formation guaranteed'. 'Modern theory assumes that with the growth of wealth and knowledge … *more opportunities for capital investment will increasingly be available than capital*' (Salz 1925, pp. 237, 239, 240–2). [Grossman's emphasis.] What this 'assump-

Neither Clark nor Marshall went beyond this *purely subjective standpoint*. Can the subjective propensity to save clarify the whole problem of capital accumulation? Over and above that, are there not still *objective conditions* on which the scope, the tempo and finally the upper limit of the accumulation of capital depend? If accumulation simply depends on individuals' subjective characteristic of making provision for the future and the number of such individuals is constantly expanding, how can the fact that the tempo of capital accumulation never proceeds at the same rate but shows periodically alternating phases of acceleration and slowdown be explained? How is it that the tempo of accumulation is often slower in more advanced capitalist countries than in less developed countries, even though the number of individuals with a 'telescopic' characteristic is obviously much larger in the former? It would be pointless to seek an answer to these questions in the authors just cited. Thus [Joseph] Schumpeter is right to observe that 'the theory of economising is one of the weakest points of the economy.' If, as he notes, economising 'depends on the moral characteristics of the population' then, even from the standpoint of 'psychological economics', 'economising money' can be posited 'as a *law of diminishing marginal utility*', since 'every further increase is also estimated lower here than the one that is directly preceding and of the same magnitude, and … *our individuals stop economising at certain points*'.[22]

In other passages Marshall returns to the issue as he tries to show, with the concrete example of hat manufacture, the conditions that determine 'the amount of capital which it absorbs'. But the only result of his analysis is the assertion of the banal fact that the extent of demand for capital depends on the average rate of interest. The demand for capital is governed by laws similar to those that apply to other commodities. The limits on the application of capitals 'are governed by the general conditions of demand in relation to supply'.[23]

Marshall breaks off his analysis precisely where the true problem begins. Before the World War, the United States of America was massively in debt to Europe, despite the high interest rates that had to be paid on the borrowed capital. In 1927, the United States exported capital to the sum of $14.5 billion and this capital export was sustained, although the US interest rate had already fallen to 3.5 per cent. How does that square with Marshall's claim

tion' of a strengthening of savings behaviour is supported by, when everything depends on temperament and changing ideas and there is no pattern behind capital formation, Salz does not tell us. It is therefore perfectly understandable why 'modern theory' 'has so little to say' about the problem of capital formation.

22 Schumpeter 2010, pp. 210, 212. [Grossman's emphasis.]

23 Marshall 1920, pp. 519, 521.

that the application of capital grows in the same degree as the interest rate falls? How does that square with [Gustav] Cassel's analogous view that the 'low rate of interest that prevails during a depression obviously leads to a greatly increased production of fixed capital'?[24] Why, despite the low rate of interest in the US, was production not expanded (on the contrary, the year 1927 already shows a substantial contraction in the scope of production by the country's most important industries); why, then, *was capital exported from and not invested in the US itself, despite the moderation of interest rates*? If the answer is that interest rates were higher abroad, the problem is only displaced. Why did US interest rates fall? Because of an oversupply of capital there? *Under what conditions can such an oversupply of capital come about?*

This brings us back to the problem that contemporary economics does not see and does not want to see. Marx, by contrast, sets out from the question posed by the classical political economists. While they answered the question negatively and assumed unlimited accumulation of capital and expansion of the productive forces under capitalism, Marx on the contrary sees an *insuperable limit* to capitalism's development and thus its unavoidable economic downfall.

How did Marx go about this proof? With this question, we enter the well-known controversy about how Marx grounded the necessity of socialism. 'Marx never grounded his socialist principles', according to Karl Diehl, '*on his theory of value*'.[25]

Marxist socialism is not, it is claimed, grounded in Marx's law of value but rather in his materialist conception of history. 'With the materialist conception of history we come to the true cornerstone of Marx's theory: the ultimate reasons why capitalism must encounter *its end*, according to Marx, are derived *from this* … That economic evolution must inevitably lead to new forms of production, that this trajectory involves class struggle … etc.; these are isolated propositions extracted from the materialist philosophy of history.' 'It is certain that his [Marx's] theory of value acquires its socialist meaning only in the framework of his materialist theory of history: *without* this foundation it can neither be used as an argument for nor against Marxist socialism. In any case, Marx himself never used the theory of value as decisive evidence in favour of his theory of socialism.'[26] To prove 'how small the socialist content of the labour

24 Cassel 1967, p. 639.
25 Diehl 1898, p. 42. [Grossman's emphasis.]
26 Diehl 1898, p. 44. [Grossman's emphasis.]

theory of value is', Diehl cites the circumstance that 'a principal representative of bourgeois political economy … David Ricardo, likewise declared labour the most suitable measure of value'. 'Whether "labour" or "utility" is regarded as the *appropriate measure of value*, how can that be decisive for the socialist or individualist tendencies?'[27] Diehl argues, quite differently from Marx in this respect, that [Pierre-Joseph] Proudhon and [Karl] Rodbertus '*assess*' the distribution of income that flows from the operation of value 'according to their *ideal of fairness* and, as they find it unfair, *want* a much fairer economic order where the worker receives his full value … This was far removed from Marx, who never approached the critique of existing conditions on the basis of any ideal of fairness'.[28]

Diehl cannot conceive of a connection between socialism and the law of value other than the ethical postulation of a fair distribution of income. Since there is, however, no such postulate in Marx, Diehl denies a connection between socialism and the law of value.

This view, subsequently widespread even among socialist writers, is fundamentally false. 'The regulation of the total production by value'[29] is fundamental to capitalism. The law of value governs the entire economic process of the capitalist mechanism and, just as its dynamic and developmental tendencies are only intelligible on the basis of this law, its end – the breakdown – can likewise only be explained in terms of it. That, in fact, is what Marx did. For that reason, Diehl's reference to Ricardo is irrelevant, because Ricardo was already disquieted by the empirical fact of the fall in the rate of profit. 'If Ricardo is disquieted even by the very possibility of this, that precisely shows his deep understanding of the conditions of capitalist production.'[30] But a clear insight into capital accumulation's connections is completely absent in Ricardo. He did not grasp the ultimate consequences of the law of value and could not therefore attain a clear theory of breakdown. In this respect Marx found himself completely at odds with Ricardo.

The idea that 'capitalist production begets, *with the inexorability of a natural process, its own negation*' was already enunciated in the first volume of *Capital*,

27 Diehl 1898, p. 42. [Grossman's emphasis.]
28 Diehl 1898, p. 43.
29 Marx 1981, p. 1020.
30 Marx 1981, p. 368.

in the chapter on 'The Historical Tendency of Capitalist Accumulation'.[31] Yet Marx did not explicitly state *how* this 'negating' tendency works itself out, how it has to lead to the breakdown of capitalism and the immediate causes that bring about the *economic downfall* of the system. Turning to the corresponding chapter in the third part of the third volume of *Capital*, on 'The Law of the Tendential Fall in the Rate of Profit' (and the chapter in question is closely connected with Marx's earlier discussion of the accumulation process), is, at first, very disappointing. The very causes that affect the process of accumulation also produce the fall in the rate of profit. But is this fall a symptom of the breakdown tendency? How does this tendency work itself out? Methodologically speaking, this is where Marx should have demonstrated the breakdown tendency. This failed to happen explicitly. Of course, there are clear steps in that direction. In other words, Marx asks, 'How then, should we present this double edged law of a decline in the profit rate coupled with a simultaneous increase in the absolute *mass* of profit, arising from the same reasons?'[32] 'How are we to explain this, what is it dependent on, *or what conditions are involved in this apparent contradiction*?'[33] It seems that the decisive answer will now come. But it does not. This is how doubt arose over Marx's theory of breakdown and, simultaneously, that there might be the possibility of a contradiction between the presentations in the first and third volumes of *Capital*.

Already in 1872 a St Petersburg reviewer of the first volume of *Capital* wrote: 'The scientific value of such an inquiry lies in the illumination of the special *laws* that regulate the origin, existence, development, and death of a given social organism and its replacement by another, higher one'.[34] And citing these words in his postface to the second edition, with the remark that they are a striking picture 'of my own actual method', Marx writes about the dialectical method: 'it includes in its positive understanding of what exists a simultaneous recognition of its negation, its *inevitable destruction*; because it regards every historically developed form as being in a fluid state, in motion, and therefore grasps its transient aspect as well …'[35] In this sense Eduard Bernstein was correct in writing against Social Democracy's dominant conception of the end of capitalism and entirely in accord with Marx that, 'If the triumph of socialism were truly an immanent economic necessity, it would have to be grounded in some proof of the inevitable economic breakdown of the present order of

31 [Marx 1976b, p. 929. Grossman's emphasis.]
32 Marx 1981, p. 326.
33 Marx 1981, p. 327. [Grossman's emphasis.]
34 Marx 1976b, p. 102. [Grossman's emphasis.]
35 Marx 1976b, p. 103. [Grossman's emphasis.]

society'. However, Bernstein goes on to append his own critical reservations: 'This proof has never been adduced and *never will be*. *Developments have taken a different path, in various respects*, from what should have been the case if breakdown was unavoidable on purely economic grounds. But why does one have to derive socialism from *economic compulsion*?'[36]

In Marx's theory of the 'negation of the negation' Bernstein could see only 'the pitfalls of the Hegelian dialectical method' and regarded it as a 'remnant of Hegelian contradiction dialectics', a 'scheme of development constructed by Hegel', because Marx never explicitly proved the law of breakdown. The theory of breakdown was, according to Bernstein, 'a purely *speculative* anticipation of the maturation of an economic and social development which had hardly shown its first shoots'.[37] This critique was based entirely on the empirical fact that the material position of certain layers of the working class had improved. For Bernstein this was proof that 'development … has taken a different path' to that predicted by Marx! As if Marx had ever denied the possibility that the working class could improve its conditions during specific phases of capitalist development![38]

The same 'facts' that served Bernstein's critique of Marx's theory of breakdown clearly completely threw [Karl] Kautsky from his saddle. For how did he answer Bernstein's critique? If Kautsky had confined himself to showing that, according to Marx, *relative* wages may fall even when *real* wages (measured in terms of products) rise, that even in this favourable case workers' 'social poverty' and their dependence on capital therefore grow, he would have contributed to a deepening of Marx's theory. *But Kautsky, beyond that, rejected the theory of breakdown*;[39] formally, by pointing out that the expression 'breakdown theory' stemmed not from Marx but from Bernstein; substantively, with the assertion that a special 'theory of breakdown was never proposed by Marx and Engels'.[40] Kautsky denied that Marx's theory of breakdown, although it leaves

36 Bernstein 1899, (cf. Kautsky 1899b, p. 46). [Bernstein emphasised 'immanent economic necessity' and 'inevitable economic'; Kautsky only emphasised '*economic compulsion*'.]

37 Bernstein 1993, pp. 29, 31–2. [Bernstein only emphasised 'economic' and 'social'.]

38 Moreover, in his pre-revisionist days Bernstein was perfectly aware of this. In his polemic against Julius Wolf, he defends the view that an *improvement* in the conditions of the working class is compatible with the discussion in *Capital*, consequently such objections against Marx are baseless since 'his theory is *by no means based on the idea of a permanent decline* of wages to some minimal level' (Bernstein 1893, p. 539). [Grossman's emphasis.]

39 It is not true, when Bukharin only claims that 'The theory of catastrophe, of collapse, was also greatly *weakened* by Kautsky in his controversy with the revisionists' (Bukharin 2012, p. 482). [Grossman's emphasis.]

40 Kautsky 1899b, p. 42.

open the possibility of *temporary* phases of improvements, asserts a tendency for an *eventual* worsening in the working class's conditions under capitalism and not just in the sense of a growth of 'social poverty' but in the sense of an *absolute* worsening of its economic conditions, hence growing economic poverty. Kautsky placed the very opposite idea in the foreground. According to him, Marx and Engels distinguished themselves from other socialists precisely by the circumstance that they not only identified tendencies that *worsen* the proletariat's lot but also *positive* tendencies that *raise* the proletariat up, in the course of its development. They identified 'not just an increase in its poverty … but also an increase in its training and organisation, its maturity and power'.[41] 'The proposition that the proletariat gains in maturity and strength is not only an essential component of Marx's breakdown theory, it is even its characteristic component.'[42] Thus Kautsky quietly ignored Bernstein's compelling argument that if the victory of socialism is an immanent economic necessity then society as it exists must unavoidably go under for economic and not political reasons. Only in his most recent book does Kautsky write anything directly about this, something we will come back to later.[43]

Yet the same Kautsky who, when dealing with Marx's theory, placed the tendencies that *raise* the proletariat in the foreground would observe some years later, as his review of [Mikhail Ivanovich] Tugan-Baranovsky's book on 'modern socialism' shows, that from a certain point these tendencies come to a standstill and that a regressive movement seems to predominate. 'The factors that generated rising real wages over the last few decades *have already all decreased*.'[44]

Kautsky analyses all these factors. He shows particularly convincingly how the trade unions have increasingly been pushed onto the defensive, while the strength of the employers, united in associations, has expanded enormously. 'All of which means that the period of *rising real wages ceases* for one section of the working class after another, some even experience *falling wages*. And this holds true not only for periods of temporary depression, but *even for periods of prosperity*.'[45] Falling wages coupled with a simultaneous rise in the cost of living and especially in food prices means that *the living standard of the working class deteriorates*. Kautsky writes this himself a year later, in 1909: 'It is worthy of notice that even during the last years of prosperity, while industry was still in full swing, and was even complaining of a lack of labour power, that the

41 Kautsky 1899b, p. 46.
42 Kautsky 1899b, p. 45.
43 Kautsky 1927; 1988b; Kautsky 1927.
44 Kautsky 1908, pp. 546. [Grossman's emphasis.]
45 Kautsky 1908, p. 549. [Grossman's emphasis.]

workers were no longer able to raise their real wages – that is, their wages as measured not in money, but in the necessaries of life – that they even *declined*. This has been proven by private investigations in various sections of the workers in Germany. In America we have an official recognition of this fact for the whole labouring class.'[46]

Kautsky sees the facts but his discussion does not go beyond the empirical. Having rejected Marx's theory of breakdown, he finds it impossible to integrate these facts into Marx's theoretical system. He confronts them helplessly. So he concludes his remarks about impoverishment with general phrases about 'the movement of wages in the capitalist mode of production' that say nothing. Wages can rise for a certain period only then to fall for even longer periods. Kautsky does not seek to examine the *deeper causes that govern these movements and their fundamental tendency*, that is the actual core of Marx's scientific achievement.

In the 'revisionism debate' there was no real controversy between Bernstein and Kautsky over the theory of capitalism's economic breakdown, because *both* abandoned Marx's theory of breakdown on this important, indeed decisive, point[47] and only fought over less important points, that were, in part, merely terminological. However, because Kautsky did not have the courage to come out openly *against Marx*, because he preferred to interpret his own conception into Marx's text and to appear in the guise of a defender of 'true' Marxist theory against Bernstein's attacks, his abandonment of Marx's theory was not noticed and the true nature of Kautsky's position – his *substantive* agreement with Bernstein, even as he superficially retained traditional Marxist terminology – was obscured.

∴

This remarkable result of the Bernstein-Kautsky controversy about Marx's theory of breakdown was not the only consequence of the fateful omissions in the third volume of *Capital*'s exposition. As will be demonstrated, there has been an absolute chaos of conflicting views to the present, quite irrespective of whether the writers considered here are bourgeois economists or belong to the radical or moderate wing of the workers' movement. Both the 'revisionist' Tugan-Baranovsky and the 'Marxist' [Rudolf] Hilferding deny that there was

46 Kautsky 1909b, p. 92. Kautsky 1909a, p. 76. [Grossman's emphasis. Kautsky emphasised 'official recognition'. The published English translation lacks 'that they even declined'.]

47 As Rosa Luxemburg rightly emphasises, 'capitalist collapse … is the cornerstone of scientific socialism', Luxemburg 2008b, p. 96.

in Marx an idea of capitalist breakdown, the idea of absolute, unsurpassable economic limits to capital accumulation, and replace it with the theory that the unlimited development of capitalism is possible. It was Rosa Luxemburg's great historical contribution that she – in conscious opposition to and protest against the distortions of the neo-harmonists – held fast to the fundamental insight of *Capital* and sought to support it by proving that there is an *absolute economic limit* to the further development of the capitalist mode of production.

Frankly, Luxemburg's attempt to justify this conception has to be decisively judged a failure. According to her account, capitalism simply cannot exist without non-capitalist markets. If this was true, the tendency to breakdown that stems from the impossibility of realising surplus value due to the lack of sales markets would have been a constant feature of the capitalist mode of production from its inception and it would thus be impossible to explain either periodic crises or any of the characteristic features of the *latest* phase of capitalism that we sum up with the term 'imperialism'. Yet Luxemburg herself felt that the breakdown tendency and imperialism only appear at an advanced stage of capitalist development and have to be explained *on that* basis. 'There can be no doubt that the explanation of the economic root of imperialism must *especially be derived from and brought into harmony with the laws of capital accumulation*.'[48] She, however, neither provided any such deduction nor made any attempt in that direction. She derived the necessity of capitalism's downfall not from the immanent laws of capital accumulation, from a particular level of accumulation, but from the transcendental fact of the absence of non-capitalist countries. While for Marx capitalism's essential problem was bound up with the process of production, Luxemburg displaces the decisive problem from the sphere of production to that of circulation. Hence the specific form in which she conducts her theoretical proof of an absolute economic limit to capitalism verges on the idea that the end of capitalism is a distant prospect, because a thorough capitalisation of non-capitalist countries is a task that will take centuries.[49] To write about the economic limits of capitalism here would

48 Luxemburg 2015b, p. 362. [Grossman's emphasis.]

49 Thus Luxemburg herself states that: '*capitalist development still has a good way to go*, as the capitalist mode of production proper still represents only a *very small fraction* of total production on earth. Even in the oldest industrial countries of Europe, there are still alongside large industrial firms very many small and backward artisanal workshops, and above all, much the greater part of agricultural production is not capitalist but still pursued along peasant lines. There are also whole countries in Europe in which large scale industry is hardly developed, local production still bearing a principally peasant and artisanal character. And finally, in the other continents, with the exception of the northern part of America, capitalist production sites are only small and scattered points, while whole

therefore only be a flight into a theoretical hereafter – even if it were conceded that capitalism does move in the way indicated by Luxemburg.

Luxemburg's conception is based on the assumption that capitalism will come to a *mechanical end*. If the entire production of the globe is assumed to be *solely capitalist*, '[t]hen the impossibility of capitalism clearly appears'.[50] In theory, a situation is anticipated, such as some revolutionaries see in every crisis, through which the 'automatic collapse of capitalism' is hoped for. Here [Vladimir Ilyich] Lenin had a deeper understanding when he said 'revolutionaries sometimes try to prove that the crisis is absolutely insoluble … *There is no such thing as an absolutely hopeless situation*'.[51] The specific form of Luxemburg's conception of breakdown has thus also contributed to describing the idea that capitalism has an economic endpoint as incompatible with Marx's idea of class struggle, a regression into a quietist fatalism, in which there is no room for working-class struggle. So Gustav Eckstein wrote, with obvious satisfaction in an otherwise at least partly well-founded critique of Luxemburg's book, that 'Together with the theoretical foundations, fall the practical conclusions, *above all the theory of catastrophes*, which Comrade Luxemburg constructed on the basis of her doctrine concerning the necessity of non-capitalist consumers'.[52]

No other attempts were undertaken to examine the problem of 'catastrophe' (as the neo-harmonists deliberately labelled it). Some examples, which follow, will illustrate the fantastic confusion that has prevailed to the present day on this decisively important aspect of Marx's theory.

2 The Conception of Breakdown in Previous Literature

We start with the discussion of Marx's theory of breakdown by four luminaries of bourgeois economics: the Russian-American Vladimir Gregorievitch Simkhovitch, a Professor at Columbia University in New York; the German Professors Werner Sombart and Arthur Spiethoff; and the Frenchman Georges Sorel.

According to Simkhovitch, one of the most erudite critics of Marx, the breakdown theory forms the essential core of Marx's theory. Marx's sights were primarily trained on the *future* of capitalist society, 'the past was a *pièce justific-*

immense expanses of land have in part not even made the transition to simple commodity production' (Luxemburg 2013, p. 299). [Grossman's emphasis.]

50 Luxemburg 2013, p. 301.

51 [Lenin 1966, pp. 226–7.]

52 Eckstein 2012, p. 712. [Grossman's emphasis.]

ative'.[53] How, according to Marx, does the breakdown unfold? Simkhovitch correctly disputes the conception of Anton Menger that Marx's socialism derives from a moral interpretation of the theory of value: 'making an ethical labour theory of value the spring and centre of Marxism socialism' simply wipes out the distinction between the utopian socialists of the early nineteenth century and modern scientific socialism.[54] Like Diehl, Simkhovitch argues that Marx's notion of breakdown is anchored *not in the theory of value* but in a 'historically constructed' proof. 'The key to his socialist doctrine is the economic interpretation of history with the class struggle doctrine following in its train. Accordingly, the doctrine of modern so-called "scientific" socialism is found in all its completeness in the *Communist Manifesto*, which *contains no reference to any theory of value*.'[55] So, while Bernstein, as we saw, evaluates Marx's theory of breakdown as a 'scheme of development constructed by Hegel', derived in a purely *speculative* manner from [Georg Wilhelm Friedrich] Hegel's dialectic of contradiction, for Simkhovitch it reflects and generalises the *actual* circumstances and tendencies that prevailed empirically at the time the *Manifesto* was written. Marx's theory of impoverishment was derived from those circumstances, as was the pessimistic wage fund theory of the classical political economists before Marx. This theory left absolutely no room for workers' conditions to improve. And, although Marx contested the wage fund theory in volume one of *Capital*, he 'did not escape the dogmatic fascination of the "economic law". It is this circumstance which stamped Marx as a *classical* economist'.[56]

As from the start, so in *Capital* Marx 'remained a *typical classical free trader in his theory*', even if in his attitude to practical issues of economic policy he became 'an *inconsistent* advocate of social control'. Marx could only construct his theories of impoverishment and breakdown thanks to his free trade attitude to an unregulated economy. 'He took it for granted that the capitalist mode of production is based on non-interference and free trade, and, with exceptional acumen he worked out its laws and tendencies, which pointed to a general cataclysm of capitalist society and to a social revolution.'[57] In fact, Marx developed 'the economic principles of Ricardo, and the change of tableaus in Hegel's historical process he expected from the self destruction of capitalism'. Of course,

53 Simkhovitch 1913, p. 45. ['*Pièce justificative*' means 'supporting evidence'.]
54 Simkhovitch 1913, p. 4.
55 Simkhovitch 1913, p. 6. [Grossman's emphasis.]
56 Simkhovitch 1913, p. 108. [Grossman's emphasis.]
57 Simkhovitch 1913, p. 109.

Marx lived to see the introduction of the 10-hour day and factory legislation and held them in high esteem. 'But it was too late; his *theory* was made up and was fixed in his mind. As a theory, it was profound, *but it was unrelated to the transformation which was going on before his eyes*.'[58]

Following this general characterisation of Marx's theories of impoverishment and breakdown Simkhovitch turns to a discussion of the specific grounding of those theories by Marx. 'The wage fund theory [of the classical political economists] was not without influence upon Marx, especially since in the ultimate result – *the assumed impossibility of any rise of the working class* – Marx was entirely in accord with his contemporaries and predecessors. *Thus, in somewhat different words, Marx restates the classical theory* …' Whereas the classical political economists based that impossibility on Malthusian premises, the 'expansion and contraction … of the population', Marx did so by linking it to the expansion and contraction of production.[59] To support this view, Marx used Andrew Ure's theory of the effects of machines and how they 'set workers free'.[60] 'Upon these facts … Marx built his theory of wages and population. From these data it followed that in industrial society a surplus population, pauperism of the unemployed, and *low wages of the employed are due to technical improvements*.'[61] By setting workers free, these lead to the emergence of a reserve army, irrespective of the theory of value. The reserve army 'acts as a dead weight of pauperism upon the active industrial army … Wages are depressed and become insufficient for the physical maintenance of the labourers' families'. 'Machinery … compels the labouring army … to "surrender …"' 'because of the competition of the industrial reserve'.[62] According to Marx, so Simkhovitch claims, 'every rise in wages which will endanger the continual expansion of capital is excluded'.[63] With an arbitrary leap in thought, Simkhovitch jumps from the *descriptive* part of *Capital*, where the effects of the introduction of machinery are described, to the chapter on accumulation '[a]t the end of the first volume of his *Capital*, summing up and giving an account of the general historical tendencies of accumulation'. And since, in Marx's description, 'the progress of accumulation sets free an ever greater mass of workers', the *result* is '*an increasing misery of the working class*',[64] Simkhovitch then remarks,

58 Simkhovitch 1913, p. 110. [Grossman's emphasis.]
59 Simkhovitch 1913, p. 115. [Grossman's emphasis.]
60 Simkhovitch 1913, pp. 110–11. [Grossman's emphasis.]
61 Simkhovitch 1913, p. 111. [Grossman's emphasis.]
62 Simkhovitch 1913, pp. 111–12.
63 Simkhovitch 1913, p. 115.
64 Simkhovitch 1913, p. 119. [Grossman's emphasis.]

'Such is the doctrine, a doctrine embracing a theory of population and a law of wages, and formulating a tendency which leads inevitably and necessarily to a social revolution and socialism. It is undoubtedly an ingenious doctrine'. But it cannot be made compatible with the facts of reality. 'Life in its development has betrayed them and left them behind. And their value is now but that of *historical monuments*.'[65] After this discussion of Marx's theory, Simkhovitch thinks, criticising it is all too easy. It suffices 'to test this doctrine by the actual facts of economic life, i.e., by *wage statistics*', supplemented by examination of workers' budgets.[66] He cites some statistical data on wages and prices in Germany, England and the USA and draws the conclusion that 'the experience of all industrial countries without exception shows a steady and unprecedented *improvement in the conditions of the working class*'.[67] With this reference to empirical data Simkhovitch imagines he has disposed not only of the theory of impoverishment but also of Marx's entire system, 'Since Marx's system cannot without wrecking its theory disavow the doctrine of increasing misery of wage earners'.[68] Self-satisfied, he closes his case with one sentence: 'The tendency which was to lead to a breakdown of our economic organisation not only broke down itself, but developed a *countertendency in exactly the opposite direction*'.[69] Simkhovitch fails to notice that he has confused two things that have nothing to do with one another and which, in Marx, *exist independently of each other*. The empirical fact that workers are set free by machinery has nothing to do with Marx's theory of impoverishment or with the process by which workers are set free, due to the general law of capitalist accumulation and its historical tendency. While the displacement of workers by machinery that Marx discusses in the descriptive part of his book is an empirical fact, Marx's *theory* of impoverishment and breakdown, as expounded in chapters 25 and chapter 32,[70] is derived deductively from the fact of capitalist accumulation, on the basis of the law of value. Without Marx's law of value, the theory cannot be understood at all. Workers are set free by the introduction of better machinery, which is a consequence of the technological relation $M : L$. It is an expression of technological progress and as such will be found in any mode of production, including a planned socialist economy. Marx's theory of impoverishment

65 Simkhovitch 1913, pp. 119–20. [Grossman's emphasis.]
66 Simkhovitch 1913, p. 128. [Grossman's emphasis.]
67 Simkhovitch 1913, pp. 144–5. [Grossman's emphasis.]
68 Simkhovitch 1913, p. 128.
69 Simkhovitch 1913, p. 145.
70 Marx 1976b, pp. 762–870, 927–30.

and breakdown, on the other hand, results from the fact that in the capitalist accumulation process means of production and labour power are applied on the basis of value, i.e. in their value forms *c* and *v*. These value forms result in the necessity of valorisation, with all its consequences – insufficient valorisation, the reserve army etc. 'The fact that the means of production and the productivity increase more rapidly than the productive population expresses itself, therefore, *under capitalism*, in the inverse form that the working population always increases more rapidly than the valorisation requirements of capital.'[71]

So, when Simkhovitch asserts that Marx's theory of breakdown has no relationship with the theory of value, he only proves that he fundamentally misunderstands the breakdown theory developed at the end of the first volume of *Capital* and in the corresponding chapter of the third. How else could he conceive the strange idea of wanting to overturn a theoretical system with a few statistics? The assertion that Marx reformulated the classical theory of wages, that it was impossible for the working class to improve its living standards, and merely expressed this in slightly different words also rests on ignorance and misunderstanding. I have demonstrated the fundamental difference between Marx's and classical wage theory elsewhere.[72] Far from contradicting Marx's theory of wages, the fact that the condition of the working class improves is a conclusion that necessarily flows from it. We will later see that the capitalist mode of production's tendency to break down remains quite unaffected by this.

Werner Sombart's treatment of breakdown theory is characterised by such superficiality and almost incredible ignorance of the facts that it deserves to be highlighted in this context and used to illustrate what a 'theorist' who counts as an authority in the field of Marxism can come up with. According to Sombart, 'the necessity of a proletarian revolution is directly grounded in two economic theories in Marx's system – crisis theory and the theory of impoverishment. Both are designed to prove that capitalism *itself generates tendencies that* are bound to *lead to its downfall* and transition to the future regime by means of the self-evolving intermediate link of a violent political revolution by the proletarian masses'.[73]

'Crisis theory or, in a more general formulation, the theory of catastrophe', Sombart continues, 'was first proposed in the *Communist Manifesto* and *since*

71 Marx 1976b, p. 798. [Grossman's emphasis.]

72 Grossman 2019e, pp. 157 et seq.

73 Sombart 1924, p. 395. [Sombart only emphasised '*itself*'.]

then, neither Marx and Engels themselves nor their successors have *developed* it any further.'[74] For, according to Sombart, Marx's theory of crises emerged in the 1840s and 1850s 'from the mood of the times'. 'That is when Marx's system emerged.' But '*this problem has not existed* for a generation and more'! 'The second pillar of Marx's theory of revolution' and breakdown, the theory of impoverishment, 'was likewise laid out in the *Communist Manifesto* and was *never developed any further after that*'. Marx's theory of impoverishment is, according to Sombart, 'again a product of the situation in which broad layers of the English industrial proletariat found themselves during the 1840s. This, it is undisputable, has long been contradicted by reality. The conditions of the working classes have consistently improved.'[75]

It is a striking sign of Sombart's theoretical innocence that in a two-volume work on 'Marxism', running to a thousand pages, Marx's theory of accumulation – the historical tendency of capitalist accumulation – is not mentioned once in connection with the problem of the downfall of capitalism discussed there! Sombart's hopeless empiricism is evident in the way he tries to finish off Marx's theory. The two theories in question (of crisis and impoverishment) are described as an expression of the 'situation' or 'mood' 'of the times' in a particular epoch. This epoch is relegated as far back into the past as possible and, in the end, suffices to prove the weakness and untenability of the theory, since both the 'situation' and the 'times' have long since changed. Even apart from Sombart's incapacity for theory, since every deduction counts as a scholastic meditation for him, the discussion cited above teems with a blatant ignorance of Marx's work that is easy to demonstrate. Marx did not, according to Sombart, develop the theory of crises any further, after its formulation in the *Communist Manifesto*! It suffices to glance at the dozens of important passages in the first and third volumes of *Capital* and the relevant part of *Theories of Surplus Value* which runs to a hundred pages.[76] That Marx's schematic depiction of the

---

74 Sombart 1924, p. 395. [Sombart only emphasised 'crisis theory' and 'theory of catastophe'.] Sombart even presumes to remark that 'Marx was the first' 'to deduce the ten-year duration of the business cycle from the ten-year life span of railroad tracks' (Sombart 1927, 2, p. 564).

75 Sombart 1924, pp. 396, 397, 398. [Grossman's emphasis.]

76 Marx 1989c, pp. 103–74. [Grossman referred to the volumes of *Theories of Surplus Value* edited by Kautsky (Marx 1905–10a, 1905–10b, 1905–10c and 1905–10d), which reorganised material extracted from Marx's notebooks. The edition referred to here (Marx 1988a, 1989b, 1989c, 1991b and 1994) has left the structure and content of the notebooks intact.] That one is scarcely dealing with an oversight on Sombart's part here is shown by the way he mischaracterises the three volumes of Marx's *Theories of Surplus Value* as 'Collection of notes. Very scholastic', in the bibliography of Sombart 1927, 1, p. 127.

capitalist reproduction process in the second volume of *Capital* was designed to set out the conditions of its *normal* course, which insofar as they failed to hold would be turned into just as many conditions of an *abnormal, crisis-ridden* course of the reproduction process, is something about which Sombart knows nothing.

We will see later that Marx's theory of impoverishment was not formulated from the 'circumstances of the time' but was a deduction that flowed logically from his theory of value and accumulation.[77]

Arthur Spiethoff's 'discovery' in the field of crisis theory is to explain crises in terms of the overproduction of the means of production, in relation to means of consumption. Consequently, Marx's reference to the overproduction of fixed capital in department I of his reproduction schema, already in the second volume of *Capital*, must be concealed and his theory distorted. So Spiethoff tries to present Marx's theory as an underconsumptionist theory: the final breakdown of capitalism is supposed to follow as a consequence of the insufficient consumption of the broad popular masses. 'The inner contradictions of capitalist society' arise, according to Spiethoff's presentation of Marx's theory, from the fact that 'capitalism's *productive powers* unfold on an ever more gigantic scale; the social *possibilities for using them* do not keep pace, by virtue of the exploitation of the worker by the entrepreneur (the theory of immiserisation and underconsumption), so that the consequent, ever sharper crises finally pose the choice between economic breakdown and a socialist order (breakdown theory). The *conflict between production and consumption*, capital's technical capacity to produce outgrowing society's powers of comprehension, explodes the private capitalist order.'[78]

Where Spiethoff has found such a formulation in Marx he does not say. He then, however, proves that Marx's theory is false with reference to empirical phenomena. 'The actual course of development was quite different to the one Marx supposed and ideas have therefore completely changed.' Capitalism does not suffer from restricted consumption, according to Spiethoff.

> The sharpest market fluctuations are found in the sectors that produce means of production, not in those that produce means of consumption. The alternation of boom and slump that characterises free market capitalism culminates in rising and falling need for means of production. An

77 I refer readers inclined to view Sombart not just as a theorist but also as a philosopher, dialectician and historian to Pollock 1926.

78 Spiethoff 1919, p. 439. [Grossman's emphasis.]

> economy's advance, in the framework of free market economies, comprises rapid expansion of demand for means of production interrupted by severe setbacks.[79]

Elsewhere Spiethoff repeats these ideas but adds some further elements of Marx's theory of crises to his discussion. In doing so he engages in an inadvertent self-criticism of his own earlier discussion and concedes its incompleteness. 'Marx's starting point is the inclination of the rate of profit to fall.' Whether and what sort of connection there is between the tendency for the rate of profit to fall and crises – this question so fundamental to understanding Marx's theory of crises – is silently omitted. Spiethoff circumvents this difficulty by confining himself to a few quotations from *Capital* and then explaining that '[t]his version, in the third volume of *Capital* cannot have been conclusive, for it represents an intolerable confusion between the general tendencies that lead to the final breakdown of the capitalist economy and circumstances that engender fluctuations'. Because Spiethoff does not grasp the logical relationship in the 'confusion' of these two elements, he passes over the real kernel of Marx's theory of crises and breakdown without any understanding of it and interprets it as a theory of *disproportionality* and of *underconsumption* at the same time and Marx is identified as a representative of the latter, alongside Sismondi and Rodbertus. 'The essential point in Marx is his explanation of overproduction in terms of the lack of proportion in the production of goods that is inseparably bound up with the capitalist economy because of social underconsumption. His conception combines the theory of disproportion in the production of goods with the theory of underconsumption, for the cause of the disproportion that he certainly regards as inevitable is underconsumption.' If in this passage he maintains that overproduction arises from underconsumption, Spiethoff contradicts himself further when he states, 'Lack of proportion in production, to a very large degree due to the society's insufficient purchasing power, leads, *in a way that is not explained any further*, to overproduction and crises'.[80]

We will later see that this exposition of Marx's theory of crises and breakdown is completely false and consequently that the critique of it is irrelevant to understanding Marx.

What Georges Sorel writes about Marx's theory of breakdown only proves that, for him, the economic side of Marx's system remains a book with seven

79 Spiethoff 1919, pp. 440, 446.

80 Spiethoff 1925, pp. 65–6. [Grossman's emphasis. The section containing this discussion is not included in Spiethoff 1953.]

seals. Incapable of understanding Marx's theory of accumulation and the necessity of capitalism's breakdown resulting from it, he tries to justify his own lack of comprehension by raising it to the status of a general principle. In other words, he asserts that Marx's breakdown theory does not have to be understood at all: it does not have to be taken too literally; the 'final catastrophe' in Marx is simply a 'social myth', which rallies the proletarian masses for class struggle.

> The penultimate chapter … in Volume I of *Capital* leaves no doubt as to Marx's position. He describes the general direction of capitalism by way of hypotheses which would be suspect if they were applied literally to the historic events of the times, and even more so if applied to present day events. It could be said and it has been said that the revolutionary hopes of Marxism were fruitless because its description of society had lost its reality. Much ink has been spilled on the subject of the final catastrophe which is to occur following a workers' revolt. *We must not take the text literally*. We are in the realm of what I call a *social myth*. We have a vivid sketch that gives a clear idea of the change; but it is not possible to discuss details as historically verifiable facts.

This view is entirely based on the assertion that 'men of action would lose all power of initiative if they reasoned with the rigidity of a critical historian'.[81]

Another version of bourgeois criticism of Marx's breakdown theory which can be mentioned is Tomáš Garrigue Masaryk. According to him, Marx and Engels expected 'a decay of the capitalist order even in their time … and they devoted a great deal of work to a plan for the new society'.[82] 'In general Marx believes that our epoch has a tendency to chronic sickness, decadence.'[83] But Masaryk wants to prove 'the erroneousness of Marx's catastrophe theory and its effects on the living standards of the working class'.[84] How is this proof constructed? 'Marx predicted an early collapse of capitalist society, basing his prediction of an apparent increase in the concentration of capital, a disappearance of small trades and industries, and a progressive pauperisation of the workers, all together pointing to a revolution.' Where Marx is supposed to have made the assertion that concentration of industry must lead to breakdown is

81 Sorel 1961, p. 248. [Sorel only emphasised 'social myth'.]
82 Masaryk 1972 p. 208.
83 Masaryk 1899, p. 247. [Where Grossman quoted passages which are not in the abridged translation of Masaryk's book into English, the reference is to the original German text.]
84 Masaryk 1899, p. 293.

not stated. In fact, Masaryk's own assertion is absolutely arbitrary and false. Marx argued only that concentration would transform competitive capitalism into *monopoly capitalism*. Marx derived the breakdown from entirely different causes. But for Masaryk this assertion is an opportunity to score a cheap victory. 'Marx's prediction', Masaryk superciliously assures, 'proved erroneous; more exact economic statistics and history show that the middle class is not disappearing precipitously, and in many areas not at all, and that the condition of the workers is rather better than Marx had assumed.'[85] 'Statistics and economic history have great importance here. In other words, if it can be shown that the proclaimed proletarianisation of the masses (disappearance of the middle class, proletarianisation of the labouring masses down to their manifest decadence etc.) is incorrect, then Marx's theory of value and surplus value also fall.'[86] Masaryk should actually have said that Marx's theory of breakdown is thereby also refuted because, in his view, Marx deduces the inevitability of breakdown from the proletarianisation of the middle strata. Masaryk cites various authors and statistical data which ostensibly show that the position of the working class in England and other countries in the second half of the nineteenth century improved and, further, that the proletarianisation of the middle strata did not occur. 'Marx's theory of decadence is contradicted by demographic statistics.'[87] 'According to the [available] data, Marx's reserve army and its degenerative influence on workers do not exist.'[88] Finally, even Marx is supposed to testify in Masaryk's favour and against himself: 'Marx himself acknowledges that the state can improve the situation of the working class through factory legislation – the decadence that he described is thus precluded'.[89] There could scarcely be an easier refutation of Marx's system. Exactly how convincing the 'facts' are with which he imagines he refuted Marx is plain from [Theodor] Vogelstein's reference in 1914 back to the 22-year long depression (1873–95) that followed the crash of 1873:

> Everything the critics of capitalism … had said *was now confirmed by the way events unfolded*. The theory of impoverishment and the theory of the industrial reserve army were, on the one hand in terms of the prevailing economic system, on the other for the structure of the labour market of that period … seen to be confirmed once more. Above all, people were

85 Masaryk 1972 p. 210.
86 Masaryk 1899, p. 287.
87 Masaryk 1972 p. 236.
88 Masaryk 1899, pp. 294–5.
89 Masaryk 1899, p. 292.

> convinced that crises become ever more frequent, depressions ever more prolonged, and periods of boom ever shorter, more artificial and fraudulent.[90]

Masaryk was incapable of presenting theoretical arguments against Marx's theory of accumulation and breakdown.

Schumpeter also repeats the usual banalities, which have already become dogmas, against Marx. According to him,

> the theory of underconsumption … was propounded by Marx with special emphasis. This theory explains crises by a discrepancy between the productive capacity and the purchasing power of society. This discrepancy results from the fact that the workers in consequence of their "immiserisation" were less and less able to take over that part of the social product that had been produced for the satisfaction of their demand.[91]

As the various authors discussed above have only devoted more or less short essays or a few pages to the problem with which we are concerned, Robert Michels takes a special place, to the extent that he has devoted a large book to the question of impoverishment and breakdown.[92] He previously undertook 'deeper studies' on the subject and also wrote, in Italian, about Marx's theory '*sulla miseria crescente*' and its origins.[93] In his book Michels proposes to finally settle 'the question of Marx's contribution to the theory of impoverishment' once and for all and to show, 'against a tendency that seeks to portray Marx's work in the social sciences as erratic scribble', that Marxism has been 'scientifically overvalued and, remarkably enough, not just by its disciples

90 Vogelstein 1923, p. 419. [Grossman's emphasis.]

91 Schumpeter 1954, p. 151. Schumpeter complains about the form that the discussion of Marx has taken in Germany, where a 'a number of well drilled writers with the zeal of religious orthodoxy' stand in the service of Marx, see every opponent as a criminal and ignoramus, and confront every counter argument with scornful laughter (Schumpeter 1954, p. 119). It is only that Schumpeter, in doing so, overlooks the fact that not many 'counter arguments' of opponents can be observed – and our review of the literature, though confined to the 'better writers', confirms this sufficiently. It is therefore apparent that objections raised four decades ago migrate from one book to another and are made out to be fixed truths, that require no verification, even though most critics have scarcely bothered to read anything more than the first volume of *Capital*, and although today sources that have since been gradually published make possible an entirely different insight into the essence of Marx's theory than was the case forty years ago.

92 Michels 1928.

93 [Michels 1922. '*Sulla miseria crescente*' means 'on increasing impoverishment'.]

but also in part by its opponents'. This can only be explained, according to him, by the 'crass ignorance' that prevails about Marx's great predecessors and contemporaries.[94] The confrontation of the 'theory of impoverishment proposed' by Marx[95] with the seventeenth- and even eighteenth-century writers exhumed by Michels supposedly provides proof that Marx was scarcely original.

> Much that arouses admiration for him today was the common heritage of political economy and, even more, the social science of his day. Most of Marx is to be found not only among the socialists but also among contemporary liberals and clerical writers. A great deal goes back … to earlier centuries.[96]

'In 1691, John Locke … already had a certain presentiment of the existence of a reserve army and its tendency to become impoverished.'[97]

In direct contradiction with the above assertion, that Marx took over the theory of impoverishment from writers of the eighteenth and the start of nineteenth century, is the other assertion that 'the theory of impoverishment and catastrophe is today essentially a *reflection* in theory of the *specific relations* in which the young industrial countries of Europe, England above all, found themselves *before the outbreak of the February* [1848] *revolution in Paris*'. 'All the same', Michels continues, Marx was in many ways in advance of most of his predecessors. 'What were only isolated observations, empirical accidents, even episodes, in his predecessors, appear in Marx with the *causal connectedness* and overall plasticity of a system.'[98]

But what 'causal connectedness' Marx incorporated into what 'system', about this Michels utters not even a dying word, as he is incapable of any theoretical analysis. Michels clearly thinks that independent thinking, thoughts at all, are superfluous for a scholar and can be replaced by 'erudition', meaningless excerpting from older and more modern authors. He knows only two perspectives from which economic phenomena can be considered – the *political* and the *historical*. He allots *theory* no place in the system of knowledge. To the objection of one French reviewer that, in assessing the *veracity* of a theory, the question of its origins is of secondary importance, Michels replies that this

94 Michels 1928, pp. 194–5, 202.
95 Michels 1928, p. 198.
96 Michels 1928, p. 195.
97 Michels 1928, p. 55.
98 Michels 1928, pp. 195, 196. [Grossman's emphasis.]

objection 'is only valid from the angle of economic *policy* … The history of the origins of a theory includes its scientific justification'. Whether a theory is true or false is only 'very interesting politically'.[99]

Is it amazing that, with such an attitude to theory, Michels is incapable of grasping the simplest elements of theory with conceptual clarity and, in an unbearable muddle, fills hundreds of pages of his book with things that have absolutely nothing to do with Marx or with Marx's 'theory of impoverishment'? Overcome by a veritable paroxysm of poverty, Michels sees in anyone at all who has written about poverty, anywhere in the world, at any time, a 'predecessor' of Marx. What does it have to do with Marx's theory of impoverishment if various sources as early as the seventeenth century refer to 'mass agrarian impoverishment' and to 'impoverished peasant cultivators' in France or if Michels himself writes many pages about the connections between poverty and high taxes and 'poverty as the effect of a false method of taxation', about 'the impoverishing tendencies caused by the large estate owners' dispossession of the peasantry',[100] about the misery in the countryside in the years before the French Revolution, about the wretchedness of the journeymen who strove for independence, indeed even about 'proletarian strata' cast onto the streets by 'sudden impoverishment of the nobility, the clergy, upper officialdom and a section of the bourgeoisie'?[101] What does it have to do with Marx's theory of impoverishment if the French Revolution, by overturning fashion, eliminating lace and bows, rich and brightly coloured fabrics, adopted a puritanical simplicity and deprived many artisans of bread,[102] if aspects of poverty resulted from the change in the form of state, the demise of the aristocratic regime, if Michels, alongside an economic theory of impoverishment, mentions physiological, psychological and demographic theories as well,[103] finally writing about the 'poverty of the rich' etc.,[104] chattering about all manner of subjects in a cheerful motley and discerns 'premises' of an emerging theory of impoverishment and the 'onset of theory' absolutely everywhere?[105] Because Michels has overlooked the specific features of Marx's theory of impoverishment, its derivation from the specific moments of the capitalist reproduction process, because he takes an amorphous 'poverty' (the difference between rich

99 Michels 1928, p. vi. [Grossman's emphasis.]
100 Michels 1928, pp. 2–7, 18.
101 Michels 1928, pp. 26, 28, 29–30.
102 Michels 1928, p. 30.
103 Michels 1928, pp. 24, 127, 226.
104 Michels 1928, p. 169.
105 [Michels 1928, pp. 15, 17.]

and poor) as the object of his examination, he can trace the predecessors of Marx back into the seventeenth century and even further to the church fathers and antiquity, for the 'problem of poverty' is as old as the world. Finally, because Michels has no notion of the real 'theory of catastrophe' that Marx elaborated and consequently fails to notice the *objective* moments which Marx declared are bound to lead to dissolution of the capitalist mechanism in the course of capital accumulation. So, for him, 'poverty' itself, so-called 'immiserisation', is the sole source of Marxist socialism's revolutionary hopes. It accelerates the arrival of socialism and the faster it occurs, the faster can the victory of socialism be expected, because impoverishment, 'in the strictly Marxist-Hegelian sense', leads to the resistance of the poor, which not only various revolutionaries, like Geog Büchner and Carlo Pisacane, but also Marx himself have repeatedly asserted.[106] But Michels notes that Marx wanted to prove too much. What point, he asks, would workers' trade union struggles have if it was really their belief that the best precondition for social revolution was to be found in poverty? Would they not have to devote their greatest efforts to ensuring that workers end up in even deeper poverty? And yet Michels has to admit that Marx himself supported trade union struggles to *improve* the condition of the working class, that Marx spoke of *rising wages* and thus 'his theory of impoverishment did not have an entirely absolute character'.[107] What does Michels conclude from this? Perhaps, that his presentation of Marx's theory of impoverishment, as positing an ever more encompassing deterioration in workers' conditions, is manifestly false? In that case, his whole book would really be redundant. So he has no other explanation than to write that 'there was an indisputable contradiction' in Marx when he expected trade union struggles to improve workers' conditions.[108]

And again, because he regards 'poverty' as an innate feature of Marx's theory of catastrophe, Michels runs into 'problems' that are worthy of accompanying his conception of the theory of impoverishment. He writes, 'It is striking that, in proposing his theses, Marx made almost exclusive use of English … theoretical material. The empirical material itself was exclusively English'. 'Why?' asks Michels. Surely the situation in Germany at that time 'would also have substantially contributed to the illustration of the theory of impoverishment'. In Germany 'the literature on poverty (workers' poverty literature) … massively expanded in the 1830s and 1840s'.[109] Should the conclusion from this not be

106 Michels 1928, pp. 124–5.
107 Michels 1928, pp. 127, 178.
108 Michels 1928, p. 127.
109 Michels 1928, pp. 181, 183.

that Marx's theory of impoverishment was precisely not about 'poverty' but, on the contrary, even more about the advanced state of *capitalist development* in England? Why, then, did Marx anchor his theory of breakdown not in the parts of his book where he presents the laws that determine wages or illustrates existing poverty but rather, precisely, in the chapter where the *historical tendency of capital accumulation* is portrayed? But it would be pointless to expect an answer from Michels.

Even stranger than the interpretation of Marx's theory of breakdown by bourgeois economists was its discussion in the Marxist, socialist literature.

The oldest representative of the theory that explains the breakdown of capitalism in terms of a lack of non-capitalist markets is Heinrich Cunow, who already developed this idea 30 years ago in an article in *Neue Zeit*, 'On Breakdown Theory', and placed it at the centre of theoretical discussion.[110] Marx's diagnosis of capitalism's developmental tendencies was correct, according to Cunow. Only in the *tempo* of development did Marx err, because he regarded the *market outlets* of his day as given. Capitalism's ability to conquer new markets for capital and industrial products in recent decades *weakened* its tendency to break down.[111] The expansion of foreign markets 'not only *created an outlet that could absorb constantly recurring … over abundance*; it also diminished the tendency towards the outbreak of crises'.[112] That is the only way of explaining why, during this temporary phase, alongside the capitalists, the *workers* too could extract some advantage (though not to the same degree).[113] If no new markets abroad had been won, England would 'long ago have faced a conflict between the absorptive capacities of its domestic and external markets and the gigantic growth of its capitalist accumulation'. 'Only the expansion of colonial possessions in the 1870s and 1880s, with their constantly growing consumption, created a breather for English capital and industrial power.'[114] Bernstein's arguments may not always be wrong but Bernstein, like the revisionists in general, tends to '*generalise* the specific effects of economic tendencies during a *distinct* phase of development and project them *unaltered* onto all stages', thus also into the future, 'without raising the question of whether conditions exist for the further *expansion of the world market* in proportion with the expansion of production'.[115] Cunow stresses that this 'extension of industrial and even

110 Cunow 1898, pp. 424–30.
111 Cunow 1898, p. 424.
112 Cunow 1898, p. 426. [Grossman's emphasis.]
113 Cunow 1898, p. 429.
114 Cunow 1898, p. 425.
115 Cunow 1898, p. 424. [Grossman's emphasis.]

more of the capital markets *cannot* grow in the future as much as during recent decades. The *temporary* character of today's economic situation … is strikingly obvious [here]'.[116] The preceding analysis results in the important perspective that this situation is unsustainable in the long run, as '*the certain end*' of the further expansion of market outlets '*is already forseeable*'. While England enjoyed a near monopoly on the world market as an industrial country, down to the 1870s, since then Germany and the North American Union have emerged as industrial competitors. The industrialisation of India, Japan, Australia and Russia followed; and presumably China will industrialise soon too. The *inevitability of a breakdown* intimately depends on the decrease in market outlets. 'The only question is *how long* the capitalist mode of production can survive in particular countries and *under what circumstances the breakdown will occur*.'[117]

Luxemburg took over this theory word for word 15 years later and tried to deepen it theoretically.[118]

The theory of breakdown presented by Cunow, later defended by Luxemburg and her followers, like Fritz Sternberg, is the only one that Arthur Braunthal discusses and critically opposes. He knows of no other breakdown theory and regards it as incompatible with the conception underlying Marx's system. For 'the theory of breakdown is an extremely pessimistic theory of development'.[119] Admittedly, there are in Marx, especially the 'young Marx', indications of a crisis theory that can create the impression that 'he regarded crises as the very contradictions which, as they intensified and became less resolvable must result in the collapse of the capitalist economy. And, finally, it was Marx who advanced the theory of impoverishment'.[120] All these ideas are only 'hinted' at in Marx.[121] But, 'if consistently elaborated … they could well be expressed in a theory that expects development towards socialism to come about from the *internal economic* breakdown of capitalism and intensified impoverishment of the workers that drives them to despair'. But Braunthal regards this conception of the *young Marx* as the antithesis of the 'contrasting ideas' of the '*more mature*' Marx. Braunthal foregrounds the tendencies towards growing concentration

116 Cunow 1898, p. 425. [Grossman's emphasis.]

117 Cunow 1898, p. 427. [Grossman's emphasis.]

118 Cunow himself later, during the World War, abandoned his breakdown theory: capitalist expansion could count on such a massive reservoir of 'third persons' that only utopians could seriously talk about proletarian revolution. It was not capitalism that broke down but one's faith in the imminent victory of socialism. Capital has by no means fulfilled its historical mission and the end of capitalist development is still not foreseeable.

119 Braunthal 1927, p. 42.

120 Braunthal 1927, p. 7.

121 [Braunthal 1927, p. 5.]

and centralisation of capital and the polarisation between classes. 'Development towards socialism is not to be expected from breakdown and impoverishment but on the contrary from a growing polarisation of the two classes and of the economy.'[122] In the end, Braunthal is also inclined to reject breakdown theory (always understood as Luxemburg's theory) because it seems incompatible with Marx's theory of class struggle. 'For any work in the present, the theory of breakdown incontrovertibly leads to rank passivity.'

> If breakdown theory is thought through to its logical conclusion, the proletariat's present tasks would consist only of organisational and intellectual-spiritual preparation for the revolution. On deeper understanding, any activity immediately directed to the present, to improving the proletariat's lot, any class struggle for present goals is basically useless. For development tends to the impoverishment of the proletariat. There is, ultimately, no point in opposing this development.[123]

[Nikolai] Bukharin's account of breakdown theory can hardly be regarded as a serious response to the problem dealt with here and considered as more than nebulous terminology about 'contradictions'. Bukharin rips apart all the threads that tie the breakdown of capitalism to tendencies of economic development. His theory of breakdown is as follows: 'Capitalist society is a "unity of contradictions"'. The process of movement of capitalist society is a process of the continual reproduction of capitalist contradictions. 'The process of *reproduction* is a process of the *expanded reproduction* of these *contradictions*. If this is so, it is clear that these contradictions will *blow up* the entire capitalist system as a whole.'[124] Satisfied with the results of his analysis, Bukharin then proclaims, 'We have reached the *limit* of capitalism'. 'Even this general … explanation of the collapse of capitalism postulates a *limit* which is in a certain sense [!] *objective*. The limit is given to *a certain degree by the tension of capitalist contradictions*.'[125] 'Its increasing size and growing intensity will *unavoidably* lead to the collapse of capitalist rule.'[126] On this Bukharin decrees, 'It is a fact that … we have entered into the period of the collapse of capitalism, no less'.[127]

122 Braunthal 1927, p. 7. [Grossman's emphasis.]
123 Braunthal 1927, p. 43.
124 Bukharin 1972, p. 264. [Grossman emphasised '*blow up*'.]
125 Bukharin 1972, pp. 264–5. [Grossman emphasised the first use of '*limit*' and '*objective*'.]
126 Bukharin 1972, p. 265. [Grossman's emphasis.]
127 Bukharin 1972, p. 260.

The exactitude of Bukharin's analysis is amazing! He obviously believes that mere assertions will do by way of proof. Hence, Bukharin forgets to specify the identifiable markers that allow recognition of the particular extent of the tension in the contradictions at which breakdown becomes 'unavoidable', 'inevitable' and which can, theoretically, be determined. And yet that is precisely the job of a true theory of breakdown, a task whose solution Marx did in fact provide.[128]

Bukharin calls his 'contradiction' terminology 'dialectical'. The lack of any concrete argumentation, the incapacity to present a rigorous theoretical analysis is concealed by the phrase 'dialectical' and that is how the problem is 'solved'. Bukharin's assertion that it is a fact that we have entered a period of breakdown may well be true; but the issue is precisely to *explain* this fact in causal terms, to prove the necessity of breakdown under capitalism theoretically! Bukharin has not done that, however. Finally, it is not surprising that, in relation to the question of the *nature of* this sharpening of contractions, Bukharin refers to his book *Politics and Economics of the Transformation Period*, where his hopes regarding the breakdown of capitalism are linked to a 'second round' of imperialist wars and the colossal *destruction of productive forces* caused by war.[129]

The breakdown [according to Bukharin] is an inevitable consequence of the *disintegration of the economy*, which comes about through war, namely the fact that through war 'the real bases of social production get narrower with every cycle of production of social capital', so that reproduction, instead of being pro-

128 Bukharin obviously prefers to disguise the inadequacy and inaccuracy of his form of argumentation by complicating the problem; as though the necessity of the breakdown is better demonstrated if instead of *one* cause for the breakdown several are cited! Against Luxemburg's false but at least clearly formulated breakdown theory which explains capitalism's downfall in terms of the contradiction between the conditions of *production* of surplus value and the conditions of its *realisation*, Bukharin objects 'But one must not start from *one* contradiction but from a *number of them* … The contradiction between production and consumption, the contradiction between different branches of production, the contradiction between industry and an agriculture limited by rent, the anarchy of the market and competition, wars as means of competition – *all that is reproduced on an expanded scale in the course of capitalist development*' (Bukharin 1972, p. 266). [Grossman emphasised '*in the course of capitalist development*'.] But the point is not to produce a long list of contradictions but to demonstrate theoretically that they necessarily come to a head and that capitalism will be in no position to resolve them in any way. There is not a trace in Bukharin of such a demonstration.

129 Bukharin 1972, p. 267. [Grossman mistakenly cited a higher page number than exists in the German original of Bukharin 1979.]

gressive, is regressive.[130] From the standpoint of the capitalist system, such a contraction of the base of reproduction is possible, so long as it happens solely at the expense of *s*. Not so when it also grips fixed capital *c* and the consumption of labour power *v*.[131] If this regressive reproduction is long lasting and deepens, in other words, transgresses certain limits, crisis turns into breakdown and the disintegration and collapse of the whole system begins. The process of disintegration, which starts in a few spheres, quickly grips all the system's spheres, the capitalist mentality of obedience to those in power evaporates, and the process of disintegration spreads from production to the army and administration as well.[132] '[T]hen the social apparatus of production bursts apart, the barricades go up between the classes.'[133]

This 'theory' of the breakdown, which is nothing but a formulation of Russia's specific experience of the War, is equally valid for all the other capitalist states![134] Today, according to Bukharin's conception, theoretical heads do not have to be broken over the causes of capitalism's breakdown, because real developments in Russia have already told us what is involved.

> Today we are able to watch the process of capitalist collapse not merely on the basis of abstract constructions and theoretical perspectives. The collapse of capitalism has *started*. The October Revolution [in Russia in 1917] is the most convincing and living expression of that.[135]

As to the causes of this collapse in Russia, he declares 'The revolutionisation of the proletariat was doubtless connected to the economic decline, this to the War, the War to the struggle for markets, raw materials and spheres of investment, in short with imperialist politics in general'.[136] Russia's breakdown is supposed to reflect the dialectical opposition between the productive forces and their capitalist shell in the course of capital accumulation, in other words, the self-transcendence of capitalism of which Marx spoke in the discussion of his theory of accumulation!

According to Bukharin, the collapse of capitalism flows from the disintegration of the economic base but this disintegration does *not* occur for *economic*

---

130 Bukharin 1979, p. 82.
131 Bukharin 1979, p. 87.
132 Bukharin 1979, p. 88.
133 Bukharin 1972, p. 264.
134 Bukharin 1979, pp. 88–9.
135 Bukharin 1972, p. 266. [Grossman's emphasis.]
136 Bukharin 1972, p. 266.

reasons, according to the inexorable *economic laws* embedded in the capitalist mechanism, but because of war, because of an *extra-economic force*,[137] which exerts a destructive influence on the apparatus of production from the outside. It would be useless to search in Bukharin for any other cause of capitalism's breakdown than the annihilation of productive forces by war. A nice, economic, 'objective' limit to capitalism! For Bukharin, the cause of breakdown does operate within the economy but transcends it. For Marx, by contrast, breakdown is an immanent result of the economic laws of the capitalist mechanism.

If Bukharin expects the breakdown of world capitalism to emerge from a 'second round' of imperialist wars then it must be counterposed that wars are not peculiar to the imperialist stage of capitalism, that they stem rather from the very essence of capitalism in all its phases and that they have *always* accompanied capitalism since its first appearance on the historical stage. From its birth to the present, capitalism has *always* been war-like, originally in the form of commercial capital, C–M–C, and then with the definitive subordination of all production and market relationships to industrial capital, M–C–M.[138] The history of capitalism is the history of uninterrupted trade and economic wars. Connecting war solely to the imperialist stage, misunderstands this feature of capitalism.

Amalfi, which was the first of the Italian city states to show early signs of capitalist development and entered into trade relations with Syria, Palestine and Egypt, had already lost her independence by 1130 and her fleet by 1135. Her competitors, the Pisans, invaded Amalfi, destroyed her fleet and plundered the city. From the twelfth century on there was a protracted struggle between the victor *Pisa* and her new rival *Genoa*. Both powers did their best to drive each other out of Syria and Palestine, seized one another's goods and set fire to each other's factories,[139] until Pisa, economically debilitated, was finally defeated militarily, in the battle of Meloria in 1284. In 1290 the Genoans destroyed the harbour of Pisa, Portopisano, and blocked the mouth of the Arno River.[140] But scarcely had it freed itself from Pisa's competition than Genoa began a long, new war. A new economic struggle between Genoa and *Venice* began. Both cities domin-

137 For, while war is likewise conditioned by the economy and necessarily bound up with the capitalist mode of production, nonetheless it is not itself an economic law.

138 [The circuit of commodity capital is commodities–money–commodities; 'the general formula' for the circuit of capital, under developed capitalism, is money–commodities–money. See Marx 1976b, pp. 200 et seq., 257.]

139 ['Factories' here means 'trade establishments in foreign lands'.]

140 Heyd 1879 [pp. 111, 207, 208, 390, 519–20].

ated markets through their commercial fleets and by establishing factories but also by concentrating banking and money dealing business in their own hands. Each destroyed the other's factories, plundered its trade goods and blockaded its harbours. Already in the thirteenth century the two cities embarked on a bloody colonial war, which sucked the whole of Syria and the Mediterranean into the conflict, and this only ceased when their common enemy, the Saracens,[141] conquered Antioch and Tripoli.

With the emergence of the modern, territorial great powers in the sixteenth century the same policy was continued. Thanks to the larger territorial and demographic base and greater concentration of power of those states compared with the Italian city states, it only gained in strength and weight. An unbroken series of trade and colonial wars began among the European powers.[142] The second half of the seventeenth century was full of wars between Holland and England for economic supremacy. The eighteenth century is nothing but a series of wars between Holland and France, France and England, Holland and England. In the 150 years preceding 1790, England spent 66 years fighting wars with the purpose of destroying its economic rivals.

If one expects the breakdown of capitalism to happen because of war, it is absolutely impossible to understand why capitalism has not already collapsed, despite many centuries of wars; why, on the contrary, it has developed even further despite those wars. History shows that defeat in war has often led to the ruin of a state, brought down a ruling party, but that has never threatened the prevailing *system* as such, if it was not already ripe for collapse thanks to internal causes. Later we will show that far from threatening capitalism, wars – despite the losses they inflict on individuals – *prolong* the existence of the capitalist system as a whole. The facts also prove that after every war capitalism experiences an *upturn*.

Georg Charasoff's grasp of the problem is no deeper than Bukharin's. He likewise fails to advance a clear conception of the real relationships. Charasoff correctly believes that the theory of breakdown that Marx famously laid

141 [In this context, 'Saracens' were Middle Eastern Muslims.]

142 'The discovery of gold and silver in America, the extirpation, enslavement and entombment in mines of the indigenous population of that continent, the beginnings of the conquest and plunder of *India*, and the conversion of *Africa* into a preserve for the commercial hunting of blackskins, are all things which characterize the dawn of the era of capitalist production … Hard on their heels follows the commercial war of the European nations, which has the *globe as its battlefield*. It begins with the revolt of the *Netherlands* from Spain, assumes gigantic dimensions in England's Anti-Jacobin War, and is still going on in the shape of the Opium Wars against China, etc'. (Marx 1976b, p. 915) [Grossman's emphasis.]

down at the end of the first volume of *Capital* is most closely connected with the fall in the rate of profit: 'All the propositions of the theory of breakdown are essentially intended to be different expressions of a single fundamental fact – that is the fall in the rate of profit.'[143]

The fall in the rate of profit is, according to Marx, the expression of the fact that, with the advance of technology, an ever smaller mass of living labour is required to set the same capital, i.e. dead labour, into motion. 'With the development of technology capitalism approaches its natural demise.' For the end of the capitalist economic order, therefore, 'the sole fact of any relevance [is] that, with the unstoppable development of the productive forces of society, the rate of profit must fall and capitalism can no longer be sustained'.[144] The competition and concentration of capitals intensify, 'overproduction becomes unavoidable, the reserve army builds up with the force of a natural law and the final catastrophe emerges with the same theoretical certainty with which one might predict a solar eclipse'.[145]

But Charasoff disputes the correctness of Marx's thinking and this on two grounds. First, because the notion of breakdown is constructed on the law of the tendency for the rate of profit to fall, Charasoff contests the fact of this fall.[146] The law, in his opinion, is obviously a mistake.[147] Then, however, and this is where Charasoff's lack of understanding is apparent, he contests the derivation of breakdown, at all, from the tendency for the rate of profit to fall. 'But conceding', he writes, 'that the fall in the rate of profit is an incontestable truth of the first order, *what follows from this in the final analysis*?'[148] Charasoff thus senses that, according to Marx, the breakdown of capitalism is connected with the falling rate of profit; he cannot, however, show *what* this connection is. So he has not proceeded beyond general formulations about the breakdown of capitalism and has not demonstrated the economic necessity of this breakdown from the laws of the system itself. Hence Charasoff ends up with the usual phrases about the 'final revolt of the enslaved but educated working class, the bright conflagration in whose flames the whole of humankind … will be reborn to a new life in a higher form'.[149] And indeed 'the fall [in the rate of profit] has to be *consciously* produced' by increasing the working class's demands for higher

143 Charasoff 1910, p. 3.
144 Charasoff 1910, p. 49.
145 Charasoff 1910, p. 4.
146 Charasoff 1910, pp. 294–97.
147 Charasoff 1910, pp. 184, 216.
148 Charasoff 1910, p. 299. [Grossman's emphasis.]
149 Charasoff 1910, p. 53.

wages. Only in this way will the 'fatalistic character of Marxism', according to which socialism is 'mainly to be expected to arise from the *external* collapse of capitalism and not from the *conscious* intervention of the people with an interest in it', be overcome.[150] The workers' conscious reduction of the rate of profit is the necessary precondition for economic progress, through which the working class achieves the possibility of '*voluntary accumulation*'. From now on the workers take on the historical mission of perfecting the forces of production instead of the capitalists and can say to them 'Now we know how you do it. So now we are doing it ourselves.'[151] 'As soon as the capitalist rate of profit really begins to fall under the influence of wage increases determined by the [workers'] *need for independent accumulation*, also then and only then will the general crisis no longer be awaited.'[152]

[Louis] Boudin also *believes* in the inevitable downfall of capitalism. 'According to Marx, the capitalist system of production and distribution is so full of inherent contradictions, that its own development, if the laws of its own existence are permitted to freely assert themselves, will lead to its ultimate and speedy destruction.'[153] He states correctly that 'this *inevitable breakdown* can only be understood and explained by the aid of the Marxian theory of value'.[154] 'The purely economico-mechanical breakdown of the capitalist system will result, according to the Marxian theory, *from the inherent contradictions of the law of value*', he writes. But we would search Boudin in vain for proof of this. He only offers a description of the concentration and centralisation of capital that flows from competition, in which the bigger capitalists beat the smaller. This reduces the number of capitalists. Boudin's whole analysis culminates in the following claim: if this capitalist tendency were to operate unhindered, 'A stage would be reached when, by reason of *lack of numbers*, the capitalists would really cease to be a social class, as a social class presupposes a certain minimum of numbers [!], and the loss in quantity would turn, for the capitalists, into a *loss of the quality of their position as a social class*'.[155] From the economic, Boudin suddenly jumps to the political. And this is supposed to be proof of capitalism's *economic* breakdown, as the necessary result of Marx's law of value! We see that Boudin does not go beyond generalities. It is not surprising, therefore, that he finally falls back on Cunow's theory of the need for non-capitalist markets as

150 Charasoff 1910, pp. 316, 317, 318. [Grossman's emphasis.]
151 Charasoff 1910, pp. 321, 328. [Grossman's emphasis.]
152 Charasoff 1910, p. 313. [Grossman's emphasis.]
153 Boudin 1907, p. 148. [Boudin emphasised 'will lead'.]
154 Boudin 1907, p. 152. [Grossman's emphasis.]
155 Boudin 1907, p. 163. [Grossman's emphasis.]

a precondition for capitalism. The industrialisation of non-capitalist countries is, he affirms, 'the beginning of the end of capitalism'.[156] The sale of the surplus product created under capitalism becomes impossible. 'It is *the inability to dispose of that product* that is the chief cause of the temporary disturbances within its bowels, and which will lead to its final breakdown.'[157]

It is obvious that both Tugan-Baranovsky and also the socialist neo-harmonists, Rudolf Hilferding and Otto Bauer, are completely hostile to the idea that capitalism could be *economically* impossible. Tugan-Baranovsky states, 'The socially available productive forces constitute *the absolute barriers for increasing production*; capital continuously *attempts* to reach these limits but it fails! *Capital never reaches those limits*',[158] at least so long as the expansion of production proceeds proportionally in different spheres of production. Tugan-Baranovsky therefore writes that 'the capitalist economy *cannot at all break down for purely economic*, whereas it must for *ethical* reasons'.[159] Elsewhere, he claims that 'There is, therefore, no occasion to suppose that capitalism will some day die a *natural death*; it will be destroyed by the conscious willing efforts of man, by that social class which has been the foremost object of capitalistic exploitation – the proletariat'.[160]

Tugan-Baranovsky expresses this idea because he is *opposed* to the materialist conception of history and grounds socialism in *morality*, in the conscious will of the working class, divorced from the objective course of economic development. Yet the same idea is taken over from Tugan-Baranovsky by Otto Bauer, Rudolf Hilferding and Karl Kautsky, although they claim to stand on the terrain of historical materialism. So Tugan-Baranovsky is the true theoretician of Marx's epigones. According to Bauer, objective limits are indeed imposed on accumulation by the current size of the population, i.e. the *scope* of accumulation does not depend on the arbitrary whims of capitalists. Within the limits set by population growth, however, unfettered accumulation does occur. Of course, in reality accumulation is accompanied by violent crises but only because the limits on accumulation set by a given growth in population are not adhered to; because, in relation to population, either overaccumulation or underaccumulation of capital occurs. But these periodic crises cannot result in enduring but only transient disruptions of the equilibrium of capitalist

156 Boudin 1907, p. 244. [Boudin emphasised the whole phrase.]
157 Boudin 1907, p. 235. [Grossman's emphasis.]
158 Tugan-Baranovsky 2000, p. 75. [Grossman's emphasis.]
159 Tugan-Baranowsky 1904, p. 304 et seq. [The 'quotation' is Grossman's summary of Tugan-Baranovsky's argument.]
160 Tugan-Baranowsky 1910, p. 96. [Grossman's emphasis.]

accumulation. '*The periodic alternation of prosperity, crisis, and depression is the empirical expression of the fact that the mechanism of the capitalist mode of production automatically generates overaccumulation and underaccumulation, with the accumulation of capital adjusting again and again to the growth of population*.'[161]

'There exists, in the capitalist mode of production, *a tendency for the adjustment of capital accumulation to the growth of population*.'[162]

We see that the crises about which Otto Bauer writes are transient phenomena within the mechanism of capitalism, which are always overcome on their own, automatically, so that capitalism can expand without limits. The idea that fully developed capitalism is economically impossible and thus its inevitable end is completely foreign to Bauer. He knows no such economic endpoint for capitalism. 'It will succumb to the indignation to which it drives the masses.'[163] Bauer makes no connection between the law of the tendency for the rate of profit to fall and the breakdown of capitalism. Entirely entranced by the harmonious equilibrium of capitalism, Bauer did not see this connection.

Hilferding advocates the same conception. He too is obsessed with the equilibrium of the reproduction schemas. Crises are a 'reality' only because 'production is unregulated'. If capital were distributed proportionately among individual branches of industry there would be no overproduction. 'It is impossible, however, to conceive how that can happen if production is carried on in the right proportions.' In that eventuality capitalism could expand without limits, '*production can be expanded indefinitely* without leading to the overproduction of commodities'.[164] If Hilferding refers, on occasion, to the breakdown of the prevailing system, he hastens to add that it will be 'political and social, *not economic; for the idea of a purely economic collapse makes no sense*'.[165]

When, consequently, [Ludwig von] Mises, a representative of bourgeois economics, sees in the modern organisation of trade and credit threats to the continued existence of capitalism and formulates the proposition that 'the development of the means of circulation must *inevitably* lead to its breakdown', in which fact Mises sees a path 'which will lead beyond the individualist organisation of production and distribution to new, possibly collectivist forms of organisation of social economy',[166] Hilferding derides 'this latest breakdown

161 Bauer 2012b, p. 740.
162 Bauer 2012b, p. 739.
163 Bauer 2012b, p. 743.
164 Hilferding 1981, p. 241. [Grossman's emphasis.]
165 Hilferding 1981, p. 366. [Grossman's emphasis.]
166 Mises 1912, pp. 472, 476. [Grossman's emphasis.] In the second edition (English translation 1953) the words cited were deleted.

theorist'.[167] Far from leading to the breakdown of capitalism, the credit system is [for Hilferding] a means of transferring the ready-made mechanism of production from the hands of the capitalists into those of the working class.

Capitalism will not break down for economic reasons, rather it will yield to the working class's political will to power, whereby the dispossession of the financial oligarchy, through the concentration of industry and finance capital, will become extremely easy.

> The tendency of finance capital is to establish control of production … The socialising function of finance capital *facilitates* enormously *the task of overcoming capitalism*. Once finance capital has brought the most important branches of production under its control, it is enough for society, through its conscious executive organ – the state conquered by the working class – to seize *finance capital* in order to gain immediate control of these branches of production … *Even today, taking possession of six large Berlin banks would mean taking possession of the most important spheres of large scale industry*.[168]

167 Hilferding 1912, p. 1027.

168 Hilferding 1981, pp. 367–8. [Grossman's emphasis.] In his May 1927 speech to the Kiel Conference of the Social Democratic Party, Hilferding clarified his position as follows:

> I have always *rejected every theory of economic breakdown*. In my opinion, *Marx too* proved it to be false. After the War such a theory was chiefly represented by the Bolsheviks, who believed that we were now on the verge of the immediate collapse of the capitalist system. No such collapse followed. We have no grounds to regret that. We are of the view that the downfall of capitalism is not to be fatalistically awaited, *nor that it will emerge from the inner laws of this system*, but must be the willed, *conscious action* of the working class. Marxism has never been fatalistic, on the contrary it has embodied the greatest possible activism. (Hilferding 1927, p. 7) [This version of the speech, published immediately after its presentation, differs from that in the minutes of the Congress and published as a pamphlet, Hilferding 2017, p. 568. Grossman emphasised '*Marx too*' and '*nor that it will emerge from the inner laws of this system*'. Hilferding emphasised all of 'must be the willed, *conscious action* of the working class'.]

With the same logic, Hilferding could argue that the conscious drive of workers who seek to raise wages by strike action proves that there are no economic laws that determine wages. At the Conference of the Verein für Sozialpolitik in Vienna, in 1926, Hilferding again came back to the issue. Claiming with irony that in every period of capitalism since the seventeenth century the cry has resounded that now, however, capitalism is at its end, he said:

> If that is how we see things, then precisely from the left we will reject the notion that the breakdown of capitalism comes about mechanically in the sense that there are no longer any precapitalist markets available. I think that in saying this I am fully in agreement with the theories of Karl Marx, *to whom a theory of breakdown has always been*

This whole conception corresponds to the dream of a banker aspiring for power over industry through the credit system. It is the Blanquist tactic of the surprise attack,[169] translated into economics.[170]

So the breakdown of capitalism was either completely rejected or grounded voluntaristically in *political*, *extra-economic* moments. No economic proof of the inevitable breakdown of capitalism was ever adduced by the theoreticians of this idea. Bernstein even believed that no such proof *could* be adduced. And yet, as Bernstein, already in 1899, and subsequently Tugan-Baranovsky correctly emphasised, the question has extraordinary significance for the whole conception of Marxism.

From the viewpoint of the materialist conception of history, social development as a whole is determined by *economic* development. It is not the consciousness of humans that evoke social revolutions, but the contradictions of material life, the conflicts between the productive forces of society and the relations of production.

> *falsely ascribed*. In fact the second volume of *Capital* shows that under capitalism production is always possible at ever higher levels. I have often thought it is not so terrible that the second volume is so little read, for under certain circumstances it could be read as a *paean to capitalism*. (Hilferding 1926, pp. 113–14) [Grossman's emphasis.]

169 [Louis-Auguste Blanqui identified the insurrectionary actions of an elite as decisive for the achievement of socialism.]

170 How deeply the *ethical* grounding of socialism has sunk roots in Social-Democratic circles is shown by a (in this context) very interesting lecture Professor Paul Hermberg gave to the Sozialistische Studentengruppe in Leipzig. He explained that:

> In the years after the War the capitalist economy stabilised more and more stongly and the belief that capitalism would collapse "on its own" proved to be wrong all along the line. Anyone … who has the requisite economic knowledge will today have to be convinced that the prevailing economic order has proved capable of surmounting the severe crises of the past few years. Many ideas of past years have consequently broken down and many have become confused about what they previously believed and are toying with the idea of whether it's not possible, already today within the framework of capitalism, to push through the sort of changes that will make it possible for the labour movement *to come to terms* with the system.

Hermberg then shows that this is an illusion. Management of the economy in the interests of the working class, 'economic democracy is only attainable if the present social order is replaced by another one'. But how can that become possible, as he himself indicated earlier that capitalism will not break down 'on its own' and has, rather, shown itself capable of overcoming acute crises? All the same, 'we should not despair about eventual success'. The magic ingredient that will get him there is that old device of all utopians, from [Robert] Owen and William Thompson to Proudhon: *la Justice*! 'Knowledge that today's economy knows no justice is the strongest guarantee that capitalism will be replaced by another economic order' (Hermberg 1928, pp. 5–6).

> In order to demonstrate the inevitable breakdown of the capitalist economy and its unavoidable transformation into a socialist one, it is necessary *to provide a rigorous proof that beyond a certain stage it is impossible for capitalism to continue*. Once that impossibility is established, the inevitable transformation of capitalism into its opposite is proved and socialism has been brought out of the realm of utopia into that of science.
>
> This was the entire, natural tendency of Marx's and Engels's line of thought, insofar as they sought to ground their socialist convictions in the perspectives of their philosophy of history. To lay bare the purely economic impossibility of capitalism's continued existence – that had to be the chief task for them.[171]

Did Marx actually do that? Tugan-Baranovsky, Hilferding and Otto Bauer write that he did not. But in the course of this enquiry, it will be demonstrated that Marx provided all the elements necessary for this proof.

3 The Final Abandonment of Marx's Theory of Accumulation and Breakdown by Karl Kautsky

We have seen how Marx, responding in the postface to the second edition of *Capital* to the words of a St Petersburg reviewer, formulated the task of science as including, in its positive understanding of what exists, a simultaneous recognition of its negation, its *necessary downfall*.[172] Despite all the attempts to deny it by some theorists, the existence of this theory of breakdown in Marx appears to me beyond doubt. The theory of breakdown confronts the problem of demonstrating the economic causes which necessarily bring about the downfall of the capitalist mode of production. Moreover, Marx's theory of breakdown is, as will be shown, a necessary presupposition of his theory of crises and is tightly bound up with it. The solution of both problems is given in Marx's law of accumulation, which is the principal idea in Marx's *Capital* and is thus itself anchored in Marx's law of value.

Several bourgeois theorists have even seen this clearly. Friedrich Muckle, for example, writes that Marx's breakdown theory 'stands in the closest connection with … the general tendencies of development and, as these in the final

171 Tugan-Baranowsky 1905, pp. 209–10. [Grossman's emphasis.]
172 Marx 1976b, p. 103.

analysis are explained by the theory of value, the idea of a socialist social order … is based on that underlying insight … on an economic fact … that portends the guarantee of a lasting triumph: the inevitability of capitalism's breakdown resulting from the unfolding of an immanent tendency and the possibility of erecting from its ruins a soaring social system whose magnificent edifice is constructed on socialist pillars. In the combination of these two components lies the most outstanding feature of Marx's system.'[173]

And it is precisely this principal idea in *Capital*, this characteristic feature of Marx's theoretical system that Kautsky rejects in his most recent book.[174] Kautsky has distorted the essential bases of Marx's theories many times before, as I show elsewhere. But previously that always happened in the guise of *defending* them. When Kautsky 'defended' those theories, ostensibly against revisionist attacks or bourgeois writers, he smuggled his own ideas into Marx's work and thus distorted Marx's ideas. These simple means just made it possible to overlook the essential differences between Marx's theory and Kautsky's constructions interpreted into it. For decades Kautsky was the source from whom the rudiments of Marxism were learnt, his was the 'official' commentary on *Capital*. The whole world saw Marx's system through Kautsky's spectacles; Marx's texts were read through these spectacles. That is how a theory arose that can more accurately be described as Kautskyism rather than Marxism. Only in the book mentioned does Kautsky discard his previous method and emerge openly as an undisguised *opponent* of the principal idea in *Capital*.

In a chapter titled 'The Undermining of Capitalism', Kautsky asks, 'Will the capitalist mode of production come to an end in a way similar to the feudal one that preceded … it?'[175] This idea Kautsky designates an 'assumption' from which 'Marx and Engels … *were not able to stay entirely clear*[!] Even today, it is very widespread in socialist circles'.[176] Here we have a typical example of Kautsky's distorting method. An attempt is made to create the impression that at one time Marx and Engels had supported the conception of the inevitable economic end of capitalism but soon made an effort to free themselves from it, without, however, ever fully succeeding. Passed over in silence was the reality that this was not a matter of some immature conception, subsequently corrected by Marx himself, but rather the fundamental idea of Marx's theory of

173 Muckle 1920, pp. 109–10.
174 Kautsky 1927; abridged translation Kautsky 1988.
175 Kautsky 1988, p. 418.
176 Kautsky 1927, p. 539; 1988, p. 419. [The second sentence is not in the abridged English translation. Grossman's emphasis.]

accumulation and crisis, developed in the famous chapter on the 'General Law of Capitalist Accumulation', in the first volume of *Capital*, and in the corresponding chapters in the third volume's part on 'The Law of the Tendential Fall in the Rate of Profit'.[177]

Kautsky did pose the question of whether capitalism would meet the same fate as feudalism. 'Won't it also *finally* assume forms that make it a *barrier* to further economic development, indeed to prosperous economic life in general, so that saving society from *economic ruin* will make *overcoming capitalism* as necessary as that of feudalism once was?'[178] Kautsky answers in the negative. Indeed, he states that 'even Marx and Engels, *at least in their beginnings*, were not able to stay entirely clear of' this idea. According to Kautsky, however, the notion of breakdown is contradicted by the facts. With absolutely the same arguments as those of Marx's bourgeois critics – Simkhovitch, Sombart, Muhs – Kautsky emphasises that Marx's theory of impoverishment is an empirical inference from the conditions prevailing in the 1840s. 'In the first half of the last century, this assumption could appeal to the evidence of the frightful devastation inflicted on the working class by industrial capitalism, wherever it was able to wreak its havoc without restraint.' Kautsky refers to the *Communist Manifesto*'s description of pauperism in England and writes '*That was correct* for English conditions at the time it was written'.[179] But after 1847, Kautsky continues, England saw the repeal of the Corn Laws, the introduction of the 10-hour working day and the start of a new era of expanding industry and trade unionism. There was, therefore, no longer any question of growing impoverishment; on the contrary, the numbers of the poor declined. 'At the same time, in industries covered by the Factory Acts the condition of the working class *improved* substantially.'[180] *Political* means also contributed to improvement in the economic situation of the workers. 'Under the condition of growing democracy, the proletariat in large cities gains control more and more of their government and is able, even in the midst of capitalist production, to improve the living conditions, especially the housing conditions, of their population to such a degree that the level of its general health is noticeably raised.' Kautsky concludes, 'We therefore can *no longer say today that the capitalist mode of production … is bringing about its own end through its mere economic development*'.[181] Kautsky's argument is based entirely on the fact that the position of the working class

177 [Marx 1976b, pp. 762–870; Marx 1979, pp. 317–75.]
178 Kautsky 1927, p. 540. [Grossman's emphasis.]
179 Kautsky 1988, p. 419. [Grossman's emphasis.]
180 Kautsky 1927, p. 541. [Grossman's emphasis.]
181 Kautsky 1988, p. 419. [Grossman's emphasis.]

has improved since it was described in the *Communist Manifesto*. And from this fact he draws the conclusion that Marx's theory of the development of the productive forces under capitalism is untenable, especially Marx's fundamental conception that, from a certain stage, capitalism becomes an impediment to the development of the forces of production, instead of developing them. To Marx's theory Kautsky counterposes the very opposite conception: 'If earlier methods of exploitation *ultimately* ruined the productive forces, although they had *for a while* promoted them, *industrial capital tends to augment them*'.[182] A few pages after mentioning the gains made by the English working class during the 20 years after the *Communist Manifesto* was written, Kautsky states, 'on the basis of this experience, in the first volume of *Capital* of 1867 Marx already expressed views very different from those he had held in 1847'.[183] He wants to create the impression that Marx changed his views and eventually, when he wrote *Capital*, abandoned the theory of impoverishment in the *Manifesto*. We have, however, shown that the essential elements of Marx's theory of impoverishment and breakdown were first presented in *Capital*, not in the *Communist Manifesto*. Marx could do this even though, at the same time, he acknowledged that the position of the working class had improved, because he did not derive the inevitable impoverishment of the working class under capitalism from the *empirical* conditions of England in the 1840s, but *deductively*, from the 'nature of capital', from the nature of the law of accumulation peculiar to it. The impoverishment of the working class and the growth of a reserve army are certainly not the primary facts from which the breakdown is derived; they emerge, rather, at a specific stage, as the necessary *consequence* of capital accumulation. That is the primary cause that ultimately leads to the economic failure of capitalism, thanks to insufficient valorisation of the accumulated capital. It is entirely characteristic of Kautsky that he neither recognises Marx's theory of accumulation and breakdown, as formulated in the chapters on the 'General Law of Capitalist Accumulation' and 'The Tendential Fall in the Rate of Profit', *nor mentions them*, and instead attacks a theory of impoverishment and breakdown that Marx never espoused. This is especially apparent in the way he combats Luxemburg's breakdown theory in a chapter entitled 'The Limits of Capital Accumulation'.[184] Against Luxemburg he writes 'Here, then, there is again a hypothesis that attempts to deduce the final *economic failure of capitalism* as an unavoidable necessity, from the conditions of its *circulation process*

182 Kautsky 1927, p. 539. [Grossman's emphasis.]

183 Kautsky 1927, p. 541; and Kautsky 1988, p. 419. [The first phrase in not in the abridged translation.]

184 Kautsky 1927, pp. 546–52; Kautsky 1988, pp. 421–2.

despite or rather because of its expansion of the productive forces, in opposition to Marx *who proved the exact opposite in the second volume of* Capital.'[185] According to Kautsky, then, in the second volume of *Capital* Marx is supposed to have proved the possibility of the unfettered development of the productive forces under capitalism! In this connection Kautsky relies on a quotation … from Luxemburg herself, from which it follows that she believes Marx's reproduction schemas in fact allow for the possibility that 'pure' capitalism can develop in long-run equilibrium, without external, non-capitalist markets. To the same end, Kautsky finally cites Otto Bauer's reproduction schema, by means of which Bauer, according to Kautsky, delivered the 'most significant critique' of Luxemburg's theory.[186] Bauer defends the thesis that unlimited accumulation, hence also the unlimited development of the productive forces under capitalism are possible and presents it as expressing Marx's own conception.[187]

For his part, Tugan-Baranovsky was the first to express the idea that the reproduction schemas at the end of volume two of *Capital* demonstrate Marx's conviction that crisis-free, unlimited development of the productive forces was possible under capitalism. Tugan-Baranovsky was critical enough to be aware of the contradiction between this harmonist reading of the reproduction schemas and the fundamental ideas of Marx's theory. He therefore attempts, at least formally, to resolve the contradiction. He admits that Marx *never otherwise expressed* the fundamental equilibrium thesis that allegedly underlies the reproduction schemas, that the schemas therefore stand in complete isolation from the other *parts* of Marx's system and in *opposition to them*. Of Marx, Tugan-Baranovsky writes: 'Ses célèbres schémas sont restés privés de leur couronnement logique, comme un corps complètement étranger dans le système harmonieux du marxisme … [L]es déductions logiques qui en résultent et que Marx a complètement négligées, *sont en contradiction manifeste avec les idées qu'il professait avant la construction de ses schémas*.'[188] Since it is hard to attribute such an obvious contradiction to an acute thinker like Marx, Tugan-Baranovsky makes an effort to find a special explanation for it. And he finds the explanation of this alleged contradiction not in the possibility that

185 Kautsky 1927, pp. 546–7. [Grossman's emphasis.]
186 Kautsky 1927, p. 547.
187 Bauer 2012b, pp. 728–9.
188 Tougan-Baranowky 1913, p. 203. ['His celebrated schemas remained bereft of their own logical culmination, like a body that is completely foreign to the harmonious system of the Marxists … The logical deductions that flow from them and that Marx completely neglected are in manifest contradiction with the ideas he professed before constructing his schemas.']

his harmonist conclusions from the schema are perhaps false but, on the contrary, believes he has found it in the notion that the system laid out before the construction of the reproduction schemas *is an earlier draft of Marx's theory, which Marx himself regarded as superseded*. It is only the circumstance that *Capital* remained a torso that explains why Marx did not draw the general conclusions that result from his analysis of the schemas and accordingly never reworked the earlier parts of his theory. 'L' analyse de Marx est restée inachevée et il n' a pu en profiter lui-même pour en tirer des conclusions générales.'[189]

Consequently, Tugan-Baranovsky sees the contradiction between his harmonist interpretation of Marx's reproduction schemas and the whole of the rest of Marx's system and tries to both explain it and bridge the gap. Now, insofar as he accepts Otto Bauer's theory, Kautsky rejects any notion of a final limit to capitalist accumulation and stands on the same ground as Tugan-Baranovsky's theory of proportionality, which Kautsky himself had combated 25 years earlier.[190] Bauer took over that theory, which in essence goes back to Jean-Baptiste Say. But, while Tugan-Baranovsky, as we have seen, wants to bridge the contradiction between such an interpretation of Marx's reproduc-

189 Tougan-Baranowky 1913, p. 203. ['Marx's analysis remained incomplete and he himself could not profit from it to draw general conclusions'.]

190 In his series of articles on 'Crisis Theories', Kautsky criticises Tugan-Baranovsky's assurance that, 'with the proportional distribution of social production, there is *no other limit* to the expansion of the market than the forces of production, which society has at its disposal' (Kautsky 1902, p. 140). [Kautsky emphasised all words after 'there is'; Tugan-Baranowsky 1901, p. 231, emphasised the entire passage.] Against this Kautsky states: 'If this were true, England's industry would have to grow all the faster, the greater its resources of capital. Instead, it comes to a standstill and growing capital migrates abroad, to Russia, South Africa, China, Japan, etc. ... According to our theory this development ... is already demonstrated, in that the *capitalist mode of production has its own limits beyond which it cannot go*' (Kautsky 1902, p. 140). [Grossman's emphasis. Grossman mistranscribed 'demonstrated' ('bezeugt') as 'limited' ('begrenzt').] To be sure, Kautsky does not locate these limits in the insufficient valorisation that flows from the actual movement of capital accumulation but in the fact that the productive forces expand more rapidly than the world market and therefore in a lack of sales outlets. A quarter century later this conception of Tugan-Baranovsky, against which he had earlier polemicised, is taken over without any reservations. In his 'Foreword' to the popular edition of the second volume of *Capital*, he writes that in the second volume Marx 'shows that one of the most important causes of crises, of interruptions in the circulation process of capital, is to be found in the occasional [!] *disruptions of proportionality* experienced in production'. Kautsky demonstrates further proof of his Marxist depths, however, when he derives crises from progress in the division of labour.

> When relations are simple, without an extensive division of labour, the economic mechanism is readily apparent and retaining the correct proportionality in production is not difficult ... By contrast, *the difficulties* in preserving such proportionality under

tion schemas and the entire content of the rest of Marx's theory, it is typical of Kautsky, just as of Bauer and Hilferding, that they are simply unconcerned about and do not even attempt to explain it. When it becomes apparent that their interpretation of the reproduction schemas is incompatible with Marx's system of thought, they just abandon Marxist theory and hold fast to their harmonist views, passing over with colours flying to the camp of adversaries, whom they successfully combated for two generations. In complete contradiction with his own past theory, Kautsky states that proportionality among the individual branches of production is the condition of the unrestricted normal expansion of capitalism. Crises are only temporary disruptions caused by the lack of proportionality in the composition of individual branches of production. 'As soon as this proportionality is significantly disrupted, the whole mechanism of production comes unstuck, it plunges into crisis. This is precisely why the whole economic apparatus is again constricted, even if those affected suffer greatly. *The correct proportionality is always re-established* and production continues'.[191] And, Kautsky believes, production can then continue forever in the way just described. He rejects the various moments that are often cited to support the idea of the breakdown of capitalism, e.g. the growing mismatch between industrial and agricultural accumulation, thus between departments I and II in the schema etc. On the basis of none of these causes 'do we have to expect a collapse or a failure of the capitalist economy, a catastrophe that would compel its replacement with another, higher one'.[192]

With this harmonist interpretation of Marx's reproduction schemas, Kautsky's art of interpreting his own views into Marx reached its endpoint. Still, despite all attempts of this sort, the fundamental idea in *Capital*, laid out in the famous chapter on 'The Historical Tendency of Capitalist Accumulation', cannot be remodelled into its opposite. So, finally, his true colours become apparent and Kautsky decides to openly describe this notion as false. While he had *earlier* suggested that the notion of breakdown was an idea of the *young* Marx, which the *more mature* Marx abandoned, that the Marx of 1867 wrote very differently in *Capital* from the way the Marx of 1847 had written in the *Communist Manifesto*, now finally even the *mature* Marx is combated and abandoned with

> capitalism *mount* as the division of labour becomes vast … Under these circumstances, indispensable proportionality is hard to preserve … which had inevitably to lead to a crisis. (Kautsky 1926, pp. xxii–xxiii) [Grossman's emphasis.]

Does Kautsky seriously mean that in a socialist economy, the division of labour will be less advanced than it is under capitalism?

191 Kautsky 1927, p. 548. [Grossman's emphasis.]

192 Kautsky 1988, p. 424.

a welcome openness: 'Consequently, we must also modify the comments with which Marx, in the famous chapter on "The Historical Tendency of Capitalist Accumulation", concludes his *Capital*'.[193] 'But we can no longer follow Marx entirely when he goes on to add: "[t]he monopoly of capital becomes a fetter upon the mode of production which has flourished alongside and under it. The centralisation of the means of production and the socialization of labour *reach a point* at which they become incompatible with their capitalist integument. This integument is burst asunder." '[194] Kautsky claims that he too expects the abolition of private property. 'It is not from the conflict between the productive forces, for the application of which the capitalist mode of production has become too restrictive, and capitalist property that we expect the end of capitalism; we do not expect this end only when "the monopoly of capital" has become "a fetter upon the mode of production." We believe that we have every reason to be confident that this end will be reached sooner'. And the reason, of course, is that 'The proletariat has come close to becoming the ruling class in some decisively important major states'.[195]

But does Kautsky [do more than] confine himself to adducing any proof that capitalism can *temporarily* fulfil the task of developing the productive forces and that the breakdown of capitalism is therefore a problem of the distant future? Absolutely not. He does cite a passage from Marx that might be construed in that way: 'No social formation is ever destroyed before all the productive forces for which it is sufficient have been developed'.[196] But Kautsky proposes that this passage *cannot be applied* to capitalism at all.[197] The capitalist mode of production assumes a special place in this respect. It was only true of earlier societies, e.g. feudal society which 'in the period of its downfall … was no longer capable of any further development of the productive forces, but rather hindered any further development … Industrial capitalism, however, is a system of exploitation quite different from its predecessors'.[198] While in earlier modes of production the rule of the propertied class 'resulted in the decay of the forces of production at their disposal, after they had extracted from them what there was to extract. Industrial capitalism, on the other hand, leads to an ever more *rapid development of the productive forces*'. '[E]conomic tendencies

193 Kautsky 1988, p. 456. [Marx 1976b, p. 930.]
194 Kautsky 1988, p. 456. [Marx 1976b, p. 929. Grossman's emphasis.]
195 Kautsky 1988, p. 456.
196 [Marx 1987b, p. 263.]
197 'In view of the development of the last few decades, this statement is no longer applicable to us' (Kautsky 1988, p. 456).
198 Kautsky 1988, p. 455.

counter to this development, which would necessarily bring it to a *halt*, cannot be expected to arise out of capitalism itself'.[199] Therefore the question under discussion, of 'whether such an obstruction *has to flow from the nature of capital and its accumulation … must be decisively answered in the negative*'.[200]

Kautsky was not content, however, with simply abandoning Marx's theory of the final economic end of capitalism. He evolved into an unconditional, unrestrained, 100 per cent admirer of capitalism, as an economic power which emerged from the ravages of the World War and the post-war era stronger than it had been before. While even Sombart in his latest book about advanced capitalism discusses symptoms of capitalism's old age (though without being able to explain them), Kautsky writes,

> Should the catastrophe [of the World War] not bring about the breakdown of capitalism? Could such a complicated, delicate, *exhausted* productive mechanism as the capitalism survive such massive disruption? … The disruption was on a scale that exceeded even the worst expectations and fears. *Yet capitalism did not break down*. It turned out that its elasticity, its capacity to adjust to new conditions, was much stronger than its delicateness. It survived the ordeal of the War and *is today*, considered *from the purely economic standpoint, more solidly established than ever*. It has recovered, in spite of the greatest follies of governments and short-sighted capitalists and landed proprietors after the War, in spite of the insanity of the Treaty of Versailles and of its sanctions, in spite of inflations and obstacles to trade of all kinds.[201]

---

199 Kautsky 1988, p. 456. [Grossman's emphasis.]

200 Kautsky 1927, p. 623. Kautsky provides a retrospective overview of changes in the conception of Marx's theory of breakdown:

> In the 1880s there were not a few economic commentators who anxiously foresaw capitalism's twilight of the gods. In the 1890s this mood in the bourgeois world transformed into one of *dulci jubileo*: capitalism had been secured once and for all. That is when so called "revisionism" emerged. Even among socialists to whom this sort of "revision of Marxism" seemed absurd, there were many who were haunted by the frightening question of whether, thanks to the consolidation of cartels, instead of socialism a new form of capitalism could emerge, a sort of feudalisation of capitalism, with the cartel magnates at the top, like feudal lords. Rosa Luxemburg's counter arguments proved to be inadequate.

And Kautsky then concluded: '*Viewed from a purely economic perspective, capitalism's inevitable failure could not be proved*' (Kautsky 1927, p. 558). [Grossman's emphasis. '*Dulci jubileo*' means 'sweet jubilation'.]

201 Kautsky 1927, pp. 558–9. [Grossman's emphasis. The words 'survived' and those following are in the abridged English translation, Kautsky 1988, pp. 424–5.]

Kautsky's faith in the economic future of capitalism, his optimism and enthusiasm for it are carried so far that, like Bernstein, he concludes his remarks with the assertion that capitalism is capable of surmounting all obstacles, that not only has the proof of the economic inevitability of capitalism's breakdown not been established but that no such proof can be adduced. In Kautsky's polemic with Bernstein on the issue of revisionism it was also, in the end, Bernstein who emerged victorious on this question. Kautsky does concede that certain changes in world capitalism, which are matters of serious concern, have occurred. Capitalism's centre of gravity has shifted from Europe to the USA. The pessimism that has arisen about this, however, according to Kautsky, only concerns the future of Europe, but 'not *the future of capitalism, insofar as it rests on purely economic observations*'. 'It has demonstrated in practice in the most impressive fashion its ability to survive and to adapt to the most diverse, even the most desperate situations. *There are no arguments of economic theory that could call its vitality into question.*'[202] Three decades earlier, Kautsky writes, 'I expected chronic crisis. Since then capitalism has survived so many crises, has shown its capacity to adapt to so many new, often quite astonishing and extraordinary challenges that today it seems to me, *from a purely economic point of view, far more capable of survival than it was half a century ago*'.[203]

It is sad to watch such a highly qualified writer reject his entire life's work at a single stroke, in the evening of his active life. And how does Kautsky support the weighty conclusions, which modify the essential core of Marx's theory? Only the empirical fact that capitalism has *so far* succeeded in surviving, despite various threats, and the *theoretical argument* that the reproduction schemas, as Otto Bauer interprets them, know no limits to the expansion of the productive forces and thus no economically inevitable end of capitalism.

The conclusions to be drawn for the cause of socialism from Kautsky's argument are nothing other than an abandonment of scientific socialism. If there is no economic reason why capitalism must unavoidably fail, then socialism can supersede capitalism not for economic reasons but only as a result of extra-economic – political, psychological or ethical – causes. In that case, the materialist basis of the argument for the inevitability of socialism, grounded in and derived from the economy, is abandoned. Kautsky himself senses this: 'The situation would really be hopeless for socialism if it based its expectations solely … *on the assumption that the progressive accumulation of capital will spontaneously produce its own limits*'. Kautsky denies that such a limit exists. He does not

202 Kautsky 1927, p. 559. [Grossman's emphasis.]
203 Kautsky 1927, p. 623. [Grossman's emphasis.]

accept Marx's theory that from a certain point the accumulation of the productive forces is constricted instead of developing further. To the extent that Kautsky abandons the basic principle of Marx's theory, he has to look for another basis for socialism, one that has nothing to do with Marx's materialism. Yet Kautsky retains this expression, obviously in the expectation that his readers will fail to notice the difference in the content of the same term. How can the victory of socialism come about, he asks, '*if capitalism proves itself to be economically vigorous?*' And his unabashed response: '[t]he prospects of socialism do not depend on the possibility or necessity of a coming collapse or decline of capitalism, but on the expectations we may entertain that the *proletariat will gain sufficiently in strength*, that the *forces of production will grow sufficiently* to supply an abundance of goods for the masses of the people … finally, that the necessary economic knowledge and conscience will develop in the working classes that guarantee a fruitful application of these productive forces by the working classes. Those are the preconditions of socialist production.'[204]

Kautsky displaces the question from economics to politics, from the realm of economic laws to the realm of justice. If an unrestricted expansion of the productive forces is possible under capitalism, then the *problem of production* can be regarded as essentially solved, capitalism can look back on its achievement with pride. Consequently, *distribution* becomes the *decisive problem* and socialism regresses three quarters of a century to its historical starting point, to Proudhon and his demand for just distribution. But the problem of distribution is nothing but the problem of production itself, seen from another angle. If that has essentially been solved then the boundless expansion of productive forces is possible and guaranteed under capitalism, and, through the inner logic of the standpoint adopted, the problem of distribution can only be solved *in the framework of the existing mode of production*, whether Kautsky wants that or not. Abandoning the foundations of materialism leads inescapably from socialism to reformism.

A stronger working class will, according to Kautsky, replace capitalism with socialism, even though, economically speaking, there are no reasons why capitalism will fail. Why, then, should the foundations of the existing economic order be shaken? Where is the certainty that the working class, having become the decisive class, will define its goal as the abolition of capitalism? Would it not, perhaps, prefer to reconcile itself with the existing order? Why should workers take action against capitalism if it is not only capable of boundlessly expanding the productive forces and actually develops them but also allows

204 Kautsky 1988, pp. 425–6. [Grossman's emphasis.]

workers to share the fruits of that development, constantly improves their conditions of life and secures increasing protection for them via social reforms? Capitalism is doing all that, as Kautsky today assures us,[205] and *yet* the working class will bring about socialism. For, according to Kautsky, despite all the development of the productive forces, despite all the improvements in the working class's conditions and despite all the advances in social legislation, class antagonisms become progressively sharper, not milder under capitalism, so that the conscious intervention of the working class is an inevitable consequence. Kautsky lists a series of subsidiary factors that will lead to this sharpening of class antagonisms. 'On this, not on the accumulation of capital or the growth of crises, in fact, hinges the fate of socialism.'[206] Kautsky fails to notice here that he is moving in circles. If the causes of sharper class antagonisms listed by him are economically conditioned, then the inevitable breakdown of capitalism is, from his own standpoint, proved, with only this difference that the causes of breakdown cited by Marx (advancing accumulation and its consequences in insufficient valorisation, crises) are replaced by other causes. Or – and this is the other alternative – these causes are not economically conditioned, in which case the growth of class antagonisms under capitalism is traced back to the pure consciousness of the working masses, divorced from the economy. And this is, in fact, the final basis of Kautsky's socialism: the realisation of socialism comes about purely voluntaristically, through the conscious will of workers, without any failure of capitalism, conditioned by the economy, and despite improvements in the proletariat's conditions of life.

The abandonment of socialism's materialist foundations, the abandonment of Marx's theory of breakdown is apparent in Kautsky in another, characteristic way: the question of when socialism will be realised. It is obviously no accident but the expression of an inner logic that all critics of Marx (even though, by abandoning Marx's theory, they have already renounced the prospects of socialism in theory, because they are unable to ground its *objective* inevitabil-

205 In the *The Road to Power* it was completely different. Kautsky asserted there that 'social reform … has not gotten on'. He showed how in Britain and western Europe the proletariat could achieve 'a little labour legislation', '*where industrial capital did not absolutely and entirely rule in state and society*, where the little capitalists, land holders and a portion of the intellectuals still stood in sharp antagonism to it'. This was the case in Britain in the 1840s. 'Continental Europe lingered far behind'. The 1880s and early 1890s 'brought a few small advances' for the working class in Germany and France. 'That was all! Since then no progress has been made worth speaking about … In the field of labour legislation, and also in every field of social reform, complete stagnation reigns' (Kautsky 1909b, pp. 82–3). [Grossman's emphasis.]

206 Kautsky 1988, pp. 426–7.

ity) want to make this and other renunciations more attractive, by claiming to be able to bring about socialism in the way they have described *sooner* than would be possible in the way presaged in Marx's theory of breakdown. This is true of [Franz] Oppenheimer,[207] for example, of Fritz Sternberg,[208] and now of Kautsky as well. The whole controversy over whether there are objective limits to capitalist development thus appears unimportant to Kautsky. 'No matter how much the limits on the development of productive forces within the capitalist mode of production are thought about',[209] it will never come to practical experience of those limits. '[T]he victory of the proletariat will occur before any of the limits can be reached that some of our theorists have set for the development of the productive forces within capitalism.'[210]

207 About Marx's theory and himself, Oppenheimer writes: 'As a deeply respectful student of the great master, we want to offer the thanks due to this powerful theory by showing that the structure of my own ideas is almost completely built on the foundations that Marx himself laid out … I only differ from Marx in that I view the internal organisation and shape of this future socialism differently from him. And I differ from present day Marxists only in *that I believe in a much faster realisation of this human ideal than even the most devoted of them* … if only we have the will that leads to the goal' (Oppenheimer 1913, pp. 100–1).

208 See Grossman 2019e, p. 138.

209 Kautsky 1927, p. 623.

210 Kautsky 1988, p. 456. [Grossman's emphasis.]

CHAPTER 2

The Law of Capitalist Breakdown

1 Is There a Theory of Breakdown in Marx?

Even if Marx did not delineate the law of breakdown coherently in one place, he did specify all the elements required for it, so that it can be developed as a self-evident consequence of the capitalist accumulation process on the basis of the law of value and is so obvious and clear that, once demonstrated, it needs no further proof.

First, however, is it true that the term 'theory of breakdown' stems from Bernstein and not from Marx? Is it true that Marx never spoke of a crisis that would strike capitalism's death blow, that 'Marx never and nowhere wrote even a single word that might be interpreted in this sense', that this 'absurd idea' was foisted onto Marx by the revisionists?[1] To be sure, Marx referred only to breakdown and not to the theory of breakdown, as he did not write about the theory of value or the theory of wages, but just developed the law of value and the law of wages. So, if we are entitled to speak of Marx's theory of value or theory of wages, we are also entitled to speak of Marx's theory of breakdown. The part [of the third volume of *Capital*] on 'The Law of the Tendential Fall in the Rate of Profit', which demonstrates how the accumulation of capital develops 'not in proportion to the rate of profit' but 'in proportion to the impetus that it already possesses',[2] states that '[t]his process would *entail* the rapid *breakdown* of capitalist production, if counteracting tendencies were not constantly at work alongside this centripetal force, in the direction of decentralisation'.[3]

So Marx notes *that the centripetal forces of accumulation would bring about the breakdown of capitalist production* if counteracting tendencies were not operating beside it. But the operation of these counteracting tendencies does not abolish the effect of the original breakdown tendency; the latter does not cease to exist; what Marx does offer is an explanation of why the breakdown tendency does not assert itself 'rapidly'. To deny this fact is to distort the clear sense of Marx's words.

1 Kautsky 1908, p. 608.
2 [Marx 1981, p. 353.]
3 Marx 1981, p. 355. [Grossman's emphasis. In editing Marx's manuscript for the third volume of *Capital* (Marx 1992a, p. 315), Engels substituted '*Zusammenbruch*' ('breakdown') for '*zum Klappen bringen*'. The published English translation of the manuscript (Marx 2016, p. 350) renders this as 'shake' but a better literal translation would be 'fold up', 'close up' or even 'bang shut'.]

 | DOI:10 1163/9789004449978 005

But, for us, it is not at all a matter of 'words' which 'might be interpreted in this sense'. The entire direction in which Kautsky drags Marx's theory proves where the interpretation of words leads. For us the question – given that Marx's sentence does have a meaning – consists of the following: how can accumulation entail the breakdown of capitalist production, if we initially abstract from the counteracting tendencies that Marx refers to? That is the problem we have to solve!

2 Preliminary Methodological Remarks. Economic Coordinate System: The Necessity of Simplifying Assumptions. The Assumption of Constant Prices as the Starting Point for the Analysis (Constant Value of Money. Equilibrium State of the Capitalist Mechanism, under Which Prices Coincide with Values. Exclusion of Competition)

Our task consists of showing how the capitalist reproduction process, as a result of causes arising from the economic process itself, necessarily takes the form of cyclical, therefore periodically recurring movements of expansion and contraction, and finally leads to the breakdown of the capitalist system. If the investigation is to be fruitful and to lead to exact results, a method that can ensure this exactitude must be chosen. The first thing to do is generate clarity about the object of the analysis.

What is the characteristic, determining condition of the course of capitalist reproduction? Lederer sees this in the fact of price movements in the course of the business cycle, the fact that in periods of upswing all prices of commodities and labour power rise, as they fall during crisis and depression. His way of posing the problem is therefore: how can a general increase in prices occur during the upswing? The expansion in the scope of production which characterises booms is, according to Lederer, only possible due to price rises. These, therefore, have to be explained first. Lederer regards the creation of additional credit as the sole stimulus to price increases; this is therefore ascribed the leading role in shaping the course of the business cycle.[4] It is different with, for example, Spiethoff. He writes that '*Expanding investment* is the mark and effective cause of the upswing'.[5] 'The upswing generally lasts several years. Its conceptual characteristics are *rising investment* and

4 [For example, Lederer 1925 and Lederer 1928.]
5 Spiethoff 1953, p. 85.

the expansion of indirect consumption.'[6] Not a word is said here about price increases. We could with equal justification choose many other features, from the Harvard Institute[7] or any other model of the business cycle, as 'characteristic', without, however, advancing one step further in elucidating the problem. For the issue is not which commonly occurring appearances are 'characteristic' or 'typical' of the business cycle but which are *necessary*, conditioning it. That price rises *in fact*, as a rule, occur during the upswing does not mean that they are *necessarily* connected with it. The smoke that emerges when a modern firearm is discharged, even if it commonly occurs, is only a concomitant feature and has no causal connection either with the mechanism of the weapon or with the process of the discharge. Lederer's problem, how a general price increase can happen so that an upswing becomes possible, is as false as the question of how to bring about smoke so that a projectile is fired. If it is assumed that rising prices are a necessary precondition of upswings, then the upswings in the United States of America, which sometimes occurred not only without price rises but on the contrary even with falling prices, are baffling.[8] The faulty starting point is apparent. Both rising prices and the extension of productive facilities are in themselves matters of indifference to the capitalist entrepreneur. The capitalist process of production is a dual one: it is a *labour process* for the production of commodities, of products; and simultaneously a *valorisation process* to achieve profits, surplus value. But only the latter constitutes the essential driving force of capitalist production, deciding its life and death, while the production of goods is only a means to an end, an unavoidable *malum necessarium* for entrepreneurs.[9] Entrepreneurs will only carry on and expand production if, by doing so, they can expand their profits. *The expansion of productive plant, accumulation, is merely a function of valorisation, of the magnitude of profit*. But the price level, in itself, is also a matter of indifference for entrepreneurs. It is not rising prices that determine their behaviour but *profits*. These, however, flow from the difference between two factors, price and costs. With stable or even falling prices profits can also grow, if cost reductions are greater than the fall in prices. These considerations already show that the question of rising prices is, in principle, a matter of complete

6 Spiethoff 1953, p. 78. [Grossman's emphasis.]

7 [The Harvard University Committee on Economic Research.]

8 Marschak 1927, pp. 390 et seq., Altschul 1927, p. 235.

9 '[I]n the capitalist mode of production the labour process appears only as a means towards the process of valorisation', Marx 1976b, p. 711. ['*Malum necessarium*' means 'necessary evil'.]

indifference for both theory and practice.[10] Management of production is a function of *valorisation*. When profits expand, it is expanded; when they disappear, valorisation is suspended. Both can occur with constant, falling or rising prices.

Of these three possible price situations, the assumption of *constant* prices, as the *simplest* case, is the one most appropriate for theoretical purposes, on the basis of which the other two more complicated cases can be examined later. The assumption of constant prices thus constitutes a provisional theoretical fiction, on methodological grounds. It is, so to speak, an *economic coordinate system*, a stable reference point, from which all the variations in the extent of profit during the production and accumulation process can be precisely measured. The fundamental problem to be clarified is the question of *how the relationship between profits and capital accumulation is constituted*. Do profits remain constant, grow or, on the contrary, become ever smaller, in the process of accumulation? The problem, therefore, consists of determining the *variations in surplus value*, in the course of accumulation. The answer to this question will also provide the explanation of the wave-like movements, conjunctural oscillations in the course of capital accumulation.

These considerations underlie Marx's analysis: 'Since the production of exchange value – its *valorisation* – is the immediate aim of capitalist production, it is important to know *how to measure it*'.[11] In order to establish whether the capital advanced has grown during its circuit of continuous, cyclical movement through all phases of production and circulation, or to know by how much it has grown in the process of accumulation, the final magnitude has to be compared with the initial magnitude, that is, capital at the end of its circuit with the same capital at the beginning.[12]

10 Lexis, therefore, correctly notes that 'A general *rise in prices* is *in itself* not necessarily bound up with an expansion of production, but *in fact* always occurs because at the start of the movement supply cannot keep up with insistent demand and because very soon the costs of production increase because of wage rises' (Lexis 1913, p. 197). [Grossman's emphasis.] Marx also sees the cause of price rises only in this uneven expansion of the individual branches of production: 'when surplus capital is produced at a very rapid rate and its reconversion into productive capital increases the demand for all the elements of the latter to such an extent, that actual production cannot keep pace with it; this brings about a rise in the prices of all commodities, which enter into the formation of capital' (Marx 1989c, p. 126).

11 Marx 1989c, p. 227. [Grossman's emphasis. Marx emphasised 'exchange value'.] Also see Marx 1981, p. 476: 'Capital manifests itself as capital by its valorisation … The surplus value or profit produced by it … is measurable only in comparison with the value of the capital advanced'.

12 Marx 1978, p. 185: 'This sequence of metamorphoses of capital in process implies the con-

This comparison of the magnitudes of value advanced and gained, which forms the basis of any rational capitalist calculation, is only possible because, under the capitalist mode of production, value exists as an independent, *objective* magnitude, which can be ascertained on the market, in the form of the *costs* of factors of production and the *prices* of the end products. As it is *objectively* ascertainable on the market, value constitutes both the basis of capitalist calculation and a form of appearance, from whose explanation any theoretical analysis has to start. Mises states that

> Valuation can only take place in terms of units, yet it is impossible that there should ever be a unit of *subjective* use value for goods. Marginal utility does not posit any unit of value, since it is obvious that the value of two units of a given stock is necessarily greater than, but less than double, the value of a single unit. Judgements of value *do not measure*; they merely establish grades and scales.[13]

All attacks by psychological economics on the objective 'conception', against the 'objective theory' of value confuse what has to be explained with the explanation, and overlook the fact that objective value (price) is not a theoretical notion but an empirical appearance that has to be explained. Marx correctly refers to this in his polemic against [Samuel] Bailey, who must be considered a forerunner of the modern subjective theory of value.[14] With biting scorn, in a letter to [Ludwig] Kugelmann of 11 July 1868, Marx emphasises the confusion among economists between the empirical appearance of value and the 'notion of value', that is, the theory which has to explain this appearance. A reviewer of Marx's *Capital*, who had doubts about what should be understood by the term 'value', is criticised in the following words: 'The unfortunate fellow does not see that, even if there were no chapter on "value" at all in my book, the analysis I give of *the real relations would contain* the proof and *demonstration of the real value relation*. The chatter about the need to prove the *concept* of value arises only from complete ignorance …'[15]

---

tinuous *comparison* of the change in value brought about in the circuit with the original value of the capital'. [Grossman's emphasis.]

13 Mises 2012, p. 9. [Grossman's emphasis.]

14 'The comparison of value in one period with the value of the same commodities in a later period is no scholastic illusion, as Mr Bailey maintains, but rather forms the *fundamental principle of the circulation process of capital*' (Marx 1989c, p. 126). [Marx only emphasised 'comparison'.] See Marx 1978, p. 185.

15 Marx 1988b, 84. [Grossman's emphasis.]

From the very beginning of the free market capitalist economy, attempts were made to grasp numerically the autonomous character of value, which imposes itself on us, in its objectivity, as something externally given, independent of us. [Heinrich] Sieveking tells us, 'Individuals [sought] to contrast their businesses, as independent entities whose inner motion and laws of transformation would have to be understood, from themselves … The rational comprehension of the economy was powerfully promoted by the emergence of book-keeping.'[16]

For Sombart, the year 1202 is even a 'turning-point in world history' and 'the year modern capitalism was born', for 'in this year Leonardo Pisano [Fibonacci] published his *Book of Calculation*, which laid the theoretical foundations for the most important property of capital, namely its "calculability"'.[17] Before the thirteenth century no account books were kept. Everything commercial businesses needed by way of documentation had to be handled by the notary and we only know anything about how merchants conducted their businesses in the early Middle Ages from private commercial papers, contracts etc. that were drafted by notaries. This calculation of the yield on the value originally invested is, however, the vital condition for the existence of capital. 'Its identity with itself is established in the capitalist's ledger, or in the form of money of account.'[18] '[A]s value in process … it is only ideally that capital exists in the shape of money of account, at first in the head of the commodity producer, capitalist or otherwise. By way of book-keeping … the movement of capital is registered and controlled. The movement of production, and particularly of valorisation … thus receives a symbolic reflection in the imagination'.[19]

The changes a given capital value has experienced in the course of its circuit are expressed as prices in money, which serves as the measure of value required for the comparison.[20]

---

16 Sieveking 1921, pp. 96–7. Wherever the possibility of comparing the originally advanced value ran into problems that was always likely to have detrimental consequences for the business concerned, just as today capitalist enterprise is impossible without rational book-keeping. Early capitalism in Florence suffered from the disastrous circumstance that, for example, 'the bankers of Florence in the Middle Ages, because of their ignorance of the Arabic numerals, quite regularly, and even when dividing their own estates, made "mis-calculations" … and … it is almost the exception to find completely "correct" calculations' (Weber 2012, pp. 38–9).

17 Sombart 1902, p. 392. [Translator's interpolation. Fibonacci 2002.]

18 Marx 1978, p. 233.

19 Marx 1978, p. 211.

20 In the different circuits of value

> in which it alternately assumes and loses the form of money and the form of commodities, but *preserves* and *expands* itself through all these changes, value requires above

And, with respect to this measure of value, Marx proceeds from the fictitious assumption, which forms the basis of his analysis, that the value of money is constant.[21]

At first glance, this appears all the more surprising as Marx, in his polemic against Ricardo not only emphasised the factual variability of the value of gold, as of any other commodity,[22] but also proved that if Ricardo's dream of an 'invariable measure of value'[23] were to come true, then gold would not be of use as a measure of value. Marx shows that 'Gold must in principle be a variable value, if it is to serve as the measure of value',[24] since, in principle, only properties that are qualitatively identical can be compared (measured). Thus the weight of one object can be measured in comparison with the weight of another or changes in temperature through the changes of the volume of air or a liquid etc. The same holds for changes in the values of commodities. 'Gold is the measure of value because its value is variable.'[25] Marx consciously recalls that through his analysis of money in *A Contribution to the Critique of Political Economy*, 'the problem of finding an "invariable measure of value" [was] eliminated'.[26]

And yet, for all that, Marx makes the assumption that the value of money is constant! The seeming contradiction has a methodological explanation. In empirical reality, factually, the values of all commodities are variable, the value of gold included! But science needs invariable measures. 'The interest in com-

---

> all an independent form by means of which its identity with itself may be asserted. *Only in* the shape of *money* does it possess this form. Money therefore forms the starting point and the conclusion of every valorisation process. (Marx 1976b, p. 255)

[Grossman's emphasis.] Cf. Marx 1981, pp. 465–6, 515–16.

21 'Henceforth we shall assume the value of [money] as a given factor' (Marx 1976b, p. 214). [Grossman substituted money, '*Geld*', for gold, '*Gold*', in Marx's original text.] 'Here we always assume that the value of money itself remains *constant*'. [Marx 1976b, p. 683. Grossman's reference for the quotation, Marx 1989b, p. 262, is wrong but the following phrase is on that page: '… assuming the value of money to be constant …'.]

22 'It is true that the value of money varies, whether as a result of a variation in its own value, or of a change in the value of commodities' (Marx 1976b, p. 230).

23 Ricardo 1912, pp. 27 et seq.

24 Marx 1987b, p. 306. [Marx emphasised 'variable'.] Cf. Marx 1989c, p. 320: 'In order to measure the value of commodities … it is not necessary that the value of the commodity in terms of which the other commodities are measured, should be invariable. (It must on the contrary be variable … because the measure of value is and must be a commodity since otherwise it would have no immanent measure in common with other commodities).' [Marx emphasised 'value' and 'immanent'.]

25 Marx 1987b, p. 309.

26 Marx 1989c, p. 320.

paring the value of commodities in different historical periods is, indeed, not an economic interest as such but an *academic* interest.'[27]

From historical surveys of the development of thermodynamics we know that once Galileo [Galilei] (in 1592) used changes in the expansion/contraction of air to study temperature, a reliable measure of changes in temperature was only established through the fundamental work of [Guillaume] Amontons with the discovery of two fundamental points (water's boiling point and absolute zero) for the liquid used as the measure of variations in temperature.[28] That established the constant points with reference to which changes in temperature levels could be compared.[29]

Now, there are no such constant reference points for gold as the measure of value. So an exact measure of the fluctuations in the value of commodities would be impossible. For, on the one hand, if the value of money fluctuates in a different proportion to changes in the values of particular kinds of commodities, then it would not be possible to determine or to measure exactly how far, say, the increases in the price of a concrete commodity have been caused by changes in its own value and how far they have come about due to changes in the value of money. In the case of money having variable value, it would, in Marx's precise investigation of the size of surplus value, be hard to determine whether the growth in value (price) mentioned was not something merely apparent and simply caused by changes in the value of money. 'There would be no real change in the capital value in any case such as this, but simply a change in the monetary expression of the same value and surplus value.'[30] 'This is so even with a purely nominal change in value, the rise and fall of tokens of value, as long as other factors remain the same.'[31]

27 Marx 1989c, p. 320. [Marx only emphasised 'economic'.]

28 Mach 1986, pp. 10–13.

29 It is worth noting in this context that further advances in thermodynamic theory were always most closely connected with the elaboration of ever more accurate methods of measurement and that repeated efforts were made in this direction. 'The development of thermometry from the use of the first air thermometer (probably in 1592) to the attainment of considerable clarity in points of principle in this domain (1817) covered an interval of some 225 years. Manifold were the paths entered upon, and again and again were they forsaken and retrodden …' (Mach 1986, p. 44). In comparison, how backward economic theory appears. It is so poor in really new methods of investigation and has never even appreciated those methods that were already in existence, as the examples of Quesnay's *tableau* [i.e. economic table, see Quesnay 1962] and Marx's reproduction schemas show.

30 Marx 1981, p. 237.

31 Marx 1981, p. 236.

On the other hand, if the value of money varies in the same proportion as the values of all other commodities, e.g., due to changes (rises or falls) in productivity – a limiting case in theory, which can scarcely occur in reality – then there would be large absolute changes in the real relations of production and wealth. But these actual changes would be invisible from the outside, because the proportional relations of commodities' values would remain unchanged. The index of value would not register the actual changes in productivity or social wealth.[32]

Thus it was valid to substitute the 'power of abstraction' for the missing *constants* (Marx), in keeping with Galileo's words, 'Measure what is measurable, and make measurable what is not so'.[33] In order to be able to determine, for example, the influence of changes in productivity on the production of value and surplus value, Marx is forced to conduct his inquiry on the assumption of an 'unchanged value of money'.[34] 'For example, if gold and silver or corn were such commodities [with an invariable value], then it would be possible to establish, by comparison with them, the rate at which other commodities are exchanged for them, that is, to measure exactly the variations in the values of these other commodities in gold, silver or corn … Stated in this way, the problem therefore presupposes from the outset that in the "measure of value" we are dealing simply with … a commodity which, because its value remains invariable, would function as the money in terms of which the theoretician makes his calculations.'[35] The assumption that the value of gold (money) is constant is thus a methodological postulate of the theoretical analysis, whose purpose is to provide an exact measure for determining variations in the value of industrial capital in the course of its circuit.

This methodological assumption of a constant value of money is, moreover, one of the oldest tools of economic theory. Ricardo already based his analysis on the assumption that the value of gold is constant or that 'equal quantities of labour … could at all times obtain … equal quantities of gold'.[36] Similar consid-

32 'If some factor were to cause the productivity of all types of labour to fall in equal degree, thus requiring the same proportion of additional labour for the production of all commodities, then the value of all commodities would rise, the actual expression of their exchange value remaining unchanged, and the real wealth of society would decrease, since the production of the same quantity of use values would require a larger amount of labour time' (Marx 1987b, p. 282). [Marx emphasised the second use of 'all'.]

33 [The false attribution of this statement to Galileo apparently first occurred in 1868. See Kleinert 2009.]

34 Marx 1981, p. 238.

35 Marx 1989c, pp. 320–1.

36 Ricardo 1912, p. 47.

erations apparently motivated Augustin Cournot's model of 'reduced money',[37] and also underlie the postulates of modern theorists like Schumpeter, Irving Fisher and others.[38]

The same motives give rise to Marx's premise that 'Henceforth we shall assume the value of gold as a given factor',[39] which recurs in all the volumes of *Capital*. 'Any scholarly investigation of the relation between the volume of means of circulation and *movements in commodity prices*', Marx writes, 'must assume that the value of the money material is given.'[40] Thus he also sees [David] Hume's erroneous methodological starting point as the source of all the mistakes in his theory of prices and money. In this, Hume confines his analysis to epochs that exhibit huge upheavals in the value of money.

The variability of the measure of value, of *money*, is, however, *only one* of the causes of changes in prices. They can also stem from causes which lie on the commodity side. In relation to changes in price, two cases can be distinguished. On the one hand, from a social point of view, they may be the consequence of real *changes in value*. Only these are of interest to Marx initially and he wants to

---

37 So Cournot writes in his fine methodological remarks: 'But if no article exists having the necessary conditions for *perfect* fixity [in its value], we can and ought to imagine one, which, to be sure, will only have an *abstract existence*. It will only appear as an *auxiliary term of comparison* to facilitate conception of the theory, and will disappear in the final applications. In like manner, astronomers imagine a mean sun endowed with a uniform motion, and to this *imaginary* star they refer, as well the *real* sun as the other heavenly bodies, and so finally determine the actual situation of these stars with reference to the real sun' (Cournot 1927, p. 26).

38
> [I]t is clear that constancy of the monetary value is of upmost necessity for many of our discussions … We reduce all variables, which we are dealing with, by means of the monetary value to the common denominator, and thereby make a comparison of the same possible. If the *denominator* is *constant*, then everything is infinitely simpler than if it changes (Schumpeter 2010, pp. 343–4). [Grossman's emphasis.]

Irving Fisher pursues the same goal in his *The Purchasing Power of Money*, with his suggestions for the stabilisation of the dollar's value, according to which, in place of the actual dollar with its fixed weight [of gold] but variable purchasing power, there should be a 'compensated dollar' that has a variable weight but fixed purchasing power (Fisher 1922, pp. 319–48, 494–5).

39 Marx 1976b, p. 214.

40 Marx 1987b, pp. 391–2. [Grossman's emphasis.] By formulating the problem in this way, Marx already critically anticipated, by two generations, Fritz Schmidt's attempt to derive business cycle fluctuations from changes in the value of money, as a result of which illusory gains and losses arise. Schmidt fails to notice that the problem is precisely to explain the economic cycles independently of changes in the value of money and that the standard, fictitious assumption that the value of money is constant, has been made in theory ever since Ricardo, with the purpose of eliminating all illusory losses and gains from the investigation (Fritz Schmidt 1926).

measure them. On the other hand, these changes in price may be deviations of prices from values, in which case, however, the total mass of value, from a social point of view, is *unchanged*, as price rises in one sector of society correspond to falls in the others. The task that Marx set himself, of measuring the increase in surplus value above the initial magnitude of capital advanced, necessarily leads him to exclude price fluctuations of the latter type. Price fluctuations which are deviations from the mid-line of value are the result of changing configurations of supply in relation to demand. But if it is assumed that supply and demand balance out then prices coincide with values. Proceeding from such methodological considerations, Marx takes *equilibrium between supply and demand both on the market for commodities and the labour market as the starting point of his analysis*, in order to subsequently address the more complicated cases of price changes. Production does expand but initially it expands proportionally in all branches so that their equilibrium is not disrupted. Later, the case in which production does not expand proportionally in all branches, i.e. when there are disruptions and displacements in the equilibrium of supply and demand, and thus also in the configuration of prices, can therefore be considered.

And it is only under these simplifying assumptions of an hypothetical equilibrium state, expressed in Marx's reproduction schema and *as the economic coordinate system which constitutes the starting point of his analysis* – because all of the factors of the mechanism are precisely defined at the outset of the analysis – that every change can also be measured precisely at the appropriate later point in the analysis. The investigation has a mathematical-quantitative character. Only on the basis of this methodological device is an exact analysis of the accumulation process conducted and the question of how variations in the magnitude of surplus value come about, in the course of capital accumulation, answered.[41] Can accumulation proceed limitlessly, without the reproduction process, i.e. from the capitalist point of view the *valorisation* process, faltering?

41 It is truly astonishing that Oppenheimer, otherwise such a sharp thinker, entirely overlooks the powerful methodological significance of Marx's schemas and wonders whether Engels 'really did a service to the great thinker' when he published these 'most painstaking efforts of private reflection'. The whole division of the annual product into its component parts $c + v + s$, which Marx encapsulates in his *tableau économique* 'was never anything other than an auxiliary device for the deduction of surplus value. The deduction failed …'. 'It is truly time for this device [of Marx], together with its consequences, to disappear from economic theory' (Oppenheimer 1928, pp. 310, 311). Marx did not need any 'device' in order to 'deduce' surplus value, because the latter is a fact and, not since the days of scholasticism, have facts required 'proof'. Marx did not set out to prove the fact of surplus value with the help of his methodological device but rather to present a precise calculation of variations in the magnitude of surplus value in the course of accumulation. Oppenheimer is

Simply to say 'yes', even regarding this as self-evident, when the question can only be answered on the basis of an analysis, is to misunderstand the question completely. So, at the Vienna meeting of the Verein für Sozialpolitik, for example, Professor [Michael] Kröll stated, 'If exchange of goods really were to take place at *equilibrium prices*, i.e. prices at which supply and demand are in equilibrium, *there would be no cyclical fluctuations*, since supply would match demand and all products would be sold'.[42] If enterprises' profitability declines or vanishes, for him it is clear that wages are 'too high',[43] even when they have not changed. Why were they not too high previously? What does 'too high' mean when there is no theoretical 'normal case', such as that represented in the reproduction schema, to serve as a basis for comparison? Where all elements are variable, it is impossible to assess or to recognise the influence of any individual factor. Shallow empiricism, which looks down on all theory, should be mindful of [Charles] Darwin's words: 'without speculation there is no good and original observation'.[44] The causal relation between falling profitability and the wage level, which Kröll asserts, cannot be assumed to be self-evident and must be proved first. It is therefore a requirement of a scientific analysis to start from the theoretical case in which wages are *always* constant over a period of accumulation and to investigate whether, in such a case too, profits disappear in the course of accumulation. If this actually occurs, then it would be a logically exact proof that the collapse of profitability, crisis, has no causal connection with the level of wages but is rather a function of capital accumulation. The assumption of equilibrium, constant prices, is nothing other than the application of the method of variation applied to the business cycle so that all other fluctuations, induced by changes in price, the volume of credit etc., are excluded from the analysis and so that *the influence of a single factor only, the impact of the accumulation of capital on changes in the magnitude of surplus value, can be investigated*.

That is, in fact, the premise of Marx's analysis of crises. 'The general conditions of crises, in so far as they are *independent of price fluctuations* … must be explicable from the general conditions of capitalist production.'[45]

---

hopelessly confused on this point. Consequently, it is not too surprising that lack of clarity about the tasks and method of Marx's research necessarily led Oppenheimer to misunderstand its results as well, as will be demonstrated.

42 Kröll 1926, p. 216. [Grossman's emphasis.]

43 Kröll 1926, p. 214.

44 [Darwin 1898, p. 465.]

45 Marx 1989c, p. 145. [Grossman emphasised 'independent of'. Marx emphasised 'general conditions' and 'price fluctuations'.] It is amusing to see Hilferding putting so much effort into explaining the turn from boom to crisis in terms of accidental increases in com-

According to Marx, crises *can* result from changes in prices. As such, they do not interest him; they are special crises. Marx takes 'capital in general' as the object of his analysis, i.e. he is only interested in those crises that *necessarily* arise from the nature of capital as such, from the essence of capitalist production, 'which are peculiar to it as capital'.[46] This essence is only apparent, however, if we disregard competition, that is through 'the examination of capital in general, in which *prices* of commodities are assumed to be *identical* with the *values* of the commodities'.[47] The identity of value and price is only possible if the apparatus of production is in a state of equilibrium. Marx proceeds from an assumption of this sort. The same holds for *credit*. Credit crises are possible and do occur. But the question is: are crises necessarily connected with credit? On methodological grounds, credit is initially excluded, to examine whether crises still occur. Marx writes: 'In investigating why the general possibility of crisis becomes a reality, in investigating the conditions of crisis, it is therefore quite superfluous to concern oneself with

---

modity prices and wages, which lead to a fall in the rate of profit. With prosperity there is an increase in the demand for labour power whose price rises. There is a gradual rise in interest rates *above* their normal level, which also entails a reduction in business profits. At the peak of prosperity, a shortage of labour power can occur, regardless of wage struggles. Too intensive use of constant capital, e.g. from too great an expansion of the time during which machinery operates, the employment of unskilled workers, all this can also lead to disruptions and therefore to reduction of the profit rate, until 'finally' the crisis appears '[a]t the moment when the tendencies toward a falling rate of profit, described above, prevail over the tendencies which have brought about increases in prices and profits' (Hilferding 1981, p. 261). Hilferding polemicises against the 'barbaric confusion' of the economists who attempt to explain business cycle phenomena in terms of changes in the rate of interest (Hilferding 1981, pp. 285–6). But that conception strikes him as barbaric not because *changes* in the rate of interest are adduced as the basis of explanation but because there are 'still other' price changes that contribute to bringing about the crisis. The neo-harmonists glorify the equilibrium schema not because it is an excellent methodological instrument for analysis but because, confusing the method of investigation with the phenomena that have to be investigated, they think they can derive capitalism's tendency to equilibrium from the equilibrium schema. They simply throw this schema into the waste paper basket, however, as soon as they prove themselves incapable of explaining the real phenomena of crises with its help and at that point import a *deus ex machina* [arbitrary contrivance] from outside, a series of contingent circumstances, price changes, etc., which are supposed to explain the occurrence of crises. Theorists like Hilferding have no clue that all precise research has to start with analysis under *constant* prices and 'normal' relations, and that the upswing as well as the crisis have to be explained independently of all changes in prices.

46 Marx 1989c, p. 143.

47 Marx 1989c, p. 145. [Grossman emphasised '*prices*'.]

the forms of crisis which arise out of the development of money as means of payment [credit]. This is precisely why economists like to suggest that this obvious *form* is the *cause* of crises.'[48]

If we have shown that even in a such a state of equilibrium, without changes in prices and without credit, the business cycle or, as Marx puts it for the sake of brevity, 'crises'[49] are not only possible but *necessarily* occur then that proves that crises are not necessarily connected with changes in prices and credit. 'That is to say, crises are possible *without* credit.'[50]

Bourgeois economics tries to explain the movement of market prices in terms of the decisive factor of competition, i.e. the changing relationship between supply and demand. Why, however, does competition exist? Is it necessary under capitalism? These questions are not posed. Competition becomes a *qualitas occulta*,[51] which is simply accepted and acquiesced to, without exploring its causes. 'There is only competition in industry', Sternberg believes, 'because the law of increasing returns applies there and individual industrialists strive to seize markets from each other by cheapening their commodities.'[52] Why must they 'seize' markets from each other? Why are there no outlets for the increasing returns in industry? None of this is logically necessary or self-evident. To assume this is to assume from the very start what has to be proved by the analysis! And all other phenomena are to be 'explained' by such an unresearched, mystical because uncomprehended power. 'It [competition] compels industrialists to accumulate capital', Sternberg goes on to state. Marx's aphorism is thus fully applicable to Sternberg: 'Competition, in other words, is

---

48 Marx 1989c, p. 145. [Grossman emphasised '*form*'. Marx also emphasised 'possibility of crisis', 'reality', 'forms', 'conditions', 'means of payment' and 'obvious'.]

49 It has become commonplace in bourgeois economics to identify Juglar (1862) as the first to research business cycles. Schumpeter asserts, for example, that 'the wave like fluctuation in business and not the crisis itself appears to be the fundamental thing' is a perspective which stems from Juglar (Schumpeter 1949, pp. 214, 223). Does Schumpeter really mean to suggest that a perspective is novel if it talks about a wave motion instead of a cycle or a circuit? In his polemic against Proudhon in 1847, Marx already wrote: if it is a matter of the deduction of general laws in the analysis of capitalism, 'We must always take the average of from six to seven years, a period during which modern industry passes through the successive phases of prosperity, overproduction, crisis, thus completing the *inevitable cycle*'. And a few pages later he refers to 'the cycle', 'within a given time which recurs periodically', 'pass[es] through the successive phases of prosperity, overproduction, stagnation, and crisis' (Marx 1976c, pp. 458, 462). [Grossman's emphasis. Editor's interpolation.]

50 Marx 1989c, p. 144. [Grossman's emphasis.]

51 ['*Qualitas occulta*' means 'hidden force'.]

52 Sternberg 1971, p. 15.

burdened with explaining all the economists' irrationalities, *whereas it is supposed to be the economists who explain competition*.'[53]

But 'a scientific analysis of competition is possible only if we can grasp the *inner nature of capital*, just as the apparent motions of the heavenly bodies are intelligible only to someone who is acquainted with their real motions, which are not perceptible to the senses'.[54] 'It is one of the tasks of science to reduce the visible and merely *apparent* movement to the *actual* inner movement.'[55] But how can the 'inner nature' of capital be grasped? Marx's answer is that, since each 'commodity owner [tries] to sell his commodity as dear as possible … *the inner law operates* only by way of their competition … which is how divergences are *mutually counterbalanced*'.[56] In empirical reality the inner law of capitalism enforces itself through the mutual cancellation of deviations of supply and demand, which means nothing other than that the mechanism can remain in *equilibrium* only through this counterbalancing. 'The real inner laws of capitalist production clearly cannot be explained in terms of the interaction of demand and supply.'[57] The inner law only emerges in the state of equilibrium. 'If supply and demand coincide … [the] price of the commodity is then *governed by the inner laws* of capitalist production, independent of competition'.[58] The law which 'governs competition' has to be discovered.[59] The 'inner law' only enforces itself in empirical reality through the constant deviation of prices from values. To gain a theoretical understanding of the law of value, its notional realisation must be assumed, i.e. all deviations from it must be abstracted away. This does not mean that competition is ignored; rather, it is grasped in a latent state, *that is to say in the special case* where its scales are in equilibrium, where supply and demand balance each other exactly. Only in this 'normal case' do the 'inner laws' of capitalism assert themselves, i.e. all economic categories – value, wages, profit, ground rent, interest – appear in their 'pure' 'normal' forms, as 'independent categories' that correspond to their 'concept'.[60] These categories and the laws that govern them can only be understood 'assuming the capitalist mode of production in its *normal* condi-

53 Marx 1981, p. 1005. [Grossman's emphasis.]
54 Marx 1976b, p. 433. [Grossman's emphasis.]
55 Marx 1981, p. 428. [Grossman's emphasis.]
56 Marx 1981, p. 1020. [Grossman's emphasis.]
57 Marx 1981, p. 291.
58 Marx 1981, p. 477. [Grossman's emphasis.]
59 Marx 1981, p. 1004.
60 [The Hegelian term 'concept' ('*Begriff*'), sometimes translated as 'notion', means the truth of a thing expressed in its emergence and development.]

tion'.[61] '*This is precisely the normal situation that is under analysis here.*'[62] This is the starting point of Marx's analysis. He writes, 'Let us finally assume that the value component of the commodity product that is formed in each sphere of production by adding a new quantum of labour, i.e. a newly produced value … breaks down always in the same proportions into wages, profit and rent, so that the wages actually paid, the profit actually realised and the actual rent always coincide directly with the value of the labour power, with the portion of the total surplus value accruing to each independently functioning portion of the total capital by virtue of the average rate of profit and with the limits to which ground rent is normally confined on this basis. Let us assume in other words that the distribution of the social value product and the regulation of production prices takes place *on the capitalist basis, but in the absence of competition*.'[63]

This is the fundamental assumption that underpins both Marx's analysis of capitalism in general and of capital accumulation in particular. Only on this methodological basis is it possible to ask: what is the effect of capital accumulation on the process of reproduction? Can the equilibrium which is *presupposed* be sustained in the long run or do new moments, which disrupt equilibrium, emerge in the course of accumulation? If the latter occurs then this proves that disruptions in the course of process of reproduction and accumulation are independent of all changes in values (prices), whether of money or of commodities, and therefore require a *different explanation*.

3 The Equilibrium Theory of the Neo-Harmonists. Otto Bauer's Reproduction Schema

In approaching the problem posed above, I want to refrain from constructing any schemas of my own and demonstrate the true state of affairs using Otto Bauer's reproduction schema (see Table 1).[64] Mathematicians will find the information required in the formulae below. In chapter 1 we saw the neo-harmonists Hilferding, Bauer and others, drawing on Tugan-Baranovsky to freshen up Say's old theory of proportionality, in order to prove that capitalism contains unlimited possibilities of development. Hilferding had already used

61 Marx 1981, p. 882. [Grossman's emphasis.]
62 Marx 1981, p. 890.
63 Marx 1981, p. 1009. [Grossman's emphasis.]
64 [Rather than reproducing some erroneous figures originally provided by Bauer and Grossman, those in this table, the subsequent table derived from it and the following paragraphs

the reproduction schemas for this purpose, even though they were not fit to illustrate his argument convincingly.

There is no doubt that the reproduction schema constructed by Bauer, in response to Luxemburg's theory, represents a decisive advance over all similar, previous attempts.[65] Kautsky showers effusive praise on him, when he states that Bauer 'provided the *most significant critique*' of Luxemburg's theory, referring to Bauer's reproduction schema, just mentioned.[66]

TABLE 1 Bauer's reproduction schema

Year	Department	c	v	k	a_c	a_v	AV	k/s %	$(a_c+a_v)/s$ %	$s/(c+v)$ %
1	I	120,000	50,000	37,500	10,000	2,500	220,000	75.00	25.00	
	II	80,000	50,000	37,500	10,000	2,500	180,000	75.00	25.00	
	I+II	200,000	100,000	75,000	20,000	5,000	400,000	75.00	25.00	33.33
2	I	134,667	53,667	39,739	11,342	2,586	242,000	74.05	25.95	
	II	85,333	51,333	38,011	10,658	2,664	188,000	74.05	25.95	
	I+II	220,000	105,000	77,750	22,000	5,250	430,000	74.05	25.95	32.31
3	I	151,133	57,533	42,028	12,834	2,671	266,200	73.05	26.95	
	II	90,867	52,717	38,509	11,366	2,841	196,300	73.05	26.95	
	I+II	242,000	110,250	80,538	24,200	5,513	462,500	73.05	26.95	31.30
4	I	169,597	61,612	44,363	14,492	2,756	292,820	72.00	28.00	
	II	96,603	54,151	38,991	12,128	3,032	204,905	72.00	28.00	
	I+II	266,200	115,763	83,354	26,620	5,788	497,725	72.00	28.00	30.31

[where
c = constant capital
v = variable capital
k = capitalists' consumption
a_c = surplus value accumulated as constant capital
a_v = surplus value accumulated as variable capital
AV = value of annual production
s = surplus value = $k + a_c + a_c$
k/s = capitalists' consumption as a proportion of surplus value
$(a_c + a_v)/s$ = accumulated capital as a proportion of surplus value
$s/(c+v)$ = rate of profit]

Bauer succeeded in constructing a reproduction schema which, apart from a few mistakes of no concern to us here,[67] meets all the formal requirements

were calculated in a spreadsheet, using formulae which seem to be those that Bauer and he used. They also confirm Grossman's conclusions. See the Appendix for Bauer's original table.]

65 [Bauer 2012b.]

66 Kautsky 1927, p. 547.

67 Bauer always assumes a *constant* rate of surplus value, despite the assumption of a progressively higher organic composition of the functioning capital. The other errors in

which could be imposed on such a schematic model and exhibits none of the defects that Luxemburg accused Marx's schemas of having:

1. It takes account of incessant technological advances, i.e. the development of the productive forces and exhibits an ever higher organic composition of capital.[68] Consequently, what Luxemburg calls the 'cornerstone of Marx's theory' is preserved.

Bauer's *analysis* do not result from the construction of his schema as such but rather from lack of clarity about the methodological tasks and presuppositions of such a schematic, i.e. simplified representation of a complicated reality. This is precisely why the schema itself and its usefulness in the analysis of capitalism under fictitious, simplifying assumptions must be distinguished from Otto Bauer's false analysis, which confuses the fictitious course of capital accumulation in the schema with the course of capital accumulation in reality. Luxemburg's opinion that Bauer's theory of accumulation 'for the Social Democratic movement is a scandal' (Luxemburg 2015b, p. 435) can therefore be shared while the significance of the reproduction *schema* is recognised.

68 Accumulation on the basis of a constantly higher organic composition of capital means that from the surplus value *s* that is obtained every year the entrepreneurs, after deducting a definite part, *k*, for their personal consumption, deploy a progressively larger part towards the formation of additional constant capital (a_c) and a relatively smaller part towards the formation of additional variable capital (a_v). Thus with the exception of price rises which, however, are not a necessary symptom of an upswing, the schema exhibits all the signs that Hahn describes as 'essential features' of the upturn: rising demand on markets for goods, expansion of capital investment, an increase in the level of employment (Hahn 1928, pp. 156–7). That capital formation is only possible if the entrepreneur's 'savings' are used for the two components mentioned, additional constant and additional variable capital, should count as a widely recognised truth today, after Marx in *Capital* exposed Adam Smith's 'stupid blunder' that the whole newly formed capital goes into the payment of workers' wages and refuted it with the full incisiveness of his critique (Marx 1976b, p. 736; Marx 1978, p. 449). Spending all newly formed capital on workers' wages would mean that it was entirely consumed by workers in the form of means of consumption, consequently that no accumulation, no investment in durable new facilities would be possible! 150 years after the appearance of Adam Smith's work, his 'stupid blunder' seems to have become fashionable again, without being subjected to criticism from any quarter! So Bendixen affirms that 'liquid capital', stemming from savings and amassed in the banks, and placed at the disposal of entrepreneurs is consumed by them and their workers, thus that the *whole* revenue devoted to capital formation is spent on workers' wages! (Bendixen 1912, p. 163). And, most recently, Sombart, with the patent malice that is peculiar to him, pounces on 'Marx's monstrous reproduction theory' which dares to assert that the (additional) capital applied in the course of the year has to be expended not just on wages but also on means of production, such as machinery, raw materials, etc. That is an 'error'. Sombart writes, '*The whole capital that is freshly applied in the course of a year goes into wages for workers*' (Sombart 1927, 1, pp. 475–6). After all the wages have been consumed from one year to the next it remains an unexplained mystery how the amassing of capital, accumulation, is possible at all. But what Marx said about the practical use made of Smith's blunder by his successors is equally true of the position taken by Bendixen and Sombart: 'it goes without saying that political economy has not failed to exploit, in the

2. Bauer's model also avoids Luxemburg's objection to Marx's schema that 'There is no visible rule to this accumulation and consumption'.[69] There is no arbitrariness here; there are *definite rules* that accumulation has to comply with: constant capital grows twice as fast as variable capital, the former by 10 per cent a year, the latter by only five per cent.
3. Although the capitalists increase their consumption in absolute terms, given the growth in productivity and the growing mass of surplus value, a progressively greater portion of the surplus value can be devoted to accumulation.
4. Furthermore, Bauer's schema preserves completely *even* accumulation in *both* of its departments, as required by Luxemburg. While, in Marx's schema, department I always accumulates *half* its surplus value, as opposed to accumulation in department II which is determined by no visible rule and is erratic, in Bauer's schema *both* departments annually devote *the same* percentage of surplus value to accumulation.
   In year 1, 25.00 per cent is capitalised, 75.00 per cent consumed.
   In year 2, 25.95 per cent is capitalised, 74.05 per cent consumed.
   In year 3, 26.95 per cent is capitalised, 73.05 per cent consumed.
   In year 4, 28.00 per cent is capitalised, 72.00 per cent consumed.[70]
5. Finally, the rate of profit actually falls in Bauer's schema, in accordance with Marx's law of the tendential fall in the rate of profit, as a consequence of the rising organic composition of capital, and in year 1 is 33.33 per cent, in year 2 32.31 per cent, in year 3 31.30 per cent, in year 4 30.31 per cent etc.

It is no wonder Luxemburg prudently preferred to explain that 'I will not of course go extensively into the calculations carried out in Bauer's "Tables". The centrepiece of his position, and of his critique of my book, is a *theory that population* growth is the basis for accumulation – a theory that he opposes to my view and that, by itself, has *nothing to do with any schematic quantitative presentations*.'[71]

In fact, the harmonist theory of population on which Bauer bases his schema of the accumulation process is a ruthless and obvious abandonment of Marx's theory of population, completely incompatible with the fundamental theories of Marxism. Luxemburg's devastating critique of it is fully justified. But in

---

interests of the capitalist class, Adam Smith's doctrine that the whole of that part of the net product which is transformed into capital is consumed by the working class' (Marx 1976b, p. 738).

69 Luxemburg 2015a, p. 80.

70 Luxemburg 2015a, p. 80. [Grossman points out on page 235 et seq. that it is not crucial for the coherence of such a schema that, in each year, the rate of accumulation in both departments is the same.]

71 Luxemburg 2015b, p. 387. [Grossman's emphasis.]

and of itself, Bauer's reproduction schema has 'nothing to do' with his theory of population, there is no necessary connection between them. Disentangled from his theory of population, Bauer's reproduction schema was all the more suitable to serve as the illustrative *starting point* in the examination of the accumulation process and it was, in any case, appropriate to engage in *a more detailed* critical appraisal of this schema.[72]

4 The Conditions and Tasks of the Analysis Using the Schema

Hence, the following examination is *entirely based on Bauer's assumptions*, for a fruitful, immanent critique is only possible when opponents are refuted from their own standpoint. From the standpoint of our problem, it is not therefore simply a matter of explaining periodic crises under capitalism, periodic expansion and contraction, as well as their causes but of the question: *what are capital accumulation's general developmental tendencies*? Initially excluding conjunctural disorders means assuming the best possible scenario for capitalist production from the *outset* of the analysis, namely that accumulation takes place on the basis of a moving *equilibrium*, as expressed in Bauer's schema.

Under these assumptions, Luxemburg's criticism that 'for Bauer … the question of *markets* and commodities … does not exist at all' even though 'a disproportion between production … and the market' 'obviously result, in the real world',[73] loses all theoretical justification and significance. For Marx consciously worked out the problem of accumulation and the whole analysis in the first volume of *Capital* under the assumption that commodities sell *at their values*, which can only occur when supply exactly matches demand, that is when they are in balanced *equilibrium*. For, according to Marx, the developmental tendencies of capital accumulation should be examined under the conditions most *favourable* for the existence of capitalism where, initially, disruptions caused by disparities between supply and demand are consciously excluded.

72 The critique we make of Bauer's schema starts from completely different perspectives: it demonstrates, first, that his schema only reflects and can only reflect the value side of the reproduction process, that it cannot describe the *real* process of accumulation in its value *and use value* aspects. Secondly, Bauer's mistake lies in conceiving of the schema as an illustration of the actual processes under capitalism and forgets the simplifications that are necessarily inherent in it. These serious shortcomings, however, do not reduce the significance of Bauer's schema, so long as the process of reproduction is initially considered from the value side alone and the analysis is consciously conducted under the *most favourable* conditions for the existence of capitalism, that is under the assumption of equilibrium between production and sales.

73 Luxemburg 2015b, p. 420. [Grossman's emphasis.]

The disruptions due to disparities between supply and demand belong to the sphere of competition. They can only explain deviations from the 'trend line' of capitalism, that is from the fundamental line of its developmental tendency, but never the trend line itself. That is what, according to Marx, the 'illusion of competition' consists of and, precisely for that reason, he everywhere excludes fluctuations in competition from his analysis when he examines general tendencies. Luxemburg is aware of this when she deals with the commodity labour power[74] but entirely overlooks it in relation to other commodities, although in both cases the same methodological principle underlies Marx's analysis.

Once we have established the *general developmental tendencies*, it is easy to explain the periodic deviations from the fundamental line of development and thus *periodic crises*. So the Marxist theory of accumulation and breakdown, at the same time, also has to be a theory of crises.

With Bauer, we assume a capitalist mechanism in which constant capital amounts to 200,000 and variable capital to 100,000. The other assumptions are that constant capital amounts to 120,000 in department I (means of production) and 80,000 in department II (means of consumption); that the variable capital, in contrast, is equally divided between the two spheres of production; further that constant capital expands by 10 per cent a year and variable capital only by 5 per cent, the rate of surplus value is 100 per cent and the rate of accumulation in the two spheres of production does not change from year to year.[75]

Proceeding from these assumptions, Bauer has constructed a reproduction schema which, in his opinion, manifests *perfect equilibrium* year after year –

74 In the first volume of *Capital*, Marx 'explicitly assumes that the price of labour power, i.e. the worker's wage, remains equal to its real value; in other words, the demand for labour power and its supply remain *in equilibrium*', writes Luxemburg (Luxemburg 2015b). [Luxemburg only emphasised 'equal'.] In other words, however, this means that a state in which *no reserve army* exists is assumed.

75 Bauer 2012b, p. 729. In empirical reality, goods are not exchanged between the spheres of production, symbolically represented in the schema, at their values but at prices of production. For the problem of the developmental tendency of capital accumulation in our total, fictitious mechanism, the distinction between values and prices of production loses all meaning. On the basis of Marx's theory of value – which of course underlies the whole reproduction schema – all prices of production have, in the end, to be traced back to values, to the extent it is not a matter of individual spheres but of their totality. And the sum total of prices of production cannot be *greater* than the sum of the values, originally present and determined by socially necessary labour time. To the extent that the sum of these prices of production is *smaller*, thus to the extent that devaluations occur, we will subsequently consider their effects separately (see below, pp. 319 et seq.). [Bauer (2015b, p. 727) also explains the allocation of additional investment, which involves a transfer of accumulated surplus value from department II to department I, between the two departments of production.]

that is, on an expanded scale – despite capital accumulating every year and the absence of non-capitalist markets, in which the surplus value can be 'realised'. With this schema, Bauer believes he has established 'an impeccable basis for investigating the problem posed by Comrade Luxemburg'.[76] He refutes her theory of the need for non-capitalist countries for the realisation of surplus value; surplus value can be realised completely under capitalism. The capitalist mechanism creates a market *through capital accumulation itself*, so long as capital grows in proportion with the population, at a given level of labour productivity. As for the question of whether there is any insuperable limit to capital accumulation, Bauer's discussion yields a negative answer. 'However, this equilibrium condition between accumulation and population growth can be maintained only if the *rate* of accumulation grows *sufficiently rapidly* that, despite the increasing organic composition of capital, *variable* capital increases at the same rate as the *population*.'[77]

But can the rate of accumulation grow so rapidly in the long run? *Bauer never posed this decisively important question, even once*! Bauer assumes that the pivotal issue in the debate for the past century and the real *thema probandi*[78] is self-evident, as if the rapidity of the growth in the rate of accumulation depends solely on the will of the capitalists! If the rate of accumulation grows in step with population, capitalism can develop its productive forces, therefore its apparatus of production too, without limit. It follows that capitalism will not collapse because unfettered accumulation is an objective economic impossibility but will be overthrown by the *political* struggle of the worker masses more and more schooled for socialism by political and trade union experience.

Thus, if the stated proportion is maintained, there is no *objective* limit to, no economic endpoint of capitalism, at which the breakdown of the capitalist mode of production would be inevitable. Only through petty daily, educational activity can the masses be educated to socialism; it can only be a product of their *conscious will*.

Tugan-Baranovsky already warned that such a conception signifies the abandonment of the materialist conception of history. If it was possible for capitalism to maintain equilibrium, if it was possible for capitalism to develop the productive forces without limit, then important psychological factors that generate dissatisfaction in the working class would be absent. If hope for

76 Bauer 2012b, p. 729.

77 Bauer 2012b, p. 737. [Grossman's emphasis.]

78 ['*Thema probandi*' means 'problem to be solved'.]

the downfall of capitalism depends solely on the political struggle of masses, educated to socialism, then 'the centre of gravity of the whole argument is displaced from the realm of economics into that of consciousness'.[79]

Luxemburg wrote in similar terms 12 years later: 'If we … assume … the economic infinity of capitalist accumulation, then the vital foundation on which socialism rests will disappear. We then take refuge in the fog of pre-Marxist systems and schools, which attempted to deduce socialism solely on the basis of the injustices and evils of today's world and the revolutionary determination of the working classes.'[80] The tremendous methodological significance of Bauer's reproduction schema will, therefore, be grasped once it has allowed us to shed more light on the problem that concerns us here.

5 Why Were the Classical Economists Disquieted by the Fall in the Rate of Profit despite Growth in the Mass of Profit?

So we have constant capital growing at 10 per cent a year, which expresses technological progress, twice as fast as the annual increase in population of five per cent growth in variable capital. The part of surplus value reserved for the individual consumption of the capitalists (k) represents a *relatively* ever smaller percentage of surplus value, falling from 75 per cent in year 1 to 72.02 per cent in year 4, *but it grows in absolute terms* even though accumulation increases from year to year, establishing the capitalists' aims and motives in expanding production.

Are not Otto Bauer's harmonist conclusions confirmed by his table above? For it could be said, on the basis of Bauer's schema, that the fall in the *rate* of profit is of no concern, since the *absolute mass of profit* can and does grow *despite* the fall in the rate of profit, as soon as 'growth in the total capital … *takes place more rapidly* than the fall in the rate of profit'.[81] 'The same development in the social productivity of labour is expressed, with the advance of the capitalist mode of production, on the one hand in a progressive tendency for the *rate of profit to fall* and on the other in a constant *growth in the absolute mass* of surplus value or profit appropriated.'[82] 'The number of workers employed by capital … *hence the mass of surplus value it produces*, and the absolute mass of

79 Tugan-Baranowsky 1904, p. 274.
80 Luxemburg 2015b, p. 376.
81 Marx 1981, p. 330. [Grossman's emphasis.]
82 Marx 1981, p. 329. [Grossman's emphasis.]

profit it produces, *can therefore grow, and progressively so*, despite the progressive fall in the rate of profit. This not only can but must be the case … on the basis of capitalist production.'[83]

If this is so, however, the question arises: why should capitalists be so worried when the *rate* of profit falls, expressed in an ever-diminishing fraction, if the absolute *mass* of their profit grows? To ensure that it grows, all they need is to accumulate assiduously and to do so *more rapidly* than the fall in the rate of profit. To accumulate and to accumulate more and more therefore appears here to be the solution that saves the situation, ensuring receipt of an ever-increasing mass of profit!

Why then was classical economics dominated by *disquiet*, 'horror at the falling rate of profit'?[84] Why, in Ricardo's view, is this law the 'bourgeois "twilight of the gods"' – the 'day of judgement'?[85] Why the 'dread of this pernicious tendency … among Ricardo's disciples'?[86] Why does Marx refer to 'the great importance that this law has for capitalist production'?[87] Why does he write that 'the law of the falling rate of profit … hangs ominously over bourgeois production',[88] while the vulgar economists invoke the growth in the absolute *mass* of profit as 'a kind of consolation' for the falling rate of profit?[89] We find no answer to any of these questions in the existing Marxist literature. Where does the importance of the law of the falling rate of profit lie? Is it really a threat to the capitalist mode of production?

Otto Bauer's reproduction schema appears to prove the opposite. For, in this schema, not only does the part of surplus value allocated to accumulation ($a_c + a_v$) grow, from 25,000 in year 1 to 32,408 in year 4 (see Table 1 on page 123), but the share allocated to the consumption of the capitalist class (k) also grows, from 75,000 in year 1 to the height of 83,354 in year 4. In this way, the actual aim of the capitalist mode of production – the hunt for surplus value – is accomplished. True, this part does fall from 75 per cent in year 1 to 72.00 per cent in year 4. But this decline is of no concern to the entrepreneur so long as both the accumulation fund as well as the fund for the capitalists' consumption rise *absolutely* because the total capital grows faster than the rate of profit falls. In percentage terms, it [the rate of profit] approaches zero as a mathematical

83 Marx 1981, p. 324. [Marx only emphasised 'must' and both instance of 'can'.]
84 Marx 1981, p. 350.
85 Marx 1989c, p. 172.
86 Marx 1989c, p. 169.
87 Marx 1981, p. 319.
88 Marx 1989c, p. 169. [Marx emphasised 'law of the falling rate of profit'.]
89 Marx 1981, p. 330.

limit, without ever being able to reach it. But this formulation, this way of calculating profit, does not prevent its *absolute increase*, when the total capital grows faster than the rate of profit falls.

And yet precisely by means of Bauer's schema, we will demonstrate that there is an economic limit to the accumulation of capital, that Bauer's harmonist conclusions about the possibility of unfettered expansion of capitalism are banal fallacies.

6 The Views of the Classical Economists on the Future of Capitalism. Ricardo and John Stuart Mill

The almost incredible blindness, it could be said, of Marx's epigones to the essence of Marx's theory of breakdown, presented above, should be all the more surprising because the theory did not emerge fully formed and all at once but, according to Marx, represented only the final stage of a long development. Marx linked his theory directly to those of the classical economists and took over specific elements from them, even if in a sharply modified and deeper form. At any rate, tracking the genesis of this theory will give us insight into its essence and character. For both [Adam] Smith and Ricardo were pessimists when it came to the future of capitalist society. Ricardo already came to the conclusion that there must necessarily be a *fall* in profits due to the rising costs of necessary means of subsistence. 'The natural tendency of profits then is to fall.' As, however, profit is the sole basis for capital accumulation, it follows that 'without [this] motive there could be no accumulation … Their [the farmer's and manufacturer's] motive for accumulation will diminish with every diminution of profit, and will cease altogether when their profits are so low as not to afford them an adequate compensation for their trouble and the risk they must necessarily encounter in employing their capital productively.' 'Long, indeed, before this period, the very low rate of profits *will have arrested all accumulation*.'[90] Ricardo, however, discussed this tendency to breakdown merely as a theoretical possibility, without reckoning with its immediate realisation, as the tendency for profits to fall, caused by the rising cost of subsistence, is constrained by 'countertendencies'. 'This tendency, this gravitation as it were of profits, is happily checked at repeated intervals by the improvements in machinery, connected with the production of necessaries, as well as by discov-

90 Ricardo 1912, pp. 71, 73 and 71–2. [Grossman's emphasis. The second interpolation is the translator's.]

eries in the science of agriculture.'[91] But, on the other hand, Ricardo expressed a certain disquiet in relation to the more distant future of capitalism and foresaw a time when the tendency in question could become disastrous for its continued existence. 'If our progress should become more slow; if we should attain the stationary state, from which I trust we are yet far distant, then will the pernicious nature of these laws become more manifest and alarming.'[92] Hence it is precisely in Ricardo that we find, as Marx writes, 'horror at the falling rate of profit'; hence, in his view it is 'the bourgeois twilight of the gods'.

Ricardo's theory of breakdown derives from the *insufficient valorisation* of capital at fairly advanced stages of capital accumulation. The actual phenomenon, the tendency for the rate of profit to fall, was identified correctly by Ricardo but his explanation was the *natural law* of the declining productivity of the soil. Marx only had to develop the theory further and revise it critically by replacing the natural law with a *social* one, arising from the specific nature of the capitalist mode of production.

The theory of breakdown already acquired a more mature form in John Stuart Mill's work,[93] i.e. the theory that 'the progress of [capitalist] society must "end in shallows and in miseries"'.[94] However, it appears in Mill beset by the distortions of a false theory of wages (the wage fund theory), a false theory of ground rent, an erroneous conception that fixed capital has no influence over the level of the rate of the profit[95] and finally by lack of clarity about the decisively important role of profit for the existence of the capitalist mode of production. All this obscures the genuine significance and implications of breakdown theory for capitalism.

John Stuart Mill asks, 'Towards what *ultimate point* is society tending by its industrial progress?'[96] His answer is that capital – assuming an isolated economy – has a tendency to decline to a definite minimum [rate of profit] required for capital accumulation. '[W]hen once it is reached, no further increase of capital can for the present take place' and the capitalist economy will have 'attained … the *stationary state*'.[97] The difference between Mill's conception and that of Ricardo and his disciples is that the latter saw in this tendency what Marx calls the 'bourgeois twilight of the gods', 'the day of judge-

91 Ricardo 1912, p. 71.
92 Ricardo 1912, p. 63.
93 Mill 1890 pp. 484–91.
94 Mill 1890, p. 495.
95 Mill 1890, pp. 486, 492–3.
96 Mill 1890, p. 494. [Grossman's emphasis.]
97 Mill 1890, p. 485. [Grossman's emphasis.]

ment', while Mill accepts it with a Stoic sense of calm and equanimity. 'I cannot, therefore, regard the *stationary state of capital* and wealth with the unaffected aversion so generally manifested towards it by political economists of the old school.'[98] From the standpoint of his petty-bourgeois reformism, he wants to alleviate capital's disquiet with the remark that 'a stationary condition of capital … implies no stationary state of human improvement',[99] on the contrary it makes possible a state of society in which 'no one is poor, no one desires to be richer'.[100] In his utopianism, thoroughly at odds with reality, Mill seems to have forgotten that the accumulation of capital is an essential condition of capitalist production, that capitalists have not the slightest interest in 'human improvements', but are interested solely in the level of profitability. In this respect Ricardo and his school showed a more correct understanding of capitalism's conditions of existence than Mill.

If these obviously essential points are disregarded, it must be conceded that Mill had a much greater insight into the breakdown tendency and its causes and also into many of the counteracting moments which weaken it. Under the preliminary assumption of unchanging technology, he developed his 'fundamental proposition' that 'it would require but a short time to reduce profits to the minimum, if capital continued to increase at its present rate, and no circumstances having a tendency to raise the rate of profit occurred in the meantime. *The expansion of capital would soon reach its ultimate boundary*'. Under such circumstances, 'there would be great difficulty in finding *remunerative employment* every year for so much new capital', and 'that there would be what used to be termed a general glut'.[101] 'The difficulty would not consist in any want of a *market*.' With a proportional distribution of the total capital across individual branches of industry, they would provide markets for each other. The problem would be finding *new opportunities* for the investment of this capital 'without submitting to a rapid reduction of the rate of profit'.[102]

For if a constant population is assumed from the start, wages would have to rise due to the growth of capital seeking investment opportunities, while 'There being no more labour than before, and no improvements to render the labour more efficient, there would not be any increase of the produce'. Under such

98 Mill 1890, p. 496. [Grossman's emphasis.]
99 Mill 1890, p. 498.
100 Mill 1890, p. 496.
101 Mill 1890, p. 485. [Grossman's emphasis.]
102 Mill 1890, p. 486. [Grossman's emphasis.]

circumstances, further growth with the 'same gross return' would make no sense.[103]

But even in the case of an expanding population, 'An augmentation of capital, much more *rapid* than that of population, must [likewise] soon reach its *extreme limit*, unless accompanied by increased efficiency of labour (through inventions and discoveries, or improved mental and physical education)'.[104]

Of course, this 'extreme limit' is only that under the assumptions made above and can be delayed or extended somewhat if there are 'counteracting circumstances'.[105] Mill enumerates the circumstances that counteract absolute overaccumulation: 1) worsening conditions for workers; 2) devaluation or destruction of capital; 3) improvements in production technology; 4) foreign trade, to the extent that it delivers the elements of production, raw materials and means of subsistence less expensively; finally 5) export of capital to the colonies or to foreign countries.[106] We will examine these circumstances later in more detail.

Whoever compares the relevant points in the third volume of *Capital*, which deal with the tendential fall in the rate of profit and *insufficient valorisation* as a consequence of the overaccumulation of capital, with Mill's breakdown theory, described here, will immediately realise that Marx's theory of breakdown set out from Mill's. Nor can there, consequently, be any doubt[107] that

---

103 Mill 1890, p. 486.

104 Mill 1890, p. 486. [Grossman's emphasis.]

105 Mill 1890, p. 487.

106 Mill 1890, pp. 487–90.

107 Yet in Luxemburg one finds not one syllable about this theory of breakdown in Marx's work. When one of her critics in the *Dresdner Volkszeitung* [possibly Anonymous 1913, although the author's point is that made by Luxemburg and accepted from her by Grossman] argued that 'capitalism will eventually collapse "because of the falling rate of profit"' (Luxemburg 2015b, p. 499), she made fun of him without noticing that in doing so she was at the same time also abandoning Marx's breakdown theory. She wrote:

> One is not too sure exactly how the dear man envisages this – whether the capitalist class will at a certain point commit suicide in despair at the low rate of profit, or whether it will somehow declare that business is so bad that it is simply not worth the trouble, whereupon it will hand the key over to the proletariat? However that may be, this comfort is unfortunately dispelled by a single sentence of Marx, namely the statement that for 'big capitals, the mass of profit outweighs the rate'. Thus there is still some time to pass before capitalism collapses because of the falling rate of profit, roughly until the sun burns out. (Luxemburg 2015b, p. 499) [The seriously mistranslated quotation from Marx has been replaced with the accurate translation in Marx 1981, p. 368.]

It is scarcely possible to find a better example of the complete collapse of Marxist thinking than these words. And it is precisely about these words of Luxemburg that Bukharin

Marx provided deeper foundations for Mill's theory and made it consistent with his own law of value. In its external organisation it already displays the same logical construction one finds in Ricardo and Mill. Marx, too, deals with the problem in two stages, first the tendency towards breakdown then the counteracting tendencies, and refers to the fact that the process of capital accumulation 'would entail the rapid *breakdown* of capitalist production, if *counteracting tendencies* were not constantly at work alongside this centripetal force, in the direction of decentralisation'.[108] Marx actually mentions all the 'counter tendencies' adduced by Mill, although he adds others and to an extent formulates them theoretically in different ways (e.g. the function of international trade, where Mill, in contrast to Marx, follows Ricardo).

7 Marx's Theory of Accumulation and Breakdown

In discussing the developmental tendencies of a system, in this case the tendency of accumulation to adjust to the growth of population, as Otto Bauer does, it is not enough to look at one year or similarly short periods of time. As every statistician knows, the development of the system has to be observed over a longer period. Bauer did not do this. He confined his calculations to a mere four cycles of production. This is the source of the errors in his study.[109] For the problem is whether accumulation under the conditions postulated by Bauer is possible *in the long run*. If Bauer had followed through the development of the reproduction process over a sufficiently long period, he would have immediately found that his system necessarily breaks down.

If the constant capital expands by 10 per cent every year then it grows to 292,820, 322,102, and 354,312 in years 5, 6, and 7, respectively, etc. In year 10 it grows to 471,590, in year 15 to 759,500, in year 19 to 1,111,983 (see Table 2 below).[110]

writes: 'Without doubt, all that is essentially correct' (Bukharin 1972, p. 262). We will see later how things stand with the 'correctness' of this conception.

108 Marx 1981, p. 355. [Grossman's emphasis.]

109 The same is true of Tugan-Baranovsky, who only tracks the evolution of his schema over three years and thinks that 'it is unnecessary to go on with this analysis … into the fourth, fifth, and following years' (Tugan-Baranovsky 2000, p. 71).

110 [Rather than the reproducing some erroneous figures originally provided by Grossman, those in this table were calculated in a spreadsheet, using his formulae. They also confirm Grossman's conclusions.]

TABLE 2 Continuation of Bauer's reproduction schema

Year	c	v	k	a_c	a_v	AV	k/s %	$(a_c+a_v)/s$ %	$s/(c+v)$ %
1	200,000	100,000	75,000	20,000	5,000	400,000	75.00	25.00	33.33
2	220,000	105,000	77,750	22,000	5,250	430,000	74.05	25.95	32.31
3	242,000	110,250	80,538	24,200	5,513	462,500	73.05	26.95	31.30
4	266,200	115,763	83,354	26,620	5,788	497,725	72.00	28.00	30.31
5	292,820	121,551	86,191	29,282	6,078	535,921	70.91	29.09	29.33
6	322,102	127,628	89,037	32,210	6,381	577,358	69.76	30.24	28.38
7	354,312	134,010	91,878	35,431	6,700	622,331	68.56	31.44	27.44
8	389,743	140,710	94,700	38,974	7,036	671,164	67.30	32.70	26.53
9	428,718	147,746	97,486	42,872	7,387	724,209	65.98	34.02	25.63
10	471,590	155,133	100,217	47,159	7,757	781,855	64.60	35.40	24.75
11	518,748	162,889	102,870	51,875	8,144	844,527	63.15	36.85	23.90
12	570,623	171,034	105,420	57,062	8,552	912,691	61.64	38.36	23.06
13	627,686	179,586	107,838	62,769	8,979	986,857	60.05	39.95	22.25
14	690,454	188,565	110,091	69,045	9,428	1,067,584	58.38	41.62	21.45
15	759,500	197,993	112,144	75,950	9,900	1,155,486	56.64	43.36	20.68
16	835,450	207,893	113,953	83,545	10,395	1,251,235	54.81	45.19	19.93
17	918,995	218,287	115,474	91,899	10,914	1,355,570	52.90	47.10	19.19
18	1,010,894	229,202	116,652	101,089	11,460	1,469,298	50.90	49.10	18.48
19	1,111,983	240,662	117,430	111,198	12,033	1,593,307	48.79	51.21	17.79
20	1,223,182	252,695	117,742	122,318	12,635	1,728,572	46.59	53.41	17.12
21	1,345,500	265,330	117,513	134,550	13,266	1,876,160	44.29	55.71	16.47
22	1,480,050	278,596	116,661	148,005	13,930	2,037,243	41.87	58.13	15.84
23	1,628,055	292,526	115,094	162,805	14,626	2,213,107	39.34	60.66	15.23
24	1,790,860	307,152	112,709	179,086	15,358	2,405,165	36.69	63.31	14.64
25	1,969,947	322,510	109,390	196,995	16,125	2,614,967	33.92	66.08	14.07
26	2,166,941	338,635	105,010	216,694	16,932	2,844,212	31.01	68.99	13.52
27	2,383,635	355,567	99,425	238,364	17,778	3,094,770	27.96	72.04	12.98
28	2,621,999	373,346	92,478	262,200	18,667	3,368,690	24.77	75.23	12.46

TABLE 2 (*cont.*)

Year	c	v	k	a_c	a_v	AV	k/s %	$(a_c+a_v)/s$ %	$s/(c+v)$ %
29	2,884,199	392,013	83,992	288,420	19,601	3,668,225	21.43	78.57	11.97
30	3,172,619	411,614	73,771	317,262	20,581	3,995,846	17.92	82.08	11.48
31	3,489,880	432,194	61,596	348,988	21,610	4,354,269	14.25	85.75	11.02
32	3,838,868	453,804	47,227	383,887	22,690	4,746,476	10.41	89.59	10.57
33	4,222,755	476,494	30,394	422,276	23,825	5,175,744	6.38	93.62	10.14
34	4,645,031	500,319	10,800	464,503	25,016	5,645,669	2.16	97.84	9.72
35	5,109,534	525,335	0	510,953	14,382 26,267 (required) 11,885 (deficit)	6,160,204		102.26	9.32
36	5,499,386* (functioning capital) 5,620,487 (available capital) 121,101 (excess capital)	539,717 (active population) 551,602 (available population) 11,885 (reserve army)	0	539,717 562,049 (required) 22,333 (deficit)	0 27,580 (required) 27,580 (deficit)	6,578,820		107.74	8.94
				total deficit: 49,913					

* 5,620,487 : 551,602 = 5,499,386 : 539,717 [i.e. c in year 36 is the amount of capital which can be set in motion by the available labour power, at the capital to labour ratio which would have held had the accumulation of variable capital been able to continue at the rate initially assumed.

[This table has been created by using Bauer's and Grossman's formulae in a spreadsheet and is therefore more accurate than Grossman's original table which contained arithmetical errors. The figures for $(a_c+a_v)/s$ in years 35 and 36, which are above 100 per cent, are the ratios of capital to be accumulated to total surplus value that would be necessary if the initial assumptions about the rates of accumulation of constant and variable were to be maintained.]

The part of surplus value to be accumulated as additional constant capital (a_c) grows at the same rate, thus it expands from 29,282 in year 5 to 111,198 in year 19.[111]

By contrast, variable capital will grow by only five per cent in the fifth, sixth and seventh years amounting to 121,551 in year 5, 127,628 in year 6, 134,010 in year 7 etc. The additional variable capital (a_v) will likewise grow at five per cent. Starting at 5,788 in year 4, it will expand to 6,078 in year 5, to 6,381 in year 6, to 6,700 in year 7 etc.

If we follow developments, under Bauer's assumptions, over a further 30 years, it is apparent that the part of surplus value earmarked for capitalists' personal consumption (k), which amounts to 86,191 in the fifth year and grows further over the following years, can only expand up to a definite *peak*. After this *it must necessarily decline*, because it is swallowed up by the part of surplus value required for capitalisation.

a The Failure of Valorisation Due to Overaccumulation

Despite the fall in the rate of profit, accumulation proceeds at an accelerated tempo because the scope of accumulation develops not in relation to the level of the rate of profit but in proportion to the weight of the already accumulated capital,[112] 'since beyond certain limits a large capital with a lower rate of profit

111 I call the magnitudes a_c and a_v the rate of accumulation of constant and variable capital, respectively. In doing so, I emphasise the following, to avoid any misunderstanding: the magnitudes mentioned here have a *double* nature. On the one hand, they are ratios, a rate, to the extent that it is a matter of determining their size. This rate depends on the the size of the already accumulated social capital and in our schema is assumed to be a *constant magnitude*. It always amounts to 10 per cent in the case of c and five per cent in the case of v. For this reason, the magnitudes a_c and a_v are *rates* of accumulation. On the other hand, a_c and a_v also express absolute magnitudes, a mass, namely the components of surplus value s whose absolute amount changes (grows) from year to year and is accumulated every year. The rate of accumulation is thus simultaneously an index of a changing *mass* of accumulation and precisely this circumstance is of decisive importance for our investigation.

112 Marx 1981, p. 359. Marx's system is really not understood at all if it is proposed, as Boudin does, that the fall in the rate of profit '*naturally tends to retard the progress of the process of accumulation*, and works in the nature of an automatic brake … *checking* the *tempo* of its growth' (Boudin 1907, p. 160). [Grossman's emphasis, apart from '*tempo*'.] And it is precisely with reference to this work that Kautsky states, in its preface, that it 'develops the salient points of Marx's system' (Kautsky 1909c, p. vii). We have shown that it is not only not 'natural' that accumulation is slowed down by the fall in the rate of profit but, on the contrary, its growth can accelerate. What is more, Marx explicitly refers to 'an *accelerated* accumulation of capital' that occurs as the forces of production develop (Marx 1981, p. 331). [Grossman's emphasis.] He writes about 'capitalist production [advancing], and

accumulates *more quickly* than a small capital with a higher rate of profit'.[113] In fact, we see that after 10 years the initial capital of 300,000 expands to 681,638 [in year 11], i.e. by 227 per cent, despite a continuous fall in the rate of profit, which declines from 33.3 per cent in the first year to 24.8 per cent in the tenth. In the second decade the rate of expansion of capital amounted to 236 per cent, from 681,638 to 1,610,830 in the 21st year, although the rate of profit fell even further, from 24.75 to 16.5 per cent in that year. Finally, during the third decade, when the rate of profit was even lower (falling from 16.5 per cent to 11.0 per cent), capital accumulation proceeded even faster, increasing by 243 per cent, from 1,610,830 to 3,922,075 in the 31st year. So Otto Bauer's schema involves *accelerated* accumulation, despite a declining rate of profit.

Indeed, the constant part of capital grows so rapidly that its share of annual production rises from 50 per cent in year 1 to 82.3 per cent in year 34 and 82.9 per cent in the following year. Capitalist consumption (k) of 117,430 in the 19th year, finally reaches its *peak* the next year, with a value of 117,742, and from the 21st on (the r point) *falls* not only relatively but absolutely. In the 25th year it still amounts to 109,390, in the 30th only 73,771. Already in the 34th year it reaches its *lowest* level, of 10,800, only to *disappear* entirely in the following, 35th year, consequently the system must break down. Let us take a closer look at the relationships in the last two years of the system. The *last* 'equilibrium year' would be the 34th [as shown in the next table, below].[114]

Already in the following, 35th year, the k part of surplus value *disappears*, i.e. the capitalist class retains no means of subsistence for its own personal consumption; *all* existing means of subsistence have to be devoted to the purposes of accumulation. In spite of this there is a deficit of 11,885 a_v. Department II can therefore only produce consumer goods worth 539,717, while, on Bauer's assumption of a five per cent growth in population, in the 36th year 551,602 v is required, and that just for workers' consumption, so that the capitalists, from then on, have to live on air! The result is that *Bauer's assumptions cannot be*

---

with it *accelerated* accumulation' (Marx 1981, p. 347) [Grossman's emphasis]; 'A *fall* in the rate of profit, and *accelerated* accumulation, are simply different expressions of the same process' (Marx 1981, p. 349). [Grossman's emphasis.]

113 Marx 1981, p. 359. [Grossman's emphasis.] This exact formulation of the process of accumulation and its consequences, the presentation of its changing courses and tempos in different phases of accumulation (initial and late phases), with a higher or lower rate of profit, etc. would, it seems to me, be extremely difficult without the help of mathematical devices. As Marx restricted himself to reporting the results of his investigations, it is justifiable to assume that Marx derived them mathematically. More rigorous research into Marx's mathematical manuscripts should, in my view, turn up the formula for breakdown either as presented here or in some related form.

114 [See the Appendix for Grossman's original table.]

Year	Department	c	v	k	a_c	a_v	AV
34	I	4,327,608	390,963	8,439	378,907	3,617	5,109,534
	II	317,423	109,356	2,361	85,596	21,399	536,135
	I+II	4,645,031	500,319	10,800	464,503	25,016	5,645,669
35	I	4,789,723	415,382	0	421,001	3,779	5,620,487
	II	319,811	109,953	0	89,952	22,488	539,716
	I+II	5,109,534	525,335	0	510,953	14,381 26,267 (required) 11,885 (deficit)	6,160,204

sustained any further. The system breaks down; the emerging crisis of the system expresses the breakdown of valorisation. From the 35th year on any further accumulation of capital, under the conditions postulated, would be *pointless*. The entrepreneurs would be engaging in the effort of managing a system of production whose fruits accrue exclusively to the working class. Already in the 35th year, the expanded capital would start to yield an insufficiently large profit to secure the k component required for the entrepreneurs' consumption. The smaller capital of the 34th year (4,645,031 c + 500,319 v = 5,145,350) still yielded a k component of 10,800 destined for their personal consumption. The even larger total capital of 5,634,869 in the 35th year (5,109,534 c + 525,335 v) yields *no* such share.

'*Overproduction of capital*', Marx writes, '*never means anything other than overproduction of means of production – means of labour and means of subsistence – that can function as capital*, i.e. can be applied to exploiting labour at a given level of exploitation; a given level, *because a fall in the level of exploitation below a certain point produces disruption and stagnation in the capitalist production process, crisis, and the destruction of capital*.'[115]

If the state just described persisted, it would mean the disintegration of the capitalist mechanism, its economic end. For the class of entrepreneurs, accumulation would not only be pointless, it would be *objectively impossible* because the overaccumulated capital would lie idle, could not function and would yield no valorisation, no profits. There would be 'a sharper and more

115 Marx 1981, p. 364. [Grossman's emphasis.]

sudden fall in the general rate of profit'[116] which would lead to a sudden, sharp *devaluation of capital*. This fall in the rate of profit during the stage of overaccumulation is, however, quite different from the fall in the rate of profit during the initial stage of capital accumulation. The fall in the *rate of profit*, as such, is a permanent feature of the progress of accumulation in all its stages, although at the initial stages of accumulation it is accompanied by a *growing mass of profit* and growth in the consumption of the capitalist class (the k part, abstracting for the moment from the parts of surplus value destined for accumulation, a_c and a_v). 'Beyond certain limits', as Marx writes, (we label this limit r_1; in the example of our schema it occurs in the 21st year of accumulation)[117] the fall in the rate of profit is accompanied by a *fall* in the part of surplus value destined for capitalist consumption (k) and soon afterwards also of those parts destined for accumulation. 'The fall in the rate of profit would be accompanied *this time by an absolute decline in the mass of profit* … And the reduced mass of profit would have to be calculated on an enlarged total capital.'[118]

Marx's theory of the economic cycle, described here, which identifies the growing valorisation of social capital as the decisive cause of capital accumulation in the upswing and deficient valorisation as the cause of the downturn into crisis, *has been fully confirmed by recent empirical research*. Wesley Clair Mitchell for the United States, Jean Lescure for France in the period 1874–1919, and finally [Josiah] Stamp for Great Britain in the period 1880–1914 have proved that in periods of boom profits do in fact rise uninterruptedly, that conversely every crisis is preceded by a decline in the level of profitability.[119] According to Lescure, 'The pursuit of profits forms the driving force of the whole organism'. 'The priority of the decline in profits seems to us to be conclusively established … It is the decline of expected anticipated profits that puts a stop to the establishment of new enterprises and thus unleashes the crisis by cutting back on orders for means of production …' The hunt for profit, insufficient valorisation! One gets the impression of reading a chapter from Marx's *Capital*. This agreement with Marx is, however, only with regard to the *facts*, but not their *explanation*. 'Why is there a decline in anticipated profits?', asks Professor Lescure. 'Since profit is the difference between prime cost and sales price, *it is*

116 Marx 1981, p. 359. [Grossman's emphasis.]

117 [The limit Marx referred to did not relate to decline in the capitalists' consumption fund. Grossman quotes the phrase in its original context above, p. 138–139.]

118 Marx 1981, p. 360. [Grossman's emphasis. Marx's observation was made in the course of a discussion which was not entirely coherent and included the possibility of a fall in the rate of surplus value as wages were bidded up.]

119 See Mitchell 1927; Stamp 1918; Lescure 1910; Lescure 1928, p. 34.

obvious why this margin must diminish.'[120] Lescure has no other explanation of the decline in profitability than changes in the prices of commodities and their costs of production. He overlooks the fact that profit is a relative magnitude, that profitability depends on the size of the capital, that is, on the relationship between the increase in profits and the increase in capital. As has been demonstrated, overaccumulation, i.e. insufficient profitability, can and indeed must emerge at a certain stage of accumulation, even when the levels of prices and of costs of production are constant. It can also become unprofitable to expand when the level of profits remains the same or even when it rises. But, to understand these complicated circumstances, the simple means of observing price movements are not sufficient. A more sophisticated method of analysis is unavoidable; in employing it, the assumption that the prices of all elements of costs are constant is crucial for accurate research. Price changes in the elements of costs (means of production, wages, interest) *simply accompany and either encourage or constrain upswings and downturns but do not generate them*. As Lescure, already so close to the truth, paid attention solely to price changes in cost elements he became lost in secondary issues and, thanks to his erroneous method, he barred the path to understanding that the accumulation of capital is the true cause of periodic breakdowns in profitability.

b The Formation of the Reserve Army of Labour and of Idle Capital as a Consequence of Overaccumulation

Insufficient valorisation due to overaccumulation is, however, *only one side* of the accumulation process. With it, the account of accumulation is not complete. It has a second side. Insufficient valorisation due to overaccumulation means that capital grows faster than the surplus value that can be squeezed from a given population; that the basis of valorisation, the population, becomes too small in relation to the swollen capital. But as overaccumulation emerges, as a necessary *consequence*, it soon generates the opposite phenomenon. In the final phase of the business cycle, the mass of profit (s), and therefore also its accumulated constant (a_c) and variable (a_v) parts, contracts so sharply[121] that it no longer suffices to sustain accumulation on the previous assumptions, that is, in accord with the annual increase in population. In year 35 – to illustrate this phenomenon with our schema – an accumulation 510,953 a_c + 26,267

120 Lescure 1928, pp. 32, 34. [Lescure emphasised the whole second sentence in the second quotation.]

121 [In fact it is the *rate of growth* of surplus value, rather than the absolute amount of surplus value, which contracts.]

a_v = 537,220 is required. But the available mass of surplus value totals only 525,335. The accumulation required is 102.3 per cent of the actually *available* surplus value (despite the assumption posited that the rate of surplus value is 100 per cent), which is a logical contradiction and impossible in reality. From this point on valorisation no longer suffices to enable accumulation to proceed *pari passu*[122] with the growth of population. From year 35 – on the basis of the existing level of technology – accumulation cannot keep pace with the growing population. Accumulation is too small, *a reserve army inevitably arises* and must grow larger every year. In our schematic analysis of the reproduction process, which presupposes dynamic *equilibrium*, where, by definition there can be no surplus population, no reserve army, it first appears as the *product* of an advanced stage of accumulation. The assumptions made initially can no longer be sustained; they are violated. 'A surplus population of workers is a necessary *product* of accumulation.'[123] In fact, the reproduction schema shows us (see Table 2 on page 136) that in year 35 the rate of accumulation of variable capital amounts to only 14,382 a_v, instead of the requisite 26,267 a_v, and is therefore no longer sufficient to fully employ the available population of 551,602 persons. 11,885 workers remain jobless; a reserve army forms. And, because only a part of the working population now enters the process of production, only a part of the additional constant capital (510,953a_c) is required to buy additional means of production. If with a population of 551,602 people a constant capital of 5,620,487 is used, a population of 539,716 uses a constant capital of only 5,499,386. There remains an *excess* capital of 121,101, with no possibility for investment. The schema provides us with a textbook example of the conditions Marx had in mind when he called the corresponding section in *Capital*'s third volume 'Surplus Capital alongside Surplus Population'.[124] Overaccumulation, that is insufficient valorisation, arises because the population base is too small. And yet, without it being possible to identify a logical contradiction, there is overpopulation, a reserve army. 'This plethora of capital arises from *the same* causes that produce a relative surplus population and is therefore a phenomenon that complements the latter, even though the two things stand at opposite poles – unoccupied capital on the one hand and an unemployed working population on the other.'[125]

And a few pages later Marx writes, 'It is no contradiction that this overproduction of capital is accompanied by a greater or smaller relative surplus pop-

122 ['*Pari passu*' means 'at an equal pace'.]
123 Marx 1976b, p. 784. [Grossman's emphasis.]
124 Marx 1981, p. 359 et seq.
125 Marx 1981, p. 359. [Grossman's emphasis.]

ulation. The same causes that have raised the productivity of labour, increased the mass of commodity products, extended markets, accelerated the accumulation of capital, in terms of both mass and value, and lowered the rate of profit, these same causes have produced, and continue constantly to produce, a relative surplus population, a surplus population of workers who are not employed by this *excess capital on account of the low level of exploitation of labour* at which they would have to be employed, or at least *on account of the low rate of profit* they would yield at the given rate of exploitation.'[126]

A downright classic illustration of this is now offered by the United States of America (end March 1928). The world's greatest capitalist power, the country with the greatest accumulation of capital, is currently suffering from an excess of capital, a lack of investment opportunities and, therefore, massive speculation in real estate and stock market securities (see the section on capital export below). And at the same time – although it has not yet come to a crisis – there is a surplus working population: the number of unemployed workers has climbed to four million, compared with a normal level of about one million! In the long run, that is, if no countertendencies come into play (export of capital, devalorisation, population growth etc.; see Chapter 3 below), the economic disintegration of the capitalist mechanism must necessarily result. Unemployed profitless capital on one side and a steadily growing reserve army of labour on the other, and not because *too much* surplus value is produced (as Luxemburg asserts) but because, in relation to the accumulated mass of capital, *too little* surplus value is available. Already from the 21st year in the schema, cap-

126 Marx 1981, p. 364. [Grossman's emphasis.] According to Marx, therefore, too much capital and too much population exist only in relation to valorisation, to the rate of profit. Luxemburg violates Marx's lucid ideas when she foists her own theory of lack of markets, of which there is no trace in Marx, into Marx's text. When citing the sentence from Marx that is quoted above, she asks, 'In relation to what is there "too much" of either? In relation *to the market or sales possibilities* existing under "normal" conditions, that is, conditions that ensure receipt of the required profit. Since the market for capitalist commodities periodically becomes too narrow, part of the capital must be left to lie fallow' (Luxemburg 2015b, p. 425). [Grossman's emphasis.] But, in the sentence quoted in the text, Marx makes absolutely no reference to lack of markets and even writes, on the contrary, about the fact that the same causes which *expand* markets and *accelerate* accumulation have reduced the rate of profit. Thus the very opposite of Luxemburg's assertion: a decline in the rate of profit not due to a lack of markets and the impossibility of accumulation but rather as a *result* of accelerated accumulation and of the expansion of market outlets. Luxemburg refers to the market for capitalist commodities 'periodically' becoming too narrow. She makes not the slightest attempt, however, to explain why this lack of markets emerges *periodically* and, from her standpoint, explanation of the periodicity of crises is not possible at all.

ital accumulation would cease to make any sense for the entrepreneur (the *r* point), something that becomes crassly obvious in year 35 when the whole of the *k* part disappears (*Z* point).

> The fact that the means of production and the productivity of labour increase more rapidly than the productive population expresses itself, therefore, under capitalism, in the inverse form that the working population always increases more rapidly than the valorisation requirements of capital.[127]

The formation of a reserve army, that is, the 'setting free' of workers, which is discussed here, must be strictly distinguished from the setting free of workers due to machinery. The displacement of workers by machinery, which Marx describes in the empirical part of *Capital*'s first volume (chapter 15: 'Machinery and Large-Scale Industry') is a *technical* fact elicited by the growth of *MP* in relation to *L*. As such, it is not a specifically capitalist phenomenon. *All* technological advance relies on labour becoming more productive, that it is saved on, set free in relation to a given product. That machinery 'frees' labour is an incontrovertible fact that needs no 'proof', since it flows from the very concept of machinery as labour-saving means of production. This setting free of labour will occur in *any* mode of production, including the planned economy of socialism, to the extent that it applies technological advances. It follows from this circumstance that Marx could not possibly have derived the breakdown of the *capitalist* mode of production from this 'natural' fact. In chapter 25 of *Capital*'s first volume, where Marx derives the law of breakdown from the general law of capitalist accumulation, the setting free of the worker through improvements in technology (the introduction of machinery) is not, in fact, mentioned. Marx does not foreground changes in the *technical* composition of capital (the ratio *MP* : *L*) but changes in the *organic* composition of capital ($c : v$). 'The *most important* factor in this investigation is the composition of capital, and the changes it undergoes in the course of the process of accumulation.' And a few lines later he adds, by way of clarification, 'Wherever I refer to the composition of capital, without further qualification, its *organic* composition is always understood'.[128] But the technical composition forms only one component of the organic composition; the latter is something more. It is a value composition determined by and reflecting changes in the technical composition. Thus Marx

127 Marx 1976b, p. 798.
128 Marx 1976b, p. 762. [Grossman's emphasis.]

here transforms the technical side of the labour process, the relation *MP* : *L*, which is common to all modes of production, into a value relation $c : v$, into the specific form observed under *capitalism*. Under the capitalist mode of production, the means of production *MP* and *L* figure as components of capital, *as values*, and they have to be valorised, that is, yield a profit. The valorisation process, not the technical process of production, is the characteristic and driving force of capitalist production. It is interrupted when valorisation for the entrepreneur ceases, even if, from the standpoint of the satisfaction of needs, the technical process of production is still desirable and necessary. Workers are then dismissed. What is entirely ignored in the previous literature is that the setting free of workers, the formation of the reserve army, which Marx describes in the chapter on accumulation, is not caused by the technical fact of the introduction of machinery but is due to *insufficient valorisation* emerging at an advanced stage of accumulation, to a cause that is the exclusive consequence of the specifically capitalist mode of production. Workers are set free not because they are displaced by machinery but because, at a certain level of capital accumulation, profits become too small, so installing the requisite machines etc. is *not worthwhile* and profits are insufficient to pay for them.[129]

129 'It is capitalist accumulation itself', Marx writes, 'that constantly produces, and produces indeed in direct relation with its own energy and extent, a relatively redundant working population, i.e. a population which is superfluous to capital's average *requirements for its own valorisation*, and is therefore a surplus population' (Marx 1976b, p. 782). [Grossman's emphasis.] About the industrial reserve army, he writes 'it creates a mass of human material always ready for exploitation by capital in the interests of capital's own *valorisation requirements*' (Marx 1976b, p. 784; similarly on pp. 784, 788, etc.). [Grossman's emphasis.] The core of Marx's theory of accumulation lies not in the displacement of labour by machines but in the setting free of workers due to insufficient valorisation. Marx never tired of emphasising the opposition between the natural, technical fact of the relation of *MP* to *L* and its specific capitalist form. '[T]he law by which a constantly increasing quantity of means of production may be set in motion by a progressively diminishing expenditure of human power, thanks to the advance in the productivity of social labour … expresses itself under capitalism.' And on the basis of capitalism 'the valorisation requirements of capital' are decisive (Marx 1976b, p. 798). 'The law of capitalist production … can be reduced simply to this: the relation between capital, accumulation and the rate of wages is nothing other than the relation between the unpaid labour which has been transformed into capital and the additional paid labour necessary to set in motion this additional capital. It is therefore in no way a relation between two magnitudes which are mutually independent, i.e. between the magnitude of the capital and the numbers of the working population it is rather, *at bottom, only the relation between the unpaid and the paid labour* of the same working population' (Marx 1976b, p. 771). [Grossman's emphasis.] It is thus the relation $s : v$, that is, the rate of surplus value, therefore a problem of valorisation!

Luxemburg can scarcely deny that, according to Marx, crises, disturbances and finally the breakdown of capitalism result from insufficient valorisation:

The a_c part of surplus value destined for accumulation (additional constant capital) increases so rapidly that it progressively devours a larger and larger share of surplus value. It devours the k part, destined for capitalists' consumption, it devours a large part of the a_v part destined to pay workers (additional variable capital) and is still not sufficient to continue the accumulation of constant capital at the assumed rate of 10 per cent a year. In year 1 the accumulated constant capital (a_c) of 20,000 amounts to 20 per cent of the disposable surplus value of 100,000. Already by year 21 the a_c part at 134,550 comes to *over half the total surplus value* in that year, which is only 265,330. By year 30 the additional constant capital of 317,262 exceeds three quarters of the total surplus value of 411,614. And finally in year 35 it climbs to 510,953, that is, more than 97 per cent of the total available surplus value of 525,335. Only 14,382 survives as a residue to cover wages, whereas 26,267 units are required for the full employment of

---

> In the entire chapter that deals with the working population and its growth Marx speaks continually about the 'valorisation requirements' of capital. It is *to these*, according to Marx, that the working population must adjust its growth; and *this* is what other things depend on, such as the intensity of the demand for labour power at any given time; the level of wages; a lively and brisk economic situation, or its opposite, i.e. prosperity or crisis. *What exactly are these 'valorisation requirements', about which Marx speaks at such great length* and about which Bauer says not a mumbling word? (Luxemburg 2015b, p. 431) [Luxemburg only emphasised '*to these*' and '*this*'.]

Luxemburg provides the answer a few pages later where she writes that accumulation 'adjust[s] to … changing *"valorisation requirements", i.e., to market possibilities*' (Luxemburg 2015b, p. 434). [Grossman's emphasis; editor's interpolation.] So here we finally have the great discovery! Only, it is certainly remarkable that Marx 'consistently' only writes about valorisation if he means market prospects. As if Marx was afflicted by a fear of calling things by their proper name and preferred disguises like always writing 'b' when he meant 'a'. It would be hard to outdo Luxemburg's vacuous scholasticism.

Bukharin also has to concede that in Marx's system valorisation and indeed insufficient valorisation play the decisive role in the failure of the capitalist mechanism. So he tells us that 'the *movement of profits*' represents 'the major propellent of the capitalist economy' (Bukharin 1972, p. 266). [Grossman's emphasis.] He does not notice, however, that insufficient valorisation flows inexorably from the *inner* laws of the capitalist mode of production as the nesessary consequence of accumulation and therefore, like Luxemburg, he ascribes the failure of valorisation to purely contingent and *external* factors, namely, that the War brought about economic ruin (Bukharin 1972, pp. 266–7).

Of course, war *can* bring about economic ruin; certainly valorisation *can* fail if no markets are available. Such formulations only conceal the real issue. The real problem still consists in showing *how profit, valorisation can evaporate* even when the most favourable case for capitalism is assumed, that is, a state of equilibrium where an endless market for commodities seems assured, where no wars destroy the mechanism from the outside, and where the breakdown of valorisation nevertheless inevitably arises from the *internal* operation of the mechanism.

all workers. For the capitalists' consumption nothing remains at all. *The available mass of surplus value does not suffice* to secure valorisation of the swollen capital. For valorisation to continue on the previous basis, the surplus value in year 35 would have to amount to 537,220, not 525,335. What emerges is a surplus value deficit to the tune of 11,885. It follows that the next year's labour force of 551,602 workers cannot be fully employed in the production process, part of it remains unemployed. 11,885 workers remain without work and will produce no surplus value, with the result that, from now on, the basis for valorisation of the expanded capital becomes even narrower.

Long before this end point is reached, already from year 21 onwards, when the *k* part begins to decline absolutely, accumulation will have lost all meaning for the capitalists. For, in year 20, from a capital of 1,475,877 they would have drawn a k part of 117,742. By contrast, an expanded capital of 1,610,830 in the following year will yield a smaller consumption amount of just 117,513. And each further advance in accumulation will be accompanied by a *decline* in the *k* part.

At this point further accumulation will inevitably break off and the turn to crisis will occur.[130]

The fundamental importance of the *k* part, which capitalists consume, for the continued existence of the capitalist mechanism is only apparent now. If

130 Representatives of psychological theories of all shades are proud of their successes because they believe that individuals' preferences for specific commodities, which have no particular importance for the economy at all, provide a better explanation than the objective theory of value. But as soon as it is a matter of doing real science and laying out the dynamic of the social mechanism – the general laws of motion of capitalist development as well as the laws of cyclical fluctuations – they are meek and admit their theoretical impotence. In doing so, they elevate their own incapacity into a general rule, since they deny any law of regularity in the sequence of phenomena and therefore the possibility of knowledge about them. And, as Liefmann for example certainly tells us, this is

> because cyclical fluctuations in an economic order that is based on striving for profit are, in the last analysis, psychologically determined. In particular, *when* the turning point occurs depends, in the final analysis, on individual psychological circumstances, speculation in the broadest sense, the perspectives of influential economic leaders … pronouncements in the press, etc. The question of when and under what conditions the cycle turns *can, self-evidently, never be answered with precision* … The impulse for the turn-around does not happen according to some natural law, according to specific data … but is routinely given by *individual* considerations, whether because particular big speculators have decided the boom is at an end and sell or because particular bank directors have decided to rein in credit. (Liefmann 1928, pp. 76–7) [Grossman's emphasis.]

It is truly high time that this 'science' disappeared from science.

expanded reproduction, i.e. the accumulation of capital is to take place then surplus value must be deployed in *three* directions and be divided into three corresponding parts:

1. additional constant capital, a_c
2. additional variable capital, a_v, i.e. additional means of subsistence for workers, and finally
3. a consumption fund for the capitalists themselves, k

Each of these three parts is *equally necessary* for the extension of production on a capitalist basis. Let us suppose for a moment that the surplus value is only sufficient to cover the first two elements: then accumulation would be impossible. For we need to ask, for what purpose do capitalists produce and accumulate? To employ more workers? From the capitalist point of view, that would make no sense as soon as the capitalists secure no benefit from the employment of more workers. They would incur the trouble of managing production without gaining any advantages for themselves.

Finally, to the extent that it is a matter of income distribution, such a mode of production would lose its private capitalist character. Once the k part of surplus value, destined for the capitalist's own consumption, vanishes *surplus value in the sense of income obtained without labour will have disappeared*. For the other two parts of surplus value, additional constant capital a_c and additional variable capital a_v, retain their character as surplus value only so long as they serve to produce the third part, the capitalists' consumption fund, which they receive without [paying] an equivalent. Once this part vanishes, not an atom of unpaid labour goes to the capitalists' share. For the entire variable capital goes to workers and the constant capital exclusively serves to enable the labour process, whose entire annual product – to the extent that it is not necessary to replace means of production – accrues exclusively to the working class. Surplus value in the sense of unpaid labour, of surplus labour beyond the time required to produce the *necessary* means of subsistence, would have disappeared. *All means of consumption would now be necessary means of consumption*, catering entirely for workers' consumption. This part of surplus value that now serves for the extension of the productive apparatus over and above immediate needs would also have to be deployed to the same end in a socialist society.[131] The k part is therefore a precondition essential for and characteristic of capital accumulation.

131 'Surplus labour in some form must always remain, as labour beyond the extent of given needs' (Marx 1981, p. 958; similarly Marx 1989a).

The vacuous scholasticism of Luxemburg's argument can only be properly assessed once these relationships are grasped clearly. She contemptuously excludes precisely this element which, as has been demonstrated, is characteristic of accumulation, from her analysis. 'Yet, quite apart from everything else, the *growing* consumption of the capitalist class cannot be considered the purpose of accumulation; on the contrary, to the extent that this consumption occurs and increases, no accumulation takes place – the personal consumption of the capitalists is consistent with the rubric of *simple* reproduction.'[132] Luxemburg has not revealed the secret of how, under simple reproduction, the consumption of the capitalists can grow in the long run. She thinks she can solve real economic problems with scholastic phrases. Locating the cause (although not the only one) behind the capitalists' drive to accumulate in the sphere of simple reproduction, she asks dramatically: for what purpose is accumulation undertaken? Marx answers her by pointing to the circuit of capital, M – M′: the purpose of the whole production process, enrichment (valorisation), '*by no means excludes a growth in the capitalist's consumption in line with the increase in the magnitude of surplus value. In fact it absolutely includes it*'.[133] 'When a certain stage of development has been reached … [the capitalist's] expenditure [on luxuries] grows with his accumulation, without the one necessarily restricting the other.'[134] For Luxemburg, capital accumulation 'makes no sense' from the perspective of growing personal consumption by capitalists. Caught up in mercantilist trains of thought, accumulation and expansion of production only make sense to her if the consumption of capitalist commodities occurs in non-capitalist countries. 'We therefore find among the exponents of the Mercantile System …', Marx writes, 'long sermons to the effect … that a capitalist nation should leave the consumption of its commodities and the consumption process in general to the other more stupid nations'.[135] With this one sentence, we see that Marx already anticipated Luxemburg's entire theory.

It should not be assumed that entrepreneurs conduct themselves passively and will wait until the k part entirely disappears. Already long before then – at the latest from the r point, thus, in our schematic example, from year 21, when the k part starts to shrink absolutely – they will do everything to halt the tendency for it to fall. To this end, either the working class's wages must be forced down or the assumptions previously postulated must be violated, namely that constant capital must accumulate at 10 per cent annually if technological pro-

132 Luxemburg 2015a, p. 239. [Grossman's emphasis.]
133 Marx 1978, p. 149. [Grossman's emphasis.]
134 Marx 1976b, p. 741.
135 Marx 1978, p. 139.

gress is to keep pace with a five per cent annual increase in population. The result, therefore, would be that from now on accumulation amounts to not 10 per cent a year but *less*, only 9.5 or 8 per cent. *From now on*, the tempo of accumulation would have to slow down and that permanently and progressively. Accumulation would not be able to keep pace with population growth. Fewer and fewer machines etc. would be required and installed, which only means that the development of the forces of production would be constrained. It follows that, from this year on, an ever-growing reserve army would necessarily form. There would be slowing accumulation and the formation of an industrial reserve army, not because wages have risen, as Otto Bauer believes, but even though wages are constant throughout this period, as was assumed.

8 Marx's Theory of Breakdown Is Simultaneously a Theory of Crises

Marx's theory of accumulation presented here, however, leads us not only to a theory of breakdown but also to a *theory of crises*. The incapacity of the previous literature on Marx to grasp the essence of this theory arises here and everywhere from the misunderstanding of the method that underlies both his analysis and the structure of his main work. The objection has repeatedly been made that, despite the crucial role of crises in his system, Marx nowhere ever provided a comprehensive discussion of his crisis theory, that he made self-contradictory and scattered attempts at an explanation. This objection rests on a crude misunderstanding. The object of Marx's analysis is not crises but the capitalist process of reproduction in its totality. As a consequence of his method of research, Marx investigates the endless *circuit of capital* and its functions, through all phases of the reproduction process and at successively higher levels. Expressed in a formula this is

First circuit

$$M - C < \begin{matrix} MP \\ \\ L \end{matrix} \quad \ldots.\ P\ \ldots.\ C + c - M + m\ (= M')$$

Second circuit

$$M' - C' < \begin{matrix} MP \\ \\ L \end{matrix} \quad \text{etc.}$$

In analysing each of the phases which capital goes through in its circuit as money capital, productive capital and commodity capital, Marx asks how they impact on the process of reproduction, whether reproduction can proceed unobstructed, that is on its 'normal' course, or rather whether obstacles, disturbances in the various phases of the normal course of reproduction are possible; and what factors actually obstruct the reproduction process in each phase. A result of this method of investigation is that Marx necessarily had to return to the problem of crises at various places in his work, in order to assess the specific impact of each of the factors that come into play in different phases of capital's circuit.

The systematic discussion of the role of all these factors in the individual phases of capital's circuit has to be reserved for my principal work. Expressing the specific object of this study, the consequence of only a single, if decisively important, factor – the accumulation of capital from the standpoint of crises – is examined here. That is the consequence of the fact that the capital which began its first circuit as *M* opens the second circuit as *M′*.

We have shown that, so long as it can proceed undisturbed, i.e. without counteracting, weakening tendencies, this consequence must lead, from a certain exactly determinable level of capital accumulation, to a breakdown of the system.

Let us construct a co-ordinate system (Figure 1, below), o – X and o – Y, where the line o – Z is the line of accumulation, an equilibrium situation for the system ('normal valorisation'). From a particular level of capital accumulation, there is insufficient valorisation, e.g. in the direction Z – S, representing a *deviation* of the line of accumulation from equilibrium, i.e. the tendency to break down as the basic tendency of the system, its secular 'trend line'.

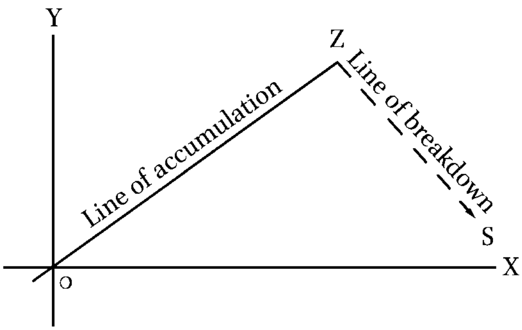

FIGURE 1

Let us now assume that in our coordinate system the breakdown tendency actually already sets in at point z_1 (Figure 2, facing) and manifests itself in

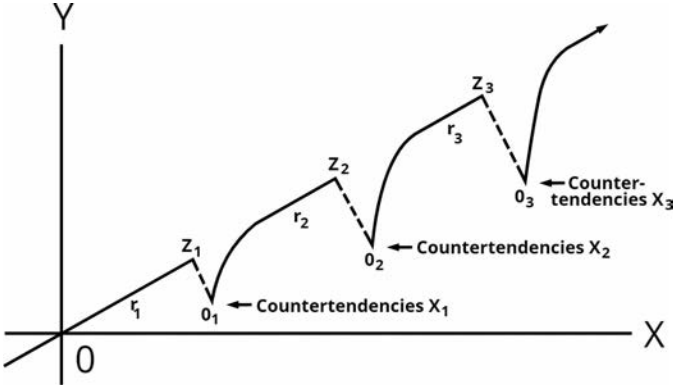

FIGURE 2

severe *devalorisation* of capital which began to overaccumulate at point r_1 (represented graphically by the dashed line z_1–o_1). Then the overaccumulated capital will be reduced back to the magnitude required for its normal valorisation and the system will be brought back to a *new state of equilibrium* at the higher level o_1–x_1. Actually we know that, in Marx's conception, crisis is simply a *healing process* of the system, a *restoration of equilibrium*, i.e. of valorisation, even if violent and bound up with losses, and thus from a capitalist standpoint it is a 'cleansing crisis'. But soon (more on this directly) the accumulation process picks up again, on an expanded scale, and can proceed without disruption of equilibrium, within certain limits that are shown in the reproduction schema (e.g., o_1–r_2). But 'beyond certain limits', from point r_2, the accumulated capital again grows too large, the mass of surplus value starts to decline, valorisation begins to slow down, until finally, at point z_2, it disappears, in the sense described earlier. The breakdown tendency sets in again, with the ensuing devaluation (z_2–o_2) etc.

If we are now in a position to demonstrate that, due to various counteracting tendencies, the full operation of the breakdown tendency is constrained and interrupted at point z_1 (and subsequently at z_2, z_3 etc.) then the breakdown tendency will not be fully realised and will not, therefore, be represented by the straight and uninterrupted line *z–s*. Instead, it will break up into a fragmented series of lines (O–z_1–o_1, o_1–z_2–o_2, o_3–z_3–o_3 …), all tending to the same final point. In this way the breakdown tendency, as the natural, fundamental tendency of capitalism, breaks up into a series of apparently independent cycles, in which the breakdown tendency sets in *periodically*, over and over again, just as the natural growth of sheep's wool is interrupted by each shearing, only to begin anew. Marx's theory of breakdown is thus the necessary basis and presupposition for his theory of crises, because according to Marx the crisis is simply a momentarily interrupted breakdown tendency that has not been fully achieved, that is a temporary deviation from the 'trend line' of capitalism.

Even though the breakdown tendency is periodically interrupted and weakened, more and more the mechanism as a whole necessarily approaches its end, with the progress of capital accumulation, because the valorisation of this expanded capital becomes progressively more difficult as the accumulation of capital grows absolutely. If these countertendencies are themselves weakened or brought to a halt, the breakdown tendency gains the upper hand and is realised in the *absolute* form of the 'final crisis'. The discussion of these countertendencies and their dynamic constitute the content of the third chapter of this work.[136]

9 An Anti-Critical Interlude

The close of a cycle and turn to depression is frequently explained, e.g. by Cassel, in terms of a series of factors that, during the boom, push costs of production up, reduce profits and hence dampen business activity, that is wage rises, increases in the material costs of fixed capital, higher interest rates. 'We quite understand how the rise in wages and prices, together with the rising rate of interest, must act as a powerful brake upon the trade boom. It is not at all surprising that these restricting factors put an end … to the whole trade boom.'[137] In propounding this view, Cassel is wedded to surface appearances, incapable of understanding the deeper connections, the essence of the phenomena. It is obvious that rising production costs threaten profitability and can intensify a crisis. But this factor *only accompanies and accelerates the emergence of a crisis; it does not cause the crisis*. The great methodological significance of the analysis proposed here is that it prevents the problem from being displaced or diverted into tributary channels. Interest rates and their fluctuations are excluded from the analysis, because we are here dealing with total surplus value, not yet

136 While it is apparent from the exposition provided here that capital accumulation is the decisively important element in Marx's theory of crises, on the other hand, the influence of other factors is of great significance for the course of crises. Fixed capital, especially, is a factor which regulates the periodicity of crises. Unfortunately, this cannot be examined in greater detail here, because this factor comes into the consideration of *simple* reproduction and is therefore beyond the scope of our analysis. In contrast to the view widespread today, even in the Marxist literature, that there is no problem of cycles under simple reproduction, it can only be noted here that Marx proves periodic crises must also arise under simple reproduction, due to the effects of fixed capital.

137 Cassel 1967, p. 641.

split into its several parts. *Price increases* are likewise excluded, because Marx assumes that commodities are bought and sold *at their values*. The same is true of the commodity labour power. It is assumed that, during the accumulation process, workers receive *only the value* of their labour power. *And nevertheless the process of capital accumulation comes to a close*. Crisis ensues. Its emergence is thus independent of the price movements mentioned above!

The real problem, the essence of the phenomenon, emerges in its full purity only by excluding diversionary moments. The accumulation of capital is too large – absolute overaccumulation – because *valorisation is insufficient*. This insufficient valorisation, however, does *not* arise from wage rises or from increases in prices, whether of loan funds (interest) or commodities. It necessarily occurs even when wages and prices are *constant*.

Against this presentation of Marx's theory of crises and breakdown, the objection can be raised that it may be abstractly, logically correct but cannot be brought into accord with the empirical facts. Does the accumulation process really come to an end as a result of absolute overaccumulation of capital? For – to use the language of vulgar economics, for once – Cassel assures us 'that the services of fixed capital … are *generally not at all in excess* even in the last part of a boom'. 'The typical modern trade boom *does not mean over production* or an over-estimate of … the needs of the community for the services of fixed capital, but an over-estimate of the supply of capital … What is really over-estimated is the capacity [of capitalists] to provide savings in sufficient quantity.'[138] Thus, according to Cassel, there is no overaccumulation of capital but rather a *capital shortage, an insufficient supply of capital*.[139] So does our theory of accumulation contradict the facts of experience? What is the real connection?

We have seen how Clark and Marshall reduced the problem of capital accumulation to the subjective, 'telescopic' property of individuals that they pro-

138 Cassel 1967, p. 649. [Grossman's emphasis. In the published English translation, the entire sentence starting with 'The typical' is emphasised and refers to 'the public' instead of 'capitalists'.]

139 We discuss Cassel but the view mentioned in the text is today dominant in bourgeois economic description and explanation of business cycles. For example: in a rising conjuncture, a period of capital absorption sets in, until towards the end of the period 'the originally ready *supply of capital is sooner or later so completely exhausted* that the warning sign of a sharp rise in the interest rate appears' (Weyermann 1923, p. 177). [Grossman's emphasis.] The assertion is accepted as indubitable, because it is confirmed by 'facts', that is, the statistics of the [share and loan] issue business show that in the final phase of the cycle issue activity slackens, so that the supply of capital is actually insufficient.

vide for the future. The steady progress of capital accumulation is secured thanks to this characteristic of humanity (see page 58 above). From Cassel, however, we learn that experience demonstrates the opposite, namely that although the attitude to the future promotes saving, a shortage of capital emerges in the course of the economic cycle and brings the boom to an end. Does that mean the psychological explanation of capital accumulation simply fails? Bourgeois economists are not perturbed by this. For them, it is really a matter of apologetically justifying the existing economic order, so they must present the deficiency of the *system* as a deficiency in the human psyche, resulting from weakness of human foresight and ability to calculate ahead, and therefore not in the capitalist system but in characteristics of human nature.[140] If one psychological explanation fails, it is replaced by another. Instead of an economic explanation of capital accumulation and its course, we receive a psychological analysis of the properties of human nature. If the boom ends with a catastrophe, a crisis, then '[s]uch a situation shows that the business world must have gone astray on some point; it must have made some calculations that have proved unsound'. And an over-estimate of the supply of capital, the 'capacity of [capitalists] to provide savings in *sufficient quantity*', indeed results. The miscalculation is made even easier because investments take several years to be completed, so that the amount of capital required 'has to be estimated many years in advance'. Now, however, in assessing the state of the capital market, the *individual* entrepreneur has 'no other means … except the rate of interest'. During a depression and the start of a boom, when investments begin to be made, the rate of interest is low or at least moderate. This spurs the entrepreneur to start with large constructions, the requirements for capital on the market 'do not yet make themselves fully felt', since at the start only a part of the capital suffices and consequently the shortage of capital cannot be felt at this stage.

140 Cassel writes: 'Socialists believe that the socialisation of the means of production, in putting an end to private enterprise, will also put a stop to trade cycles. This contention appears to be based on a very inadequate analysis of the trade cycle. The possibility of diverting social production *too much* [!] in the direction of an increased production of fixed capital is present in *every social order* … [T]hese changes … will hardly be more successfully avoided in a socialistic community than in a capitalistic system of private enterprise' (Cassel 1967, pp. 647–8). [Grossman's emphasis.] To combat socialisation of the means of production, it is asserted that socialisation is pointless because cycles cannot be abolished under a socialist economic order either. It is nevertheless asserted, however, that crises have already been successfully moderated under capitalism and that trade cycle research institutes will soon succeed in securing an economy without cycles. Even though trade cycles result from human nature? Poor old science does not have to prove everything!

As, however, every entrepreneur acts on his own, without any thinking that his competitors are doing the same thing, the investments are laid out on a larger scale than the future supply of capital allows. 'If the boom is pressed continually onward in this way, there must, at last, come a time when it is clear that the market cannot find a sufficient quantity of savings with which to purchase the real capital produced. There must then be a sudden *fall in the value* of fixed capital …'[141]

The end of the boom, the crisis, is ultimately brought on by miscalculation of future demand for capital, because, at the start, only a part of the capital is sought and, '[a]s to the remainder business men usually reckon upon procuring it in the future …' '[*T*]*he primary cause of crises is a wrong estimate* of the possibilities of obtaining, on the capital market of the future, the funds necessary …' '[T]his wrong estimate of the future condition of the capital market would not lead to such a catastrophe if the individual entrepreneur secured in advance the whole of the capital he needs to carry out his plans.'[142] This much derided 'agnostic' theory of crises continues to find new admirers, willing to fight and die for it. And today Cassel is regarded as the luminary of bourgeois theory! If crises really did stem from a deficient grasp of the state of the market, miscalculation of future demand for savings, there would be nothing easier than to eliminate these causes of crises. It would suffice to create a central bank which would oblige all entrepreneurs to register the total capital requirements of their planned investments, which would form the basis for the relevant capital disbursements. Cassel overlooks the fact that the crisis, the end of capital accumulation, has nothing to do with frailties of human nature or miscalculations of future demand for capital but necessarily flows from the *objective conditions* of the capitalist system. Even if the capital required in future were known most precisely, even if the provision of capital was planned by a central credit organisation, the end of accumulation would still be unavoidable, under the conditions described in our schema. That is proved by our schema and demonstrates its great methodological importance! In our schema, the magnitude of the capital needed for future expansion of the productive apparatus is precisely calculable in advance and is known for each year in the future. And [the next table below shows] what the demand for capital amounts to.

And despite exact knowledge of the current and future state of the capital market, the breakdown of capital accumulation is inevitable. The central

141 Cassel 1967, p. 650. [Grossman's emphasis.]

142 Cassel 1967, pp. 650–1. [Grossman's emphasis.]

Year	a_c	a_v
1	20,000	5,000
2	22,000	5,250
3	24,200	5,513
4	26,620	5,788
10	47,159	7,757
20	122,318	12,635
and so on		

credit agency could find the registered demands for capital too high and the state of the capital market inappropriate, and therefore cut them back. Would that make a crisis impossible? Slowing down accumulation, if *c* grew at 9.8 per cent or seven per cent a year instead of 10 per cent, would at best (as will be shown) delay the crisis, i.e. increase the wavelength of the crisis cycle. However, so long as capital accumulation in the whole economy proceeds *faster* than the increase in population – and, on the basis of capitalism, the continuous progress to ever higher levels of the composition of capital is one of the essential preconditions that arises from the system itself – there must come a point in the course of capital accumulation where valorisation is insufficient, where absolute overaccumulation necessarily occurs. This could only be circumvented, on the basis of capitalism, if *c* were to accumulate *in step* with the growth in population. On the basis of capitalism, however, that would be the same as giving up on technological progress. Accumulation does not cease as a consequence of faulty assessment of the future supply of capital which is a consequence of a deficient knowledge about the capital market, but rather happens as the necessary consequence of the objective conditions of the capitalist system.

Another, just as important aspect of the complete untenability of Cassel's 'theory' is, however, also apparent, even in the domain of simple *factual description*. We have seen that Cassel disputes overaccumulation, overproduction of means of production. '[T]he materials of fixed capital are *not* produced to excess during the trade boom. Indeed, the boom commonly shows an unmistakable scarcity of these materials – a scarcity which becomes particularly apparent through the extraordinarily high prices of these commodities. We must, therefore, entirely reject the theory that the crises are caused in the main by an over-production of the materials of fixed capital.' On the contrary, the future supply of capital was over-estimated: 'the crisis really consists in an *acute* *shortage of capital* – that is, savings needed for purchasing the real capital produced', '[t]he increasing scarcity of capital during a boom'.[143]

Cassel's whole discussion can only obscure the real state of affairs. The supply of capital is too small? But what capital is Cassel talking about? Obviously not the already accumulated and functioning capital, the $c + v$ of our model. If he is talking about a lack of supply of *capital* in the future, about an insufficient supply of savings, he can only be thinking of additional capital seeking its initial investment, that is still to be accumulated, that will function for the first time. This is expressed as $a_c + a_v$ in our schema. But what does a shortage of *this* 'capital' mean? *Why* is there a lack of this capital? Instead of pursuing the origins of this capital to its birthplace – the sphere of production – Cassel is content with asserting the fact that the supply of capital is insufficient and he remains stuck in the sphere of circulation. The capital that is 'supplied', i.e. in Marx's words, 'every new bit of capital looking round for a function',[144] the capital that seeks active deployment, does not fall from heaven. It is placed at the disposal of accumulation in the form of 'savings'. Before it is saved it must be produced and form the saver's income. In fact, it would first have to be produced by workers and appropriated by the entrepreneur as income gained without labour, as surplus value. The capital that is 'supplied', seeking investment, forms only a part of this surplus value, the part that is not consumed but 'saved' for the purpose of accumulation and only in that function becomes additional capital. To assert that this additional, newly supplied capital becomes progressively scarcer in the course of accumulation really only means nothing other than that in the course of accumulation the original source of this capital, surplus value, becomes ever scarcer, too small, in relation to the already accumulated mass of capital. If the mass of surplus value is too small, then the part destined for purposes of accumulation is likewise insufficient. Cassel simply mixes up concepts. He talks about a shortage of capital, an insufficient supply of capital. In the language of the banker, everything is capital. In reality Cassel is not talking about capital but about a part of the *surplus value* that still has to be accumulated, that represents only *potential* capital and becomes capital only through its function in the valorisation process. There is thus no shortage of capital, in fact, but a *shortage of surplus value*, a shortage of those parts of surplus value, $a_c + a_v$, which are yet to be accumulated. On the other hand, there is overaccumulation of already functioning capital, $c + v$. Overproduction of capital and insufficient valorisation are correlative, mutually determining

143 Cassel 1967, pp. 649, 652. [Grossman's emphasis.]

144 Marx 1976b, p. 792.

concepts. A capital that does not fulfil its function, valorisation, ceases to be capital; hence its *devalorisation*. The devalorisation of the original capital is here a necessary and logical consequence of its insufficient valorisation. Not so in Cassel. He also writes about a 'sudden fall in the value of fixed capital', as a consequence of a shortage of capital. Cassel writes about devalorisation because the phenomenon of devalorisation is apparent in practice and theory must take a position on it. But Cassel is incapable of incorporating the fact of devalorisation into his theory. The latter remains without any internal, logically necessary connection with devalorisation. Devalorisation must not and cannot occur at all in Cassel's theory of crises. According to his theory it would be illogical and impossible. When and how can capital be devalorised according to his subjective theory of prices ('the principle of scarcity'), how can there be *scarcity of capital*? On the other hand, in Marx's theory, insufficient valorisation and the devalorisation of the original capital, which is a consequence, have an inner logical connection.

If our analysis has shown that in the course of accumulation there emerges a shortage of surplus value (obviously embodied in real useful things of any kind) and if, at the same time, the experience of the cyclical movement confirms that in the final phase of a boom there is a shortage of 'savings', a shortage of the elements a_c and a_v available for expanded reproduction, then this only confirms with facts the correctness of our own abstract schematic argument and hence also the correctness of Marx's theory of accumulation.

Only now can we finally answer the question raised by Diehl: whether there is a connection between Marx's theory of value and theory of surplus value, and socialism. Diehl denies this and believes that it 'can be calmly conceded that returns to capital, ground rent, entrepreneur's profit, have their roots in the surplus value squeezed out of workers', but 'socialist conclusions' are not entailed in this for anyone 'who supposes that without such surplus value no technological and economic progress is possible'. 'Nowhere does Marx argue that this mode of production is bound to disappear, because surplus value squeezed out of workers accrues to the entrepreneur during the capitalist epoch.'[145]

Really, seldom has a theory been so badly misunderstood as in this case! It is not a matter of the ethical evaluation of surplus value, of belief in whether or not it has a civilising role but of *variations in its magnitude*. For with the disappearance of the possibility of valorisation, the civilising function of surplus value, the development of the productive forces, can likewise not be fulfilled. Consequently, the capitalist mode of production must necessarily make way for another. Marx showed that capital accumulation, because it proceeds on

145 Diehl 1898, pp. 42–3.

the basis of the law of value, $AV = c + v + s$, cannot take place beyond definite limits, i.e. it bears a transitory character because in the long run the surplus value s does not suffice for the valorisation of $c + v$.[146]

Franz Oppenheimer is one of the sharpest and best-known recent critics of Marx's law of accumulation. He is so convinced of the overwhelming power of his own arguments that from the very start he denies the good intentions of everyone who dares to adhere to Marx's theory, even before he has examined their counter arguments, indeed even before hearing them. Thus, about Marx, he writes, 'Frankly [!] it can no longer be disputed that … his law of capitalist accumulation and his deduction of the reserve army are logically erroneous and that therefore his identification of the tendency of capitalist development is false'.[147]

If, however, Marx's theory of accumulation and breakdown reproduced here is compared with what Oppenheimer represents as Marx's theory of accumulation, the errors in Oppenheimer's conception are immediately apparent.[148] The elegant deductions that are otherwise typical of this sharp thinker and distinguish him from other critics of Marx completely fail here. In a section entitled 'The Supposed Tendency of Capitalist Development', Oppenheimer does ask, in relation to *surplus value* as the driving force of the bourgeois order: 'continuing to operate in the future, how would it structure the development of society? That is the problem to be solved.' But, instead of investigating the changes that surplus value undergoes in the course of accumulation, Oppenheimer abandons the right path and ends up at a dead end. Oppenheimer's vacillating assessment and characterisation of Marx's theory of accumulation is already symptomatic. At one point he regards it as merely the product of Hegel's dialectical contradictions – and here he follows Bernstein's statements (see page 63 above): 'Marx derived his basic solution from his philosophical ideas, specifically his fundamental conception of the *philosophy of history*, which he had learnt from Hegel … For him, this solution resulted from the

146 In 1907, Ladislaus von Bortkiewicz in his polemic against Tugan-Baranovsky, on the basis of his mathematical analysis, already stated that 'This inequality allows us to conclude that with a *given* rate of surplus value (r) and a given quantity of variable capital (v), *an unlimited growth of constant capital cannot take place* without bringing about a decline in the rate of profit'. 'He [Tugan-Baranovsky] did not succeed in proving that the organic composition of capital has no influence on the rate of profit' (Bortkiewicz 1949, p. 218; Bortkiewicz 1907, p. 335). [Grossman's emphasis. Bortkiewicz's concluding paragraph was not including in the English translation of 1949.]

147 Oppenheimer 1964a, p. 1098.

148 Oppenheimer 1903, pp. 25–33; Oppenheimer 1919, pp. 135–65; also Oppenheimer 1927. Further Oppenheimer 1913, pp. 139–42; Oppenheimer 1964b, pp. 1084–90.

application of the "dialectical method"'.[149] We have already shown that before Marx both Sismondi and Richard Jones already expressed a 'presentiment' of the necessary downfall of the capitalist mode of production, i.e. on the basis of observations about the philosophy of history. So the advance represented by Marx's own research consisted and could only consist in demonstrating the necessity of capitalism's downfall through a purely economic line of argument, from the *analysis of the capitalist system itself*. Yet it is precisely this economic line of argument that Oppenheimer fails to notice! Capitalism's law of breakdown, which, as he concedes, is 'the principal load-bearing pillar of Marx's whole economics and sociology in general',[150] results not from Marx's analysis of capitalism but from the application of Hegel's dialectical method. It was thus a construction built on Hegel's developmental schema according to the trichotomy: thesis, antithesis, synthesis. At another point, Oppenheimer asserts that the problem Marx deals with in his theory of accumulation cannot be solved deductively. In fact, Marx's theory that the reserve army regularly grows was only based on an empirical 'impression' that he 'gained at the time when he was observing British economic development'.[151] At a third point, according to Oppenheimer, Marx's theory of accumulation was established by way of a *deduction*,[152] which Oppenheimer even calls an 'impressive deduction',[153] a 'gigantic effort',[154] 'a solution attempted in the grand style'.[155] These vacillating assessments of the character and genesis of Marx's theory of accumulation show that Oppenheimer has overlooked the true kernel, the core of this theory, despite his assurance that he 'devoted an evaluation, crafted with the greatest affection and care in its presentation and criticism', to this theory, in one of his own books.[156]

In which directions do Oppenheimer's criticisms proceed? *The insufficient valorisation* of the accumulated capital, for Marx the decisive phenomenon that disintegrates the capitalist mechanism from within, according to its own laws, even if a state of equilibrium is assumed as the starting point of the analysis, is not mentioned by Oppenheimer even once! Instead he foists 'two elements', which have nothing to do with it, into Marx's theory of accumulation.

149 Oppenheimer 1919, p. 115. [Grossman's emphasis.]
150 Oppenheimer 1919, p. 137. In Oppenheimer 1964b, p. 1086 it is called 'the load bearing pillar of the grand system of proletarian economics'.
151 Oppenheimer 1903, p. 56. See further below.
152 Oppenheimer 1919, p. 136.
153 Oppenheimer 1919, p. 144.
154 Oppenheimer 1919, p. 146.
155 Oppenheimer 1919, p. 135.
156 Oppenheimer 1919, p. 137.

1. The first is that 'machinery displaces workers'.[157] We already indicated the important difference between the displacement of workers by machinery and their displacement by the very course of capital accumulation. Oppenheimer confuses these two phenomena.[158] Machinery displaces workers, hence, in Oppenheimer's discussion, the production process generates 'a *chronic* relative overpopulation', according to Marx. Oppenheimer claims that, for Marx, 'there is *always* an oversupply of labour power. Thus wages cannot rise above their *lowest point*, because there are *always* two workers chasing every master, underbidding each other'.[159]

In reality, the 'setting free' of workers that Marx discusses in the chapter on accumulation is something completely different from the setting free of workers by machinery. In a formal sense, this already results from the structure of Marx's work. Marx deals with the fact that workers are set free by machinery in the descriptive-historical part of chapter 15 of the first volume [of *Capital*] ('Machinery and Large-Scale Industry'), namely in the three sub-sections 5–7 where he describes the problem of workers being set free by machinery and its consequences extensively ('The Struggle between Worker and Machine'; 'The Compensation Theory, with Regard to the Workers Displaced by Machinery'; 'Repulsion and Attraction of Workers through the Development of Machine Production'). So, after all that, does he repeat everything he has already said in the chapter on accumulation? In fact, Marx writes here about the accumulation of capital setting workers free, i.e. by insufficient valorisation at a specific and advanced stage of accumulation. Even the absolute number of workers grows,

157 Oppenheimer 1919, p. 141.

158 See above, pp. 70, 145. Finally, Oppenheimer mixes up a third kind of setting free: 'The setting free of the proletariat in the rural economy'. 'If the functioning capital was what caused the setting free of labour', he argues, 'then, according to the laws of accumulation, the release of labour would be much stronger in industry' than it is in agriculture. 'There would have to be many more workers cast into the reserve army from the industrial side than the agricultural, if Marx's explanation were true. In fact the reverse is true'. He then adduces figures to show the more rapid displacement in agriculture, and finally states: 'So the setting free of labour can have nothing to do with changes in the "organic composition" of capital' (Oppenheimer 1913, p. 105). In arguing like this, Oppenheimer overlooks an elementary point: Marx's analysis has 'pure capitalism' as its basis. The problem is precisely to explain the *capitalist* mechanism and expound the causes of the setting free of workers who already function as wage labourers. The 'setting free' in the rural economy that Oppenheimer talks about is a 'setting free' of independent small producers, hence their proletarianisation, which forces them to become wage labourers. It is identical with the destruction of *pre-capitalist* forms of production, a process not covered by the scope of the law of accumulation.

159 Oppenheimer 1964b, p. 1087. [Grossman's emphasis.]

up to this point. 'With the growth of the total capital, its variable constituent, the labour incorporated in it, does admittedly *increase*.'[160] But it increases with accumulation 'in a constantly diminishing proportion', until at a specific level of accumulation it completely ceases to grow and turns into the setting free of workers, that is 'a relatively redundant working population, i.e. a population which is superfluous to capital's average *requirements for its own valorisation* and is therefore a surplus population'.[161]

Oppenheimer overlooked this and was bound to do so, because he disregards the fundamental difference between the technical labour process and the capitalist valorisation process and identifies the two precisely at the decisive point in his critique. For example, when he writes that according to Marx 'a large and ever growing number of workers is "set free" *by machines, i.e. constant capital*, and thrown out on the streets as a reserve army of the unemployed'.[162] Machines in relation to labour power ($MP : L$) and constant capital in relation to variable capital ($c : v$) represent two absolutely distinct categories, whose conflation is bound to lead to errors with serious consequences. So there was a time when displaced workers who had been set free, succumbing to the same confusion, vented their frustration in the mass destruction of machines. 'It took both time and experience', Marx writes, 'before the workers learnt to distinguish between *machinery* and its *employment by capital*, and therefore to transfer their attacks from the *material instruments of production* to the *form of society* which utilizes those instruments'.[163] And it is precisely from this form of exploitation and not from the technical application of the material means of production that *Marx* derives the necessary end of the accumulation process.

If the displacement of workers, about which Marx writes in the passage cited, was a result of the application of machinery, that is of technological advance, then surplus population would, in fact, be 'chronic' overpopulation, as Oppenheimer states; there would '*always*' be an oversupply of labour power, two workers would 'always' be chasing every employer. But this, for Marx, is true only for a small number of workers. This is so-called 'absolute' unemployment which exists even in boom periods when employers complain about the shortage of labour. It can be explained by the *changing of jobs*, since every change from one job to another is bound up with a shorter or longer period

160 Marx 1976b, pp. 781–2. [Grossman's emphasis.]

161 Marx 1976b, p. 782. [Grossman's emphasis.]

162 Oppenheimer 1919, p. 144. [Grossman's emphasis.] So too in Oppenheimer 1913, p. 104: 'Capital as *constant capital, i.e. in its shape as machinery*, "increasingly sets workers free"'. [Grossman's emphasis.]

163 Marx 1976b, pp. 554–5. [Grossman's emphasis.]

of unemployment. This absolute unemployment therefore has nothing to do either with displacement by machinery or with the accumulation of capital. Thus Oppenheimer's interpretation of Marx's theory of the reserve army in the sense of a *chronic* surplus population is fundamentally false. What prevails instead, according to Marx, is the *law of the alternate attraction and repulsion* of workers, whereby the absolute number of workers who are employed and then set free can and does in fact grow. '[I]n all spheres, the *increase* of the variable part of the capital, and therefore of the number of workers employed by it, is always connected with violent fluctuations and the *temporary* production of a surplus population.'[164] So it is not a matter of *chronic* overpopulation, as Oppenheimer asserts, but of the *periodic* formation and absorption of the reserve army in the cycle of production: 'The path characteristically described by modern industry, which takes the form of a decennial cycle … depends on the constant formation, the greater or less absorption, and the *re-formation* of the industrial reserve army or surplus population'.[165] Furthermore, the absolute number of workers can grow and indeed must grow if accumulation, i.e. expanded reproduction, is to occur.[166]

164 Marx 1976b, p. 782. [Grossman's emphasis.]

165 Marx 1976b, p. 785. [Grossman's emphasis.]

166 Marx writes: 'in order that these components [of constant] capital [needed for accumulation] may actually function as capital, the capitalist class requires *additional labour*. If the exploitation of the workers already employed does not increase, either extensively or intensively, *additional labour powers must be enlisted*' (Marx 1976b, p. 727). [Grossman's emphasis.] The sheer force of the argument of those various critics of Marx who raise the objection to Marx's law of accumulation and population that, as the capitalist mode of production progresses, the number of employed workers … grows, is astonishing! This is proved by the numbers Marx presents in chapter 15 of the first volume of *Capital*, which Marx himself supposedly adduced as an illustration of his law of accumulation and theory of the growing reserve army. The conclusion is drawn 'that the number of employed workers, hence the scale of variable capital, has expanded', closing with the now fashionable jibes at the 'flippancy and superficiality' of Marx's statistical methods (see Muhs 1927, pp. 466–7). This method of Marx criticism only exposes the unparalleled 'flippancy and superficiality' of Mr Muhs himself. The numerical examples in chapter 15 have nothing to do with Marx's law of accumulation, they demonstrate, rather, as Marx expressly states in the title of the relevant section, 'the most *immediate* effects of machine production on the worker', thus the fact of the displacement of workers by machinery (Marx 1976b, pp. 517 et seq). [Grossman's emphasis.] That other workers later find employment in greater numbers is completely irrelevant to the workers who have been set free. In contrast, in chapters 24 and 25 where Marx discusses accumulation, he himself cites figures which prove that the absolute number of workers grows (e.g. Marx 1976b, p. 783) and it follows from his exposition of accumulation that, conceptually, an additional number of workers is a *necessary presupposition of accumulation*. Truly, *difficile* [*est*] *satyram non scribere*! ['*Difficile est satyram non scribere*' means 'It is difficult not to write satire', Juvenal 1958, p. 18.]

2. And now for the supposed second 'premise' of Marx's deduction, the second element: the classical wages fund theory.[167] According to Oppenheimer, Marx 'still took over this theory in its decisive features',[168] despite being aware of some of its weaknesses. 'The classical theory derived all prices from the relationship between supply and demand, and resolved the problem of wages, i.e. the price of labour, in the same way',[169] that is, from demand by social capital C and supply by workers L. To explain the decline in wages of his time, Ricardo included not total capital C but only circulating capital, as the numerator in the wage fraction. And Marx went further in this direction, in that he placed an even smaller component of capital, variable capital, in the numerator. This is how the low demand for labour (despite a growing total capital) and thus also the emergence of a reserve army is supposedly explained.

This assertion, repeated in various writings by Oppenheimer,[170] is completely unfounded. Marx supposedly solved the problem of wages in terms of the relationship between supply and demand! I have demonstrated the complete untenability of this view elsewhere.[171] Marx's theory of wages is only a special application of his theory of value to the commodity labour power and, just as in his theory of value, the determination of value proceeds quite independently of competition, of the relationship between supply and demand, so too in Marx's theory of wages. Oppenheimer expresses Marx's wage theory with the formula $W = v/L$. In doing so, he leaves the factor of reproduction costs r, the value basis of Marx's theory of wage determination, out of Marx's wage formula. In other words, Marx's wage formula should be $W = r \times v/L$ where, because Marx proceeds from a state of equilibrium and thus $v = L$, he can ignore the fraction $v/L = 1/1$. So, according to Marx, wages are determined by the coefficient r, i.e. by the reproduction costs or value of labour power, which is independent of competition or the relationship between of v and L. However, because Oppenheimer has misunderstood the true determination of the value of labour power in Marx, the factor which, according to Marx, drives *increases* in the level of real wages in the course of capitalist development (the growing intensity of labour), also escapes him. Only in this way can Oppenheimer arrive at the patently false view that in Marx's system wages 'can never rise above their *lowest* point'!

Since Oppenheimer's description of Marx's theory of wages as a wage fund theory is absolutely false, his criticisms of Marx's theory of accumulation, based

167 Oppenheimer 1919, p. 138.
168 Oppenheimer 1919, p. 141.
169 Oppenheimer 1919, p. 138.
170 Oppenheimer 1909, p. 17; 1924, p. 1085.
171 Grossmann 2019e, pp. 163–6.

on it, also fail. To demonstrate the necessary formation of a reserve army, Marx did not have to invoke the relationship between supply and demand at all. In Marx's analysis the reserve army is the *product* of the process of reproduction in the late stage of accumulation and not, as Oppenheimer claims, a *permanent precondition* for the sustained reproduction of the capital relation.[172] This point again shows how much Oppenheimer has misunderstood the basic presuppositions of Marx's analysis. In his analysis of the accumulation process, as in other parts of his work, Marx sets out from the assumption of the *normal* circulation of capital, that is from a state of equilibrium where demand corresponds to supply, where, therefore, all commodities are sold (including the commodity labour power) and where, therefore, *there is and can be no reserve army of labour*. Precisely because demand for labour matches its supply, the commodity labour power is purchased *at its value*. Consequently, even though the changing relationship between demand and supply is consciously excluded from the analysis, the reserve army still emerges in the course of accumulation. For Marx, therefore, it cannot be deduced from that relationship but precisely from and as a consequence of the accumulation of capital. '[A] surplus population of workers is a necessary *product of accumulation* or of the development of wealth on a capitalist basis.'[173] Granted that, in empirical reality, once created, this surplus population 'becomes, conversely, the lever of capitalist accumulation, indeed it becomes a condition for the existence of the capitalist mode of production'.[174] For empirical, actually given capitalism, the existence of a reserve army of labour is a condition of existence, not in order to reproduce the capital relation but rather to make *sudden extensions of production* possible, because 'in all such cases there must be the possibility of suddenly throwing great masses of men into the decisive areas without doing any damage to the scale of production in other spheres. The surplus population supplies these masses'.[175] Thus the reserve army is a condition of existence, but not for the existence and continuous reproduction of the capital relationship. The best proof of this is the fact that Marx undertakes to illustrate the accumulation process with a reproduction schema that presents capitalist production in a state of equilibrium, in which there is no reserve army, and yet the capital relation

172 So Oppenheimer 1919, p. 150 writes of the formation of the reserve army, 'the social capital relation is forever reproduced by that means'.

173 Marx 1976b, p. 784. [Grossman's emphasis.]

174 Marx 1976b, p. 784.

175 Marx 1976b, p. 785. Luxemburg had already clearly perceived this function of the reserve army in Marx's system and expressed it in her polemic against Bauer (Luxemburg 2015b, p. 432).

is reproduced. If Oppenheimer's assertion that the reserve army is indispensable for the reproduction of the capital relation were true and if this was Marx's view, then Marx's attempt to represent the capitalist mode of production in a schema *without* a reserve army would be obvious nonsense. Marx was justified in initially excluding the reserve army from his *theoretical analysis*, because the ideal *normal course* of capitalist reproduction, not empirical capitalism with its sudden expansions, constituted the initial object of his analysis.

If Marx in his theory of accumulation had wanted to prove that the existence of a reserve army is a necessity, by assuming falling demand for labour, i.e. a growing reserve army, as the *premise* of his proof procedure (as Oppenheimer asserts), that would have been a *petitio principii*,[176] since the premise that was *assumed* would already have contained what was to be proved. What would the content of Marx's theory of accumulation have been then? Marx's theory of accumulation is, however, free of this fault. Both of its supposed premises are Oppenheimer's very own products. Oppenheimer combats a Marx that he himself has constructed!

3. And now Oppenheimer's description of Marx's 'proof procedure'! What is the central idea in Marx's chapter on the accumulation of capital? Oppenheimer understands it to be that 'capital and *its accumulation are to blame for the continued existence* of capitalism'[177] because according to Oppenheimer, as we already know, the existence of a reserve army is a necessary precondition for the reproduction of the capital relation. The formation of the reserve army in the course of accumulation is thus identical, according to Oppenheimer, with the formation of one of the necessary conditions for the *continued existence* of capitalism. That is a gross error. In the chapter on 'The Historical Tendency of Capitalist Accumulation', Marx describes not the continued existence of capitalism but precisely its opposite, the *explosion of the capital relation*, the end of the capitalist mode of production as a result of accumulation. 'Capitalist production begets, with the inexorability of a natural process, its own negation.'[178] The existence of capital, i.e. the separation of the worker from the means of production, is quite sufficient for the reproduction of the capital relation.[179] The existence of a reserve army is not required for that.

And, precisely because Oppenheimer only occupies himself with the problem of the setting free of workers by machinery and has not noticed the principal ideas in the famous chapter 25 on 'The General Law of Capitalist Accumu-

176 [*'Petitio principii'* means 'begging of the question'.]
177 Oppenheimer 1919, p. 151. [Grossman's emphasis.]
178 Marx 1976b, p. 929.
179 For more detail, see Grossman 2019e, pp. 150–1.

lation', *he has not dealt with these in his critique*. His critique misses the mark. As his entire attention is devoted to the setting free of labour by machinery, he nowhere examines the problem of insufficient valorisation as a consequence of accumulation. He only mentions the problem of valorisation in passing. But how! Oppenheimer places himself entirely on the ground of the subjective experience of the individual capitalist, with no trace whatsoever of any analysis of the social interconnections, the objective social conditions, of accumulation. Agreeing with Marx he states, in other words, 'that the sole motive for accumulation is hope for surplus value' and that therefore even the most avid accumulator will give up accumulating at 'the lowest point of surplus value or interest'! And would 'much rather consume all his income than put part of it aside'.[180] On the other hand, however, a fall in interest rates compels capitalists to accumulate to a higher degree.

To begin with, from a strictly methodological standpoint, it should be mentioned that here again Oppenheimer overlooks how Marx does not directly analyse empirical reality; in the chapter on accumulation, the object of his analysis is surplus value and the variations in its magnitude, while reality only knows the parts into which surplus value is split (interest, profit, rent, commercial profit etc.). Surplus value is only a theoretical aggregation of those real parts into a totality. Marx's proof procedure has the character of a deduction. A specific phenomenon – insufficient valorisation of the total social capital – has to be derived from the conditions of the problem, the conditions of accumulation. Oppenheimer makes an excellent remark about such deductions: 'Any appeal to experience is inadmissible here. A deduction is not validated because its results conform to experience'.[181] And the same accomplished logician appeals, in his critique of Marx's deduction, to … experience! Against Marx's assertion that the decline in surplus value in the course of accumulation brings it to a standstill, Oppenheimer replies that 'experience teaches that as interest rates fall [Marx refers to falling surplus value, not interest], accumulation proceeds all the more vehemently and psychology can easily explain the phenomenon: savers want to secure a definite level of money income that will provide them with a definite standard of living. To achieve this, lower interest rates require larger sums of capital'.[182] Oppenheimer asserts, further, that this limit on accumulation 'lies very deep' and, in practice, cannot be taken into account. To establish this, Oppenheimer cites Marx's statement about the

180 Oppenheimer 1919, p. 149.
181 Oppenheimer 1919, p. 150.
182 Oppenheimer 1919, p. 149.

level of interest rates (!): 'The minimum limit of interest is completely indeterminate. It could fall to any level, however low'.[183] It is as clear as day that Oppenheimer committed a grave *quarternio terminorum*[184] here, that he *confuses insufficient surplus value with falling interest rates*. Interest rates can fall to any level conceivable but not surplus value. Interest is only a part of profit; if interest declines, entrepreneurs' profits increase.[185] If interest rates fall as a consequence of an oversupply of loan capital, what would the result be? That loan capital would flood into production and the capitalist lender would become a functioning, i.e. industrial, capitalist.[186] Only a shift of capital would occur. But matters are different when we look at total surplus value, that is at total social capital – and Marx discusses precisely these in his account of the social process of accumulation and reproduction. Once surplus value declines below a certain, exactly calculable limit, *capital accumulation ceases*, breakdown necessarily occurs as a consequence of insufficient valorisation of capital – *quod erat demonstrandum*.[187] Enormous devaluation of capital would be the consequence. At the same time, from this point on (the *Z* point), a reserve army would necessarily emerge, indeed a constantly expanding reserve army, which would dissolve the stalled mechanism of accumulation. Oppenheimer's assertion that capitalists accumulate more vehemently, the lower the rate of interest, presents the matter as if accumulation and its scope depend only on the good will and psychology of the saver. He overlooks the *objective conditions* of accumulation – i.e. the magnitude of the available surplus value – which determine the limit on the scale of accumulation, a limit that no amount of eagerness to save can help the capitalist overcome. *Oppenheimer knows no such limit to the accumulation of capital.* Here we reach the core of the problem of accumulation. According to Oppenheimer, so long as accumulation is sufficiently rapid, the setting free of workers by the application of new technologies can be offset and even more than offset. For example, suppose there is a working population of 80 workers to be employed, assuming a wage of 1 v per worker, then all the workers would find employment if there is a total capital of 100 and an organic composition of capital of 20 c : 80 v. If the organic composition is 50 c : 50 v, then 30 workers are displaced. To ensure employment for all workers, there only has to be diligent accumulation to push the total capital up to 160. With a compos-

183 Oppenheimer 1919, p. 149. [Marx 1981, p. 480.]
184 ['*Quarternio terminorum*' means 'fallacy of a fourth term', i.e. drawing a false conclusion.]
185 Marx 1981, p. 496.
186 Marx 1981, p. 496.
187 ['*Quod erat demonstrandum*' means 'proving the proposition which was to be demonstrated'.]

ition of 60 c : 40 v the workers set free would be absorbed if the total capital increased to 200. Oppenheimer's solution is so self-evident and simple that it must be wondered why Marx did not also see that the setting free of labour by technological change *can be offset and even more than offset by correspondingly faster accumulation*.[188]

Oppenheimer overlooks the essential question here: with a given working population and a given rate and mass of surplus value, *is such accumulation possible in the long run on the scale and at the tempo required*? That is the issue! Oppenheimer, for whom accumulation depends on the free will of the investor, replies with a 'yes'. We, however, say 'no' and have offered in justification of our standpoint an exact proof (to the extent possible within a deductive argument). Oppenheimer cites three possible situations in which workers are set free and this is offset through growing accumulation:

> 1) Partial compensation: more are set free in one branch than are additionally employed in others. 2) Full compensation: the number set free and additionally employed are equal. 3) Over-compensation: additional employment outweighs the number set free. If case 1) is the reality then the law of accumulation holds.

Then Oppenheimer asks,

> Which of these three cases is actually the reality? The problem *cannot be resolved through deduction*: it is an equation with several unknowns. It can only be solved directly with *figures*; the numbers of unemployed at different points in time have to be compared.

But, Oppenheimer adds, there was certainly insufficient statistical data in the British Empire in Marx's day to resolve the issue. As neither deduction nor empirical proof was possible, 'in the period that he studied British economic development, Marx gained the *impression* that the reserve army consistently grows'.[189]

So, according to Oppenheimer, the fundamental law of Marx's system, the capitalist mode of production's 'law of motion', was therefore an illicit generalisation from vague empirical 'impressions' in a particular phase of economic development! Oppenheimer's entire argument is untenable in all of its propos-

188 Yet Marx himself states: 'A necessary condition for the growth in the number of factory workers is thus a proportionally *much more rapid growth in the amount of capital invested in factories*' (Marx 1976b, pp. 582–3). [Grossman's emphasis.]

189 Oppenheimer 1903, p. 56. [Grossman's emphasis.]

itions. Marx's thesis about capital accumulation's breakdown tendency was not propounded as a generalisation from purely empirical observations or impressions nor on the basis of Hegel's formulation of the dialectic of contradiction. It was derived through deduction, as a self-evident consequence of the accumulation of capital on the basis of the law of value. If Oppenheimer asserts that Marx evolved the whole theory of the setting free of workers from an analysis of industry[190] then that is an arbitrary assertion, whose sole explanation is that Oppenheimer merely invokes the empirical illustrations in the first volume of *Capital* alone and, in this connection, does not take the crucially important passages in the third volume, which deal with the tendential fall in the rate of profit, into account at all. Hence we have here a conflation between two phenomena, as fundamentally different as workers set free by machinery and capital accumulation setting them free. Oppenheimer's assertion that the problem cannot be solved deductively is disproved by our demonstration, using a concrete numerical example, that the problem really can be solved and we will demonstrate this mathematically. The problem's exact conditions and data are set out precisely and variations in surplus value in the course of accumulation can thus be calculated. The problem of an equation with several unknowns may well exist for empirical relationships. No such problem exists for theoreticians. By saying 'assuming that …', they have a wonderful, magical means of transforming all unknowns into measurable quantities.

In our schematic analysis, we proceed from Oppenheimer's case 2, i.e. from a state of equilibrium where, despite an increasing organic composition of capital, the setting free of workers is compensated for by their renewed employment. That is where the great methodological value of this model lies. Every year a higher organic composition, hence better technologies are introduced. Workers are set free as a result. The workers set free are, however, reabsorbed through correspondingly greater capital accumulation, so that equilibrium is re-established every year. Thus what Oppenheimer recognises as the remedy against workers being set free by machinery is precisely presupposed. With the purpose of immanent critique, we therefore stand on the ground of his own assumptions. And nevertheless, it is apparent, from the standpoint of these very assumptions, that such a proportional state of accumulation is *only temporarily* possible. From a certain point in development, further accumulation, on the above basis, becomes *impossible in the long run*, because it immediately runs up against the limits on valorisation and the assumed case 2 necessarily reverts into case 1. At this late stage of accumulation, the number of workers set free outweighs their re-employment. As, however, our schema always assumes

190 Oppenheimer 1903, p. 59.

that setting free of workers by machines is compensated for by a correspondingly greater accumulation – and this condition is in fact fulfilled in the schema over many years – the eventual breakdown of accumulation and emergence of a reserve army *cannot* be ascribed to *this cause*. The breakdown of accumulation results from another cause: insufficient valorisation. Accumulation ceases, thanks to an *objective impossibility*, not to the deficient subjective will of savers: there is not enough surplus value to sustain accumulation on the scale required.

If, as has been demonstrated, Oppenheimer's case 1 is not just the actual situation in the late stage of capital accumulation but the necessary one then, to use his words, 'the law of accumulation has been proved'. When Oppenheimer, pointing to actual developments in England, proposes that 'in industry as a whole the "setting free" of labour by the use of machinery is over-compensated by new employment',[191] in addition refers to 'the fact of over-compensation' and furthermore believes that 'Marx lost the match when he had to concede that in industry as a whole over-compensation occurs',[192] it is Oppenheimer himself who has lost the match. For, from the very start, he abstains from presenting any deductive counterproof against Marx's deduction and merely relies on empirical facts. But, as Oppenheimer himself knows, theory cannot be acquired through empiricism. Marx could concede a hundred times over that over-compensation does happen occasionally in industry and, nevertheless, the validity of Marx's law of accumulation and breakdown would remain unaffected. Additional labour power is in fact one of the necessary, constitutive elements of Marx's concept of accumulation! After all, his whole system is constructed on the idea of surplus value, of the greatest possible intensive and extensive exploitation of human labour. Capitalism strives *to employ the largest possible number of workers*. It is a complete mystery how Marx's own proposition that 'overall, the number of workers employed in industry *increases* and not just absolutely but more strongly than the total as a whole' can be raised as on objection *against* him.[193] As the demographic base expands, the limits of capital accumulation are extended. Precisely for this reason, the breakdown tendency is weakened and displaced to the distant future (see Chapter 3, pages 327 et seq. below). But from the law of accumulation it follows, on the other hand, that with any *given* population [growth rate] capital accumulation encounters an insuperable barrier beyond which any further accumulation is pointless, because it will be accompanied by a decline in the mass of profit and therefore also by the emergence of a reserve army. The breakdown tendency

191 Oppenheimer 1903, p. 58. [Oppenheimer emphasised the whole sentence.]

192 Oppenheimer 1903, p. 59.

193 Oppenheimer 1919, pp. 152–3. [Grossman's emphasis.]

emerges. Of course, this consequence can always be compensated for and interrupted by 'modifying circumstances'. Hence the periodic, cyclical succession of phases of expansion and breakdown. If, however, we disregard the attraction and repulsion of workers in the course of the industrial cycle, if we thus concentrate solely on secular trends, we have to conclude that in the early stages of capital accumulation population was, on the whole, too large in relation to the paltry scale of capital. Hence Malthus and Malthusianism. In the late phases of accumulation, the relation is reversed: compared with the enormous accumulation of capital, the population, thus the source of valorisation, becomes progressively less adequate. *Hence* the sharpening of tensions in the established capitalist countries in the course of capital accumulation, *hence* the growing role of capital export, *hence* the anxiety of the exponents of the existing mode of production about the decline in the birth rate and the 'economic and moral dangers' ([Pierre Paul] Leroy-Beaulieu)[194] connected with it, *hence* the ever more brutal expansionist tendencies of capital, to secure sources of the raw material it needs as well as the largest possible reservoirs of human labour power. But here capitalism runs up against huge obstacles. The world has already been divided up. The economic transfer of large masses of people also encounters difficulties. So capital accumulation increasingly runs up against its unsurmountable limits. Countertendencies that weaken the breakdown tendency are themselves weakened: the tendency to breakdown becomes stronger.

With that, however, the situation corresponding to the terminal phase of our schema, in which an ever-increasing reserve army must necessarily emerge, draws closer. In other words, from the law of accumulation it follows that, although for a time there is over-compensation for the setting free of workers in the less advanced phases of accumulation (the first 34 years in our schema), in the advanced phases of accumulation such over-compensation is impossible and turns into the permanent setting free of labour.

So when Oppenheimer declares that 'the law of accumulation as Marx developed and understood it is refuted', by Oppenheimer,[195] the statement rests on manifest self-delusion.

Karl Muhs's critique of Marx's theory of accumulation and breakdown in his bulky *Anti-Marx* shows not the slightest trace of originality.[196] He moves at the same level of argumentation as Oppenheimer, but has failed to enrich the discussion with one single new argument and merely draws together what has

194 Leroy-Beaulieu 1913, pp. 287–94.
195 Oppenheimer 1903, p. 67.
196 Muhs 1927.

been stated by others (Julius Wolf, Franz Oppenheimer, Simkhovitch, Georg Adler, Eduard Bernstein).[197] He also bases himself entirely on the discussion in the first volume of *Capital*; the decisively important passages in the third volume, which deal with the tendential fall in the rate of profit, and have the closest bearing on the issue under discussion, are not considered. According to Muhs, Marx's theory of accumulation and breakdown has empirical roots. And, indeed, his theory of the permanent setting free of labour by machinery is derived from the development of English industry around the middle of the nineteenth century. 'Here the investigation is conducted on a largely *empirical* basis', he claims, repeating Oppenheimer like an echo.[198] He follows this up with Julius Wolf's and Oppenheimer's critique of Marx's statistics on the English cotton textile industry (see pages 165 et seq. above) and comes to the conclusion: 'From the displacement of labour power by machinery, thus proved [!], follows the absolute law of the setting free of labour'.[199] The superficiality of this assertion is readily apparent. Marx did not need to 'prove' that workers are set free by machinery, as this proposition had already been demonstrated by Ricardo in the 1821, third edition of his *Principles*,[200] has never been seriously challenged by anyone and cannot be challenged at all. Marx simply accepted what Ricardo had argued and Muhs himself confirms that labour is *in fact* set free, when he states, 'We will have to agree with Marx, as the production of machinery *never demands the same quantity of labour* as the application of machines ends up saving'.[201] But this form of argument was necessary for Muhs, as a means to an end, namely to prove the empirical genesis and foundation of Marx's theory of accumulation and breakdown: '*From now on the phenomenon of setting free is placed in the centre of the theory of accumulation* and is thus elevated into the principal phenomenon of capital, thanks to which this system of production dissolves and flows into the communist system of production'.[202] Once the empirical character of the law of accumulation – this '*cornerstone* of the whole Marxist system' – is established, nothing is easier than to overturn the law of accumulation supposedly constructed on that basis and subsequently the whole 'Marxist system', by means of a critique of this empirical foundation, of the statistical material used by Marx. Incapable of mobilising a single argument in an open frontal attack on Marx's law of accumulation,

197 [Wolf 1892; Adler 1887.]
198 Muhs 1927, p. 461.
199 Muhs 1927, p. 462.
200 Ricardo 1912, chapter 31 [pp. 263–71]; and Marx 1989c, pp. 177 et seq.
201 Muhs 1927, p. 475. [Grossman's emphasis.]
202 Muhs 1927, p. 463. [Muhs only emphasised '*theory of accumulation*'.]

Muhs tries to use an empirical-statistical detour to finish off Marx's *theoretical* system! So Marx's statistics are criticised and the 'frivolity and superficiality with which Marx applies the statistical "method"' is demonstrated and it is finally stated that 'The empirical-statistical proof that labour is set free by capital thus completely failed …' With reference to empirical relations, he asserts: 'The industrial reserve army, as developed by Marx, a reserve army that grows progressively with the growth of the total social capital … this reserve army of Marx has *not* been created by the historical process of capitalism',[203] 'since, as a matter of fact, the capitalist mode of production has proved capable of absorbing into the production process the substantial increase in population, which is discernible after the introduction of the system in almost all capitalist countries'.[204] And Muhs believes that with this one empirical statement, which completely dispenses with analysis, he can refute Marx's entire system! 'From the fact that *actual* development contradicts Marx's deductions, the conclusion inevitably follows that the *theoretical arguments* out of which Marx constructs the industrial reserve army must be likewise flawed.'[205] That the curve of population growth has risen in the industrialised countries and population has grown is, according to Muhs, 'irrefutable [!] *factual proof* against the setting free of labour, in the end more conclusive than any theoretical consideration'. 'The theory of labour displacement is thus empirically and theoretically refuted.'[206] Theoretically? There is no trace of theory in Muhs. Even when a bird walks, it is apparent that it can fly. Nowhere in his whole book can it be observed that Muhs has raised himself even a hair's breadth above the terrain of empiricism. Hence it is also superfluous to criticise Muhs's remarks from a theoretical standpoint.

Nor should the process of breakdown described above be confused with the *limits* to accumulation that Otto Bauer discusses. To forestall the charge of being an apologist for capital, Bauer indicates that he has revealed a limit to capital accumulation. What is the limit that Bauer discusses? In the first place, the limit determined by the proportion between the two departments of the reproduction schema, departments I and II. Secondly, however, the limit which, for a given level of productivity, is set by the rate of *population growth*. *Variable*

203 Muhs 1927, pp. 467, 474. [Grossman's emphasis. Muhs emphasised 'completely failed', 'industrial reserve army' and 'that grows progressively with the growth of the total social capital'.]

204 Muhs 1927, p. 473.

205 Muhs 1927, p. 468. [Grossman's emphasis.]

206 Muhs 1927, p. 483. [Muhs also emphasised the entire second sentence.]

capital must be accumulated in proportion to population growth, in the example provided earlier five per cent must be accumulated annually. This sets the limit on the growth of constant capital, as it has to grow in a definite relation to variable capital (according to the prevailing state of technology). (In our earlier example, its rate of growth is twice that of variable capital.) The proportional relationship $c : v$ is the limit Bauer discusses. If constant capital grows faster than required by its proportionality to variable capital, overaccumulation of capital arises; in the opposite case, underaccumulation. *Crises arise because the required proportional relationship between accumulation and population is not maintained*. If accumulation stays within the limits prescribed by population growth then, under the assumptions made, accumulation can proceed *without limit*. Bauer does talk about 'overaccumulation'; according to him, however, it only arises because the conditions specified by him are not maintained. These conditions can, according to him, be maintained and in fact maintained even *in the long run*; and the capitalist mechanism itself soon corrects all disturbances to equilibrium and cancels out deviations from the required proportions. '[L]ike underaccumulation, overaccumulation too is always just a *transient phase* in the industrial cycle.'[207]

The process is totally different in the case presented by us. We showed that, in the end, after a certain period, even though both of the constraints on capital accumulation required by Bauer, [the proportions] between departments I and II and between c and v, are maintained for a while, and accumulation – at a given level of productivity – *only occurs within the constraints imposed by population growth*, nevertheless the further maintenance of the required constraints is objectively impossible. The result is that the system of production presented in Bauer's schema must break down at a specific stage of development and that the conditions Bauer imposed on the system and its existence *must* be breached. Beyond a certain point in time, the system *cannot* exist with a rate of surplus value of 100 per cent. From year 21, from the r point the surplus value and mass of profit are not sufficient to sustain accumulation on the specified scale, that is, in proportion to population growth, and to secure the same income for the entrepreneurs from the enlarged capital. This would not be temporary overaccumulation, as Bauer claims, but under the conditions postulated, *chronic overaccumulation*. The income of the entrepreneur becomes ever smaller and the situation continues to deteriorate until in year 35, at the Z point, it disappears altogether. Alternatively, the assumptions made must be violated, i.e. wages must be cut and the rate of surplus value raised to *over*

207 Bauer 2012b, p. 738. [Grossman's emphasis.]

100 per cent. These wage cuts would not simply be a temporary phenomenon, until equilibrium is re-established, but from now on would be a *permanent phenomenon*. From year 36 either *wages must periodically fall* or the reserve army must necessarily continuously grow. This would not be one of those periodic crises *within* the system that Bauer refers to, elicited by disproportionalities between departments I and II or between *c* and *v*, hence by deviations from the assumptions of the reproduction schema. A crisis of that sort could disappear as underaccumulation is subsequently overcome by means of falling wages, that is, by *adjusting* the size of the productive apparatus to the size of the population. *Here there is nothing more to adjust*. The *periodic crises* in Bauer's schema, the underaccumulation and overaccumulation, arise because in empirical reality the two required proportionalities in the distribution of the social capital have not been maintained, because the conditions for equilibrium are *not* maintained. In our discussion *we have maintained the proportions demanded by Bauer*: the system was in equilibrium the entire time, capital accumulation *was* adapted to population growth the entire time, as assumed, and yet a crisis, a breakdown tendency emerges from year 35. The real dynamic of the capitalist system is thus completely different from the one Bauer asserts. According to Bauer there is, in the capitalist mode of production, 'a tendency for capital accumulation to *adapt* to population growth'.[208] We have shown the opposite, however, namely that there is a tendency for capital to *overaccumulate absolutely*, beyond the limits of population growth.

But Bauer tries to create the impression that his discussion coincides with Marx's, as if he is simply providing an illustration of Marx's ideas. What does Bauer mean by overaccumulation? That capital grows at a faster tempo than that assumed by population growth in the schema. As a consequence of excessive demand for labour, wages rise and accumulation thus slackens, because profits decline. (The opposite effect occurs when there is underaccumulation.) 'Like underaccumulation, overaccumulation is also generated again and again by the mechanism of the capitalist mode of production itself.'[209] These words initially sound remarkably like Marx's well-known argument in the first volume of *Capital*'s chapter on accumulation.[210] On closer inspection, however, Bauer's modification of Marx's ideas is immediately clear. Marx does refer to the rise in wages as a consequence of accumulation, to the softening of the spur of profit and to the self-regulating removal of obstacles, which the capitalist production process temporarily brings about. But this whole discussion in Marx is

208 Bauer 2012b, p. 739. [Bauer emphasised the whole text.]
209 Bauer 2012b, p. 739.
210 Marx 1976b, p. 770.

not about real capitalist accumulation, i.e. about accumulation on the basis of a progressively higher organic composition of capital. The discussion in question comes in the first section of chapter 25 which is called 'A Growing Demand for Labour Power Accompanies Accumulation *if the Composition of Capital Remains the Same*'.[211] Thus Marx's conclusions are only valid in this fictitious or only exceptional case of accumulation based on unchanging technology, because under these 'most favourable conditions [of accumulation] for workers'[212] the growth of capital simultaneously signifies growth in demand for labour. For accumulation on the basis of changing technology and indeed at advanced stages of it, in contrast, Marx deduces the law of the progressive production of a relative overpopulation and finally the law of breakdown. Bauer has confused these two cases and applies Marx's conclusions drawn from accumulation with unchanging technology to his discussion of an accumulation with technological progress. Thus, according to him, crisis does not arise from a lack of sufficient valorisation as a consequence of overaccumulation, even when prices and wages are constant. Following the vulgar economists, it is explained by the changing relationship between supply and demand (wage and price increases), as opposed to Marx whose reproduction schema shows that even in the case where the reproduction mechanism is assumed to be in equilibrium from the start and thus independent of all competitive processes, in the end the general, absolute law of capitalist accumulation must nevertheless prevail. That is, the assumed equilibrium must be disturbed simply by the fact of capital accumulation: deficiency of valorisation and the emergence of a reserve army must occur – entirely irrespective of all changes in values and prices. With his thesis of the possibility of an unlimited accumulation without crises and without any reserve army, Bauer negates Marx's fundamental law of accumulation and thus the cornerstone of Marx's whole system. Since even Kautsky, in his latest book, unreservedly accepts Bauer's explanations (see page 98 above), we are experiencing the singular and shocking drama of the hitherto leading theoreticians of Marxism and likewise of the Second International openly abandoning Marx's theory in its decisive point and placing themselves on the ground of the harmonistic,

211 Marx 1976b, p. 762. [Grossman's emphasis.] When Marx goes on, in the second section of the chapter, to analyse accumulation on the assumption of a rising organic composition of capital, he writes, 'So far, we have considered only one special phase of this process, that in which the increase of capital occurs while *the technical composition of capital remains constant*' (Marx 1976b, p. 772). [Grossman's emphasis.]

212 Marx 1976b, p. 768.

equilibrium theory of Say and Ricardo, that Marx combated most fiercely throughout his life.

And what has been said about Bauer also applies to Tugan-Baranovsky. He believes that 'If social production were *planned*, if the directors of production had a perfect *knowledge* of demand, and the *power* for transferring labour and capital from one branch of production into another, then, commodity supply could not exceed demand'.[213] Bauer's schema now represents such planned, organised production, where managers know all they need to about demand and have the power to adapt production to demand. They are thus in a position to comply with all of Tugan-Baranovsky's requirements and invest capital where they think it is needed to preserve proportionality. They actually do that and, nevertheless, a tendency to breakdown emerges, valorisation declines absolutely, and a reserve army forms.[214]

---

213 Tugan-Baranovsky 2000, p. 77. [Grossman's emphasis '*planned*'.]

214 Finally, the theory of overaccumulation developed here must be sharply distinguished from Bouniatian's 'overcapitalisation' theory. In essence, this theory is simply a reformulation of Say's old proportionality theory. There must be proportionality between the individual branches of production and likewise between consumption and production. Accumulation, i.e. expansion of production, can only come about without leading to crisis if consumption too has grown. 'Every profit-making increase in capital must therefore result in a corresponding rise in the production of consumer goods. If, in contrast, the community's consumption does *not* rise *commensurately* with the increase in capital, a case that is assumed here, then there will be a decline in prices of consumer goods and subsequently of production goods as well.' 'Accumulation of the productive forces that is detached from the consumption of the community *finds its limit* in the possibility of being accomplished economically.' This argument rests on an obvious *petitio principii*. What is to be proved is assumed. It is assumed that production has increased to a *greater* extent than consumption and then it is 'proved' that overproduction, that is a crisis, has occurred. Bouniatian argues:

> For every state of technology, in a given branch of production there is a definite relation between the capital employed and the quantity of mass goods of a lesser order that are produced. On the other hand, in each of these branches of production the capacity to absorb goods of a higher order will depend *on the use* made of goods of the next order, in whose production they are employed, and eventually on the use made of consumer goods. *If consumption remains the same or does not rise sufficiently, then every expansion of capital in any stage of the production process must to lead to overproduction in that branch of production* and, with proportional increases capital in all stages of production, to an overproduction of consumer goods. (Bouniatian 1908, pp. 109–10) [Grossman's emphasis.]

Bouniatian overlooks the fact that the problem is to explain the emergence of crisis, even though *equilibrium* is taken to be the starting point of the analysis, thus it is assumed that

It is apparent that the problem is not whether an excess of commodities remains or not – the only viewpoint that is important for Luxemburg. We did *assume* equilibrium where, *per definitionem*,[215] there is no unsaleable remainder. And yet the system must break down. The difficulty lies rather in the *valorisation* of capital: surplus value is not sufficient for accumulation to continue at the rate assume! Hence the catastrophe.

Obviously, as Lenin correctly states, there are no absolutely hopeless situations.[216] In our case too the breakdown tendency does not necessarily prevail. Counteracting tendencies can interrupt its absolute realisation. So the absolute breakdown becomes a temporary crisis, following which the accumulation process sets in anew on a changed basis. In other words, with the aim of valorising the overaccumlated capital, there is the possibility of *exporting capital* to countries at a lower stage of capital accumulation where rates of profit are higher. Again, a sudden *devalorisation* of constant capital during a crisis improves the possibilities for the valorisation of capital. The *reduction of wages* could have the same effect and postpone the catastrophe. Disregarding the violation of the initial assumptions of Bauer's schema in these cases, these expedients would only have a *temporary* effect. The accumulation that ensues on a new basis must, in a short time, elicit the same phenomena of overaccumulation and insufficient valorisation.

10 The Logical and Mathematical Basis of the Law of Breakdown

We have demonstrated the developmental tendency of pure capitalism, using Otto Bauer's arithmetical schema rather than some example of our own, constructed *ad hoc*. We could have done the same with Tugan-Baranovsky's schema or any other, for that matter.[217] The ensuing result is incontrovertible, because it follows from the essence of accumulation based on the law of value, as a self-evident necessity; because it is already entailed, *a priori*, in the concept

consumption always grows in the required proportion to the expansion of production, to accumulation.

215 ['*Per definitionem*' means by 'definition'.]

216 [Lenin 1966, p. 227.]

217 Tugan-Baranovsky's numerical example of expanded reproduction escapes the danger of breakdown only because it lays out a schema of *simple* and not accelerating accumulation, i.e. displays none of the progressive increases in the organic composition of capital which are a necessary condition for *capitalist* accumulation. According to Tugan-Baranovsky, accumulation develops as follows:

of accumulation, insofar as it takes place *on the basis of a progressively higher organic composition of capital* (accelerated accumulation).[218]

A simple example suffices to grasp this. We assume that population grows by five per cent a year. The mass of surplus value *s* is assumed to grow at the same rate as population, i.e. likewise by five per cent a year. But I have to defray expenses from this growing mass of surplus value that are greater than the annual increase of surplus value. In other words, a *wage increase* a_v that is likewise five per cent of the population (so five per cent of *v*) and, beyond that, expenditures on additional *constant capital* a_c, which increases *more rapidly* than the population (in our schema, at 10 per cent of *c*). The ever-expanding capital has to be valorised by a population which likewise grows absolutely but less rapidly than the capital, so that the basis of valorisation becomes ever smaller and must finally be inadequate. 'The growth in capital values … these growing far *more quickly* than the population, contradicts the basis on behalf of which this immense productive power operates, since this *basis* [the population] *becomes ever narrower* in relation to the growth of wealth; and it also contradicts the conditions of valorisation of this swelling capital. Hence crises.'[219]

The mass of surplus value is like a water reservoir that receives an influx of water of five per cent in a given period but at the same time loses *more* than five per cent in the same period. It is clear that, in the long run, such a state is impossible and sooner or later the reservoir that has to valorise the accumulated capital *must* be depleted. That may not be apparent *initially* and the point of final depletion seems quite remote if, at the start of the process to be analysed, the reservoir was very large compared with the inflow. (In certain circumstances, the amount of water in the reservoir can even temporarily increase.) Eventually, however, the depletion of the reservoir has to follow and

Year	*c*	*v*	*s*	AV
1	1,440	720	720	2,880
2	1,680	840	840	3,360
3	1,960	980	980	3,940

The ratio between *c* and *v* always remains the same (see Tugan-Baranovsky 2000, pp. 67–8). If the rising organic composition of capital in the course of accumulation is taken into account, then breakdown must necessarily result, even on the basis of Tugan-Baranovsky's reproduction schema.

218 ['*A priori*' means 'deduced from given presuppositions'.]

219 Marx 1981, p. 375. [Grossman's emphasis.]

already long before depletion is complete, the mass of water in it begins to *sink* in absolute terms.

In year 2 the surplus value grew by five per cent, that is, by 5,000, at the same pace as variable capital (population growth). But in year 3, apart from a variable capital of 105,000 v, I need not 5,000 a_v additional variable capital but 5,250 a_v, and over and above that 22,000 a_c for additional constant capital. Together, 105,000 v + 5,250 a_v + 22,000 a_c = 132,250 is needed [in year 2]. The surplus value has grown from 100,000 to 105,000, while the expenditures that have to be financed from this surplus value have grown from 25,000 to 27,250.[220] While the amount to be capitalised was 25 per cent of the surplus value of 100,000 in year 1, in year 2 it already constitutes 25.95 per cent of the expanded surplus value of 105,000. Under these conditions, the reservoir of surplus value is depleted more and more, and the accumulated capital can only be valorised at a progressively less favourable rate. After a sufficiently long time the reservoir *must*, however, run dry; the quota due for capitalisation each year not only depletes the available surplus value but must eventually be larger than it, even though it is only a *part* of it. This is where the contradiction lies. At the assumed tempo of accumulation, the mass of surplus value no longer provides the mass [of capital] required for accumulation each year. Therefore, what results is the breakdown of the system, its necessary economic endpoint.[221]

220 [The original text mistakenly stated that in year 3 the outlay on variable capital was 100,000, the sum v + a_v + a_c was 127,250 and expenditure on accumulation from surplus value had grown from 125,000 to 127,250. These errors do not affect Grossman's conclusions.]

221 'The identity of surplus value and surplus labour *sets a qualitative limit to the accumulation of capital*: the total working day, the present development of the productive forces and population, which *limits the number of working days that can be simultaneously exploited*' (Marx 1981, p. 523). [Marx emphasised only '*total working day*'.] Even bourgeois economists recognise the facts of the case but their defective analysis blocks the path to understanding them. For example, Arthur Feiler writes:

> *Exhaustion of the capital reserves* forcibly brought about the cyclical reversal. In periods of cyclical expansion, *more capital is laid out* on existing assets and creating new ones *than is saved over the same period*. Expanded use of credit makes up the difference. Eventually, however, a point … comes when this strain on credit reaches its peak, at which neither capital nor credit is to be had to continue the extension on the previous scale. (Feiler 1914, p. 9) [Grossman's emphasis.]

And elsewhere he states that crises are produced by 'lasting, severe shortages on the money market [by] *capital formation lagging* behind requirements for capital' (Feiler 1914, p. 139). About the crises of 1900, 1907 and 1913 he writes, 'On each occasion the *exhaustion of capital reserves* brought the boom to an end' (Feiler 1914, p. 167). [Grossman's emphasis.] Is the exhaustion of 'savings' an exhaustion of capital? Is it not rather an exhaustion of the surplus value, hence of the future *potential capital* that still has to function as capital?

The attempt by Tugan-Baranovsky, Otto Bauer and Rudolf Hilferding, like every other possible attempt, to interpret Marx's reproduction schema in the sense of the harmonious and unlimited possible expansion of the productive forces under capitalism, must therefore be regarded as a distortion not only of Marx's schema itself but of the fundamental idea that dominates the whole of Marx's system.[222] There are, therefore, no grounds for regarding Hilferding as the 'theoretical leader' of the Marxists, 'the only one who, in his book *Finance Capital*, developed Marx further', as Oppenheimer does.[223]

In addition to the arithmetical and logical proofs presented above, I provide here, for mathematicians, the following general presentation, free of the chance nature of a concrete numerical example.

We have provided a critique of Feiler's conception earlier, in relation to Cassel's similar explanations and refer to what is written above [pp. 157–160]. Here it will only be stated that Feiler is arrested at the empirical-descriptive level; he makes not the slightest attempt to *explain* the facts stated by him. Why are capital reserves exhausted? Why does the economy constantly move up and down? For Feiler these are entirely 'natural' phenomena. The upswing results from increased population, for that brings about 'a lasting stimulus to economic expansion'. The rest follows of itself. For, 'the entirely natural [!] consequence is that we *exaggerate this upswing for a while*'. 'That continues until the turnaround comes and general optimism becomes general pessimism. Then no one will buy more or build more … The factories come to a standstill or curtail their production … until confidence returns after a certain time and gradually new, general, hopeful bliss grows' (Feiler 1914, p. 8). According to this cozy theory, everything is 'natural' and follows 'of itself', after a certain time. For lack of a clear theoretical approach, Feiler's blatant inconsistencies are unavoidable. Although he himself stated, purely descriptively that the 'exhaustion of capital reserves', the 'lag in capital formation' were the true cause of the crises of 1900, 1907 and 1913 (Feiler 1914, p. 139), at the Zurich Conference of the Verein für Sozialpolitik in 1928 he asserted the very opposite, that 'the evidence for a slackening of capital formation is not sufficient', and that he therefore, 'in contrast to Sombart, believes more in the future of highly developed capitalism than in late capitalism' (see *Frankfurter Zeitung* 1928d) [for this position, in expressions which differ in some respects, see the conference minutes, Feiler 1929, pp. 71–2.] What Feiler bases this belief on he does not state and apparently forgets that science ends the moment belief replaces theoretical understanding. Feiler's jibes at 'the existence of a church called Marxist socialism' serve only to conceal his own theoretical weaknesses (see *Frankfurter Zeitung* 1928d) [also Feiler 1929, p. 75]. Descriptive empiricists will always brand every theory, every self-contained system of thought as a dogma, as a 'church'.

222 In a review of Hilferding's book [Hilferding 1981], Bauer states this fact as follows: 'Hilferding confronts Marx with complete freedom … in the theory of crises, he goes considerably beyond Marx' (Bauer 2012a, p. 415). It is now apparent what 'going beyond Marx' means! That is precisely why Hilferding's book is even acknowledged by Othmar Spann as 'the only valuable neo-Marxist book' (Spann 1923a, p. 132).

223 Oppenheimer 1922, p. 4.

a *Meaning of the Symbols*

c = constant capital. Initial value = c^0. Value after j years = c^j
v = variable capital. Initial value = v^0. Value after j years = v^j
s = rate of surplus value (as a per cent of v)
a_c = rate of accumulation of constant capital c [note that elsewhere, a_c denotes the *mass* of additional constant capital accumulated]
a_v = rate of accumulation of variable capital v [note that elsewhere, a_v denotes the *mass* of additional variable capital accumulated]
k = consumption share of the capitalists
S = mass of surplus value = $k + \frac{a_c \times c}{100} + \frac{a_v \times v}{100}$
Ω = organic composition of capital, or $c : v$
j = number of years
Further, let
$r = 1 + a_c/100$
$w = 1 + a_v/100$

b *The Formula*

After j years, at the assumed rate of accumulation a_c, constant capital c reaches the level $c^j = c^0 \times r^j$. At the assumed rate of accumulation a_v, the variable capital v reaches the level $v^j = v^0 \times w^j$. The year after, $(j + 1)$, accumulation is continued as usual, according to the formula:

$$S = k + \frac{c^0 \times r^j \times a_c}{100} + \frac{v^0 \times w^j \times a_v}{100} = \frac{s \times v^0 \times w^j}{100}$$

whence

$$k = \frac{v^0 \times w^j}{100}(s - a_v) - \frac{c^0 \times r^j \times a_c}{100}$$

For k to be greater than 0, it is necessary that

$$\frac{v^0 \times w^j}{100}(s - a_v) > \frac{c^0 \times r^j \times a_c}{100}$$

$$k = 0 \text{ in year } n, \text{ if } \frac{v^0 \times w^n}{100}(s - a_v) = \frac{c^0 \times r^n \times a_c}{100}$$

The timing of the absolute crisis is given by the point at which the capitalist's consumption share [of surplus value] vanishes completely, following its prolonged and steady decline. This means that

$$(r/w)^n = \frac{s - a_v}{\Omega \times a_c}$$

whence

$$n = \frac{log\frac{(s-a_v)}{\Omega\times a_c}}{log\frac{(100+a_c)}{100+a_v}}$$

This is a real number, so long as $s > a_v$. This assumption is, however, the foundation of our entire investigation.

Starting from time point n, the mass of surplus value is no longer sufficient to ensure the valorisation of c and v under the previous assumptions.

c *Discussion of the Formula*

The number of years n until the absolute crisis therefore depends on the following four conditions:

1 The level of the organic composition Ω. The higher this is, the *lower* the number of years in question. The crisis is accelerated.
2 The rate of accumulation of the constant capital a_c, which works in the same direction as the level of the organic composition Ω.
3 The rate of accumulation of the variable capital a_v, which can work to intensify or weaken [the breakdown tendency], and whose impact is therefore ambivalent, as is apparent in the formula. (More detail on this below.)
4 The level of the rate of surplus value s,[224] which works to weaken [the breakdown tendency], i.e. the greater s is, the *higher* is the number of years n, so that the tendency to breakdown is weakened.

224 We have seen that the rate of surplus value s [is such that the mass of surplus value] is equal to, greater than, or less than v. Marx's assumption that the rate of surplus value amounts to 100 per cent, i.e. [the mass of surplus value] is equal to v, only represents the *simplest* and therefore the most convenient starting point for the following calculations. It is not a statement about the actual level of the rate of surplus value. It is simply proof of the declining capacity for abstract thought among bourgeois economists that Heinrich Dietzel raises the following objection against Marx: 'This example which, alas, is calculated to inflame and incite to the highest degree – this assumption that of the twelve hours the worker slogs away, he slogs away six for the capitalist – has unfortunately passed over into the whole of the literature on wages inspired by Marx. Even Oppenheimer makes use of it – thus letting the capitalist earn 100 per cent on the capital invested in wages!' (Dietzel 1921, p. 15). It is not capitalist exploitation that is 'inflammatory' but the innocent example of a 100 per cent rate of surplus value! It should be said to Dietzel that capitalist reality knows rates of surplus value completely different from 100 per cent. Engels, who also had practical experience as a manufacturer, calculates an annual rate of over 1300 per cent for the year 1871, in an enterprise known to him, based on facts 'from the practice alive in Manchester', and writes that, in periods of prosperity, 'such a rate is by no means rare' (Marx 1981, p. 169). In the epoch of monopolies, trusts and combines, dividends of 50 per cent, 75 per cent and more are the order of the day, as one can read in Liefmann and Rousiers [e.g. Liefmann 2001; Rousiers 1912.] The so-called dilution of equity capital that

The accumulation process can be resumed if the earlier assumptions are modified, namely if

a the rate of accumulation a_c is reduced, so that the tempo of accumulation slows down

b constant capital is *devalued*, which again reduces the rate of accumulation a_c

c *labour power is devalued*, that is wages are forced down, so that the rate of accumulation of variable capital a_v slows and the rate of surplus value is thus enhanced

d finally, capital is exported, which again means that the rate of accumulation a_c becomes lower.

From these four principal cases, we can derive all other variations, which are found in empirical reality and bestow a certain elasticity on the capitalist mode of production.

In fact, we see that once the breakdown tendency has come into play in reality, i.e. with the breakdown of the given level of valorisation which means that the accumulation process stagnates, sooner or later counteracting tendencies eventuate. That is, entrepreneurs make attempts to restore the valorisation of their capital. In a *crisis* the devaluation, thus the reduction of the available capital, occurs; the process of reorganisation and concentration, which raises the rate of profit by increasing productivity and 'rationalisation', follows. The same effect is achieved by directly attacking wages etc. We will become more familiar with these counteracting tendencies later, in Chapter 3 below. They interrupt the breakdown tendency so that accumulation can resume, indeed on an expanded basis, and the absolute breakdown is thus converted into a temporary crisis. Here is the simple explanation of the Marxist theory which Spiethoff fails to understand and characterises as a 'confusion between the general tendencies that lead to the *final breakdown* of the capitalist economy and the circumstances that engender *fluctuations*'.[225]

The crisis is, therefore, from the standpoint of capitalist production, a *healing process* through which the valorisation of capital is restored: 'Crises are never more than momentary, violent solutions for the existing contradictions,

is common in American and German industry only serves the purpose of disguising the high rates of profit and surplus value. To take only one example: in his book van Delden reports that as well as a normal dividend the Kamarhatty Company in 1898 distributed an extra dividend of some 300 per cent by issuing bonus shares. The same was true of the Khardach Company in 1909 which likewise handed out 300 per cent in dividends (Delden 1915, p. 167). What are the tremendous rates of surplus value on 'wage capital' required to be able to pay such dividends on the total capital?

225 Spiethoff 1925, p. 66. [Grossman's emphasis.]

violent eruptions *that re-establish the disturbed balance for the time being*'.[226] By its very nature, the duration of this healing process is indeterminable. While the duration of accumulation up until its maximal point *Z* is calculable – as will be demonstrated – it is not possible to determine the length of the actual crisis. Entrepreneurs attempt to use the methods mentioned to restore valorisation until, sooner or later, they succeed. The crisis is only a more or less prolonged interval between two phases of accumulation.

Once counteracting tendencies come into play, the assumptions under which the theoretical analysis was conducted *change*. If they are modified, along the lines identified above, then the process continues for *a time* on a new basis, until a new absolute crisis, which is exactly determined by the new assumptions and can, in turn, be calculated according to the same formula. Surmounting them is, in turn, only an alteration of the assumptions most recently made, for example, if entrepreneurs impose a new reduction of wages. Quite apart from the fact that our initial assumption about variable capital being increased in line with population growth has been breached, the continuation of accumulation would prove to be unfeasible, after a certain lapse in time, even with this lower wage rate. It would, in turn, run up against the limits to valorisation and must therefore be followed by *further reductions in wages* and so on and on in the same direction.

This is the only context that makes sense of Marx's assertion that it is in the nature of capitalism not only to push wages down to the minimum necessary for subsistence but *even lower* than this. 'This zero cost of labour is therefore a *limit in a mathematical sense*, always beyond reach, although we can always approximate more and more nearly to it. *The constant tendency of capital is to force the cost of labour back towards this absolute zero*.'[227] 'It follows therefore that in proportion as capital accumulates, the situation of the worker, be his payment high or low, *must grow worse*.'[228]

> *The greater the social wealth, the functioning capital, the extent … of its growth … the greater is the industrial reserve army*. The same causes which develop the expansive power of capital, also develop the labour power at its disposal … the greater this reserve army in proportion to the active labour army … the greater is official pauperism. *This is the absolute gen-*

226 Marx 1981, p. 357. [Grossman's emphasis.]
227 Marx 1976b, p. 748. [Grossman's emphasis.]
228 Marx 1976b, p. 799. [Grossman's emphasis.]

> *eral law of capitalist accumulation*. Like all other laws, it is *modified in its working* by many *circumstances*, the analysis of which does not concern us here.[229]

People have tried to give the lie to this inexorable general developmental tendency of the system, inherent in pure capitalism, by citing the empirical level of real wages, the discernible *improvement in workers' living standards* in this or some other year. As if Marx had denied the possibility of real wages improving in particular phases of capital accumulation! In a late stage of accumulation, however, this general tendency for real wages to fall (and so not simply worsen in relative terms) inexorably results from the fact of capital accumulation on the basis of an ever higher organic composition of capital. It can only be checked, slowed down by specific counteracting tendencies for a time, but *cannot be abolished*. Apart from such temporary phases, under pure capitalism wages must steadily fall from a certain point in accumulation, despite initial rises; the tempo of accumulation and of possible technological advances must slow down; and the reserve army must grow. But it is readily apparent that the process cannot continue indefinitely. For permanent deterioration of workers' wages is only possible in theory, i.e. conceptually; it is a purely abstract possibility. In reality, the ongoing devaluation of labour power, i.e. continuous reductions in wages, will very soon run into insuperable barriers. John Stuart Mill already said that 'the margin which can be gained by a deterioration of the labourer's condition is a very narrow one: in general he cannot bear much reduction: when he can, he has also a higher standard of necessary requirements, and *will* not'.[230] Any sustained and not just temporary deterioration in living standards would necessarily drive the working class to rebel. So, as it progresses, the capitalist system, because of its own inner economic mechanism and as a consequence of capital accumulation, inexorably approaches its end; it is dominated by 'capital accumulation's law of entropy'.

229 Marx 1976b, p. 798. [Marx emphasised '*This is the absolute general law of capitalist accumulation*'.]

230 Mill 1890, p. 486.

11 Causes of the Misunderstanding of Marx's Theory of Accumulation and Breakdown

If the logical conclusion that flows from accumulation on the basis of an ever higher organic composition of capital is readily apparent and necessary, and follows as an inexorable consequence, it is truly astonishing that no-one has ever previously drawn it. This is particularly the case considering that *the theory of breakdown as a consequence of overaccumulation and insufficient valorisation* is already to be found, *in nuce*,[231] in Ricardo and John Stuart Mill, so that there can scarcely be any possible doubt about the content of Marx's breakdown theory.[232]

Yet, at the very start of his discussion of the general law of capitalist accumulation, Marx proposes that 'The *most important* factor in this investigation is the *composition of capital*, and the changes it undergoes in the course of accumulation'.[233] So it was tempting to think through to the end all the consequences that flow from this fact, all the more because the resulting breakdown of the

231 ['*In nuce*' means 'in a nutshell'.]

232 An especially crass misunderstanding of Marx's theory of accumulation appears in Arthur Salz's discussion (1925, pp. 247 et seq.). Salz starts by complaining that due to lack of space it is impossible for him

> to deal with … [Marx's] theory of the *dynamic of capital* in its different forms. That is all the more regrettable as this is an important component of Marx's economic theory (in the second volume of *Capital*), indeed one acknowledged by many "bourgeois" economists, but one that is not usually considered any further in their textbooks. For entire schools this object generally poses no problem.

After this promising introduction one is excited to find out from Salz the content of Marx's theory of capital's dynamic. On this Salz writes, 'Now one can certainly, like Marx … scoff at … the relatively *minimal activity of accumulation* that occurs in a capitalist economy'! Salz then informs Marx that 'the capitalist form of production's strength in generating capital has exceded all other historical systems of production and has, despite the short span of its existence … maximised accumulation in previously unexpected ways'. In view of this 'historically verifiable fact', Marx's theory of *insufficient accumulation* (!) is untenable. 'It follows that whoever *posits the unsustainability of the capitalist economic system because of capitalism's meagre achievements in this field* has to show that this capital accumulation – so long as its necessity is conceded even by socialists – would necessarily be larger or even just as large under another system' (Salz 1925, p. 249). [Grossman's emphasis.] 'Bourgeois' economists do 'acknowledge' Marx's dynamic, according to Salz, but they pay no attention to it in textbooks. By contrast, Salz introduces it into textbooks but only in order to combat it. It is therefore dissected into a theory of 'insufficient accumulation'. Only, it is a pity that Salz has not betrayed the secret source of his information to us. In Marx himself there is, in any case, not a trace of any of anything that Salz recounts of Marx's theory of accumulation. In other respects too, Salz's ideas are extremely odd. In his conception there is capital accumulation even under other, i.e. non-capitalist, systems!

233 Marx 1976b, p. 762. [Grossman's emphasis.]

capitalist system would only be discussed *in detail* in the third volume, in the part on 'The Law of the Tendential Fall in the Rate of Profit'. Goethe's words can never have been more justified than in this case!

> These men of words, however,
> That word don't understand.[234]

It is, however, no accident that this outcome of Marx's theory has not been previously identified. It is self-evident that bourgeois economists, instead of seeking to *explain* the capitalist mechanism and its laws of development, have long since sunk into pure apologetics. Their so-called 'historicism' has extended the field of research in *one* direction only, which consists of describing the initial stages of this mechanism – its genesis. But the problem of the *possible future end* of this mechanism has never been taken up within the investigative scope of their economics! Just raising the problem throws them into a fearful panic. They prefer not to say anything about it, not to notice the problem.

But even within the Marxist camp the conditions for understanding Marx's life-work were extremely unfavourable. From the correspondence between Marx and Engels, it is apparent how mortified Marx felt by the fact that party circles in Germany were almost unbelievably indifferent to *Capital*. The immaturity of the German workers' movement of the time found a truer expression in [Ferdinand] Lassalle's pamphlets than in the powerful and brilliant intellectual edifice of Marx's theory. Even the leading thinkers of the workers' movement were incapable of grasping the decisive aspects of Marx's theory. It is typical that Wilhelm Liebknecht in 1868 asked Engels to write an article for the party's newspaper to 'explain … what the difference really is between Marx and Lassalle'.[235] So it is understandable that, as Max Beer tells us today,

> up to 1882, and even for some years thereafter there was little trace of *Marxism* in Germany … On the whole the movement drew its doctrines, ideas and sentiments from *Lassalle's writings*, from the recollections of 1848, from the French literature: many socialists had imbibed the doctrines of Rodbertus or Eugen Dühring; others were at the most acquainted with the publications of the International Working Men's Association, or

234 [Goethe 2010, p. 25.]
235 [Liebknecht 1963, p. 88. Engels mentioned Liebknecht's letter in his own letter to Marx, Engels 1987b, p. 526.]

> they based their demands on appeals to ethics and humanity. It was only gradually that Kautsky succeeded in spreading Marxian ideas.[236]

Yet, precisely when, with the appearance of the third volume of *Capital*, Marx's theoretical system was completed for the public, the rapid flowering of German capitalism was extremely unfavourable for the deepening of Marx's theory. It was thought that his theory was contradicted by capitalism's real tendencies. Departure from Marx's theory rather than its deepening was characteristic of that epoch. It was this period of vigorous capital accumulation (1890–1913) that gave birth to revisionism, to all those discussions of a capitalism in equilibrium, all the theories of the possibility of unlimited expansion that we later find not just among the revisionist critics of Marxism but also among the official exponents of theory like Rudolf Hilferding and Otto Bauer. How much the bourgeois economists' fear of the problem of capitalist breakdown has stained the Marxist camp is strikingly apparent in Hilferding's aversion to the whole problem. For him, 'the idea of a purely economic collapse makes no sense'.[237] He shuts his eyes to the real tendencies and identifies them as 'nonsense'! This was precisely how the great utopians wanted to abolish capitalism, by branding the laws regulating wages as 'unjust'.

To a historian looking back, such an attitude to Marx's *Capital* is not incomprehensible. The great popularity that the book enjoyed was initially due to those parts of the work which describe the *immediate process of production* within the factory. Through its discussion of the labour process, which is simultaneously a process of production of value and surplus value, *Capital* threw a harsh light on the position of the working class and its exploitation by capital, and made the day-to-day class struggle that was plain for all to see intelligible. So this volume was for decades the *Bible* of the working class.

The fate of those parts of the work that discuss the *historical tendencies of capital accumulation* was totally different. However brilliantly Marx handled the question of the breakdown of capitalism in all the volumes of *Capital*, that question was bound to remain unintelligible. Capitalism had not ripened to the point when the questions of breakdown and realising socialism could have an immediate reality. Marx was intellectually so far ahead of his own epoch that precisely the parts of his work dealing with these were bound to remain unintelligible at first. In this way, the materialist conception of history is yet again confirmed in relation to Marx's own life-work itself.

236 Beer 1957, pp. 146–7. [Grossman's emphasis.]

237 [Hilferding 1981, p. 366.]

Following the appearance of *Capital*, two generations had to march across the historical stage before capital accumulation's advance and its consequences had sufficiently ripened capitalism into its present imperialist phase and spawned conflicts that found a temporary end in the convulsions of the World War. Only now does the problem of realising socialism descend from the nebulous regions of the socialist programme to the reality of day-to-day practice. Only now are lessons and answers sought in *Capital* to questions that are no longer purely 'academic', no longer simply problems of theory but are thrown up by the harsh necessities of everyday life. In the changed historical situation, the inquisitive gaze reveals previously unnoticed words and content. So the time has come for the reconstruction of Marx's theory of breakdown.

Apparently, the circumstance that the third chapter of the first part of the third volume of *Capital* – where the relationship between the rate of profit and the rate of surplus value is discussed and serves as the basis for the derivation of the law of the tendential fall in the rate of profit – existed as a 'series of *incomplete* mathematical drafts' may have given occasion to the misunderstanding of this principal idea in Marx's theory. Engels, who states this in the preface, sought the collaboration of his friend Samuel Moore who 'took on the task of working up this notebook', since 'as a former Cambridge mathematician he was far better equipped to do so'.[238] But Moore was no economist and, in the final analysis, the discussion of these issues entailed *economic* problems, even if expressed in mathematical form. The way in which this part of the work emerged therefore makes it plausible that there was an extensive opportunity here for misunderstandings and errors, and that these errors could easily be carried over into the part on 'The Law of the Tendential Fall in the Rate of Profit', if only because of the correlation between the two closely connected chapters.

The likelihood of error becomes a near certainty when we consider that it is, unhappily, a matter of a *single* word, which completely distorts the meaning of the entire argument: the inevitable end of capitalism is ascribed to the relative fall in the rate of profit instead of its *mass*. Here Engels or Moore has certainly used the wrong term![239]

---

238 Marx 1981, p. 94. [Grossman's emphasis.]

239 The following well known passage serves to illustrate how much the theory would have gained in clarity if a correction had been introduced in this sense:

> As the process of production and accumulation advances, therefore, the mass of surplus labour that can be and is appropriated *must* grow, and with it too the absolute mass of profit appropriated by the social capital. But the same laws of production and accumulation mean that the value of the constant capital increases along with its mass, and progressively more quickly than that of the variable portion of capital which is converted into living labour. The same laws, therefore, produce both a grow-

Now, although there are the closest connections between the falling rate of profit and the mass of profit, these two words represent two entirely different worlds for theory. Several writers like Charasoff, Boudin and others felt that the central point of Marx's theory lay here. But they could not establish that the breakdown of the capitalist system necessarily follows from Marx's law of value, because they only ever referred to the fall in the *rate* of profit. The breakdown cannot, however, result from a fall in the *rate* of profit. How could a percentage, like the rate of profit, a *pure number* lead to the breakdown of a *real system*? As if the boiler of a steam engine could explode because the pressure gauge goes too high! Why does the capitalist class need to care about a fall in the *rate of profit* if the *mass of profit* continues to grow? The growing mass of profit would be expressed in ever smaller percentage amounts and the rate would approach the null point, its limit in the mathematical sense, without ever being able to reach it. Yet the capitalists and the capitalist system may nevertheless survive. In fact, from Table 2 we see that the capitalist system can exist, despite the fall in the rate of profit, and that the eventual breakdown in year 35 has nothing to do with the fall in the rate of profit as such. Why the system can survive in year 34, with a rate of profit of 9.7 per cent, and why it then breaks down in the following year, when the rate of profit is 9.3 per cent, is not explained. The problem is only comprehensible when we link the breakdown not to the rate of profit but to its mass. 'Accumulation depends', Marx writes, 'not only on the *rate of profit* but on the *amount* of profit.'[240] 'All the circumstances that determine the *mass* of surplus value operate to determine the magnitude of the accumulation.'[241] This can only be true on one decisively important condition. In other words, if the view of Sombart and Otto Bauer is accepted, that value in Marx is *not a real phenomenon* but merely a concept, a '*mental* fact', an aid to our thought, then the breakdown of capitalism due to the relative fall in the mass of profit (the fall in

> ing absolute mass of profit for the social capital, [and a falling rate of profit]. (Marx 1981, p. 325)

The words in square brackets were wrongly written by Engels or by Marx himself; more correctly, they should have been: 'and at the same time a *mass* of profit which falls relatively'. The mass of profit rises in absolute terms and *the same mass of profit* declines in relative terms. Even from the structure of the sentence, this is the only logical expression. The contrast with absolute growth is the *same* magnitude's relative fall of the *same* magnitude. This can therefore relate only to the mass of profit. The *rate* of profit falls not relatively but *absolutely*. [The 'error' Grossman identified was not Engels's, as the relevant sentence in Marx's manuscript is 'The same laws, therefore, produce a *growing absolute mass of profit*, which social capital appropriates, and a *falling rate of profit*' (Marx 2016, p. 328).]

240 Marx 1989c, p. 165. [Grossman's emphasis.]

241 Marx 1976b, p. 747. [Grossman's emphasis.]

the rate of profit is simply an external expression of this fact) becomes an unexplained mystery. Ideas cannot destroy a real system. This is why Sombart and Bauer could not understand Marx's theory of breakdown. Matters are different if value and thus also the mass of profit are conceived of as *a real magnitude*. In this case the breakdown of the system has to follow *from a relative fall in the mass of profit*, even if it nevertheless can and does increase in absolute terms. *The fall in the rate of profit is thus only an index which registers the relative fall in the mass of profit*. A falling rate of profit is only important for Marx because it is identical with a relative decline in the mass of surplus value in the sense just outlined: 'The law of a progressive fall in the *rate of profit*, or the relative decline in the *surplus labour* appropriated.'[242] Only in this sense is it possible to maintain that with a falling *rate* of profit the system breaks down, for the rate of profit falls because the *mass* of profit declines in relative terms. 'The fall in the *rate* of profit *thus expresses the falling ratio between surplus value itself* and the total capital advanced.'[243] It is only this relative decline in the mass of profit (in surplus value, in the mass of surplus value) as a *real magnitude*, rather than the fall in the rate of profit, that engenders the '*conflict between the extension of production and valorisation*'.[244] Beyond a specific limit to accumulation, surplus value is insufficient to secure the normal valorisation of the ever expanding capital.

Only once we recognise the role of the mass of profit and its relation to the rate of profit, which I have discussed here, will a closer reading of the whole chapter on the tendential fall in the rate of profit lead directly to the conclusion that, in several passages, the wording has been distorted in the direction indicated above. Only in this way can the necessity of the breakdown, that is, the conflict between extension of production, accumulation and valorisation, have been obscured and misunderstood. From this, it is apparent what decisively important insights into the character of value in Marx are, at the same time, also yielded by the theory of breakdown!

242 Marx 1981, p. 322. [Grossman's emphasis.]

243 Marx 1981, p. 320. [Grossman's emphasis.]

244 Marx 1981, p. 355. [Grossman's emphasis.] This settles Diehl's objection that Marx was never able to prove the *real significance* of his objective theory of value and that his discussion in the third volume of *Capital* 'leaves the theory of value expounded in the first volume appearing to be what Marx precisely did not intend it to be, namely, a *pure hypothesis*' (Diehl 1898, p. 44).

12 The Factors of the Breakdown Tendency. The Problem of the Periodicity of Crises. The Course of the Cycle and the Problem of Establishing the Duration of Its Phases. The Cycle Research Institutes' Symptomatology. The Provisional Exclusion of Credit. The Tempo of Capital Accumulation (in the Upswing) and the Extent of Population Growth

Otto Bauer did not notice these consequences of accumulation because, in his schema, he starts with a *relatively large number of workers* in year 1 (the organic composition of capital is 200 c : 100 v, so that variable capital constitutes a third of the total capital). Thus Bauer has at his disposal a substantial reservoir of surplus value to begin with, so he can keep going for quite some time. Thus in his reproduction schema the duration of the upswing is 34 years, until only in year 35 does a turn to crisis occur.

With this statement, we arrive at the problem of the periodicity of crises in the course of the cycle and the problem of determining the length of its phases. To the present, bourgeois economists have completely failed when faced with this question.[245] While for a series of theorists the periodicity of crises is a *fact* that occurs of 'natural necessity'[246] and they are therefore incapable of even hinting at the causes of this periodicity, others deny both the fact of periodicity as well as the possibility of establishing the duration of its phases. So [Emanuel] Vogel, for example, writes

245 A sad renown has accrued to the 'theories' of those writers who connect the periodicity of economic cycles to the course of cosmic processes. Thus Stanley Jevons tied the 11-year cycle, in whose existence he believed, to oscillations in the number of sun spots. Most recently, Henry Ludwell Moore sought to explain the eight-year cycle, which he regarded as normal, by changes in the position of Venus in relation to the earth and the sun (Jevons 1884, pp. 221–43; Moore 1923, pp. 121–41). It would be correct to remark that, since in the domain of cosmic phenomena all possible types of periods can be established – from one minute to hundreds and thousands of years – some phenomenon in the firmament can always be found that has the same periodicity as whichever period is assumed to be typical of fluctuations in the economic cycle.

246 John Mills: 'The periodicity of commercial crises is any rate a *fact*' (quoted in Pownall 1987, p. 467). Lexis: 'Periodically, however, there also occurs, as if by natural necessity, an absolute overproduction whose consequences also impact enterprises that are not overcapitalised' (Lexis 1911, p. 208) [Lexis emphasised 'absolute']; Clément Juglar [and Pierre des Essars]: *'Les crises … sont une véritable maladie … qui survient à époques presque fixes'. 'Les crises reviennent périodiquement'* ['Crises are a real illness … that occurs at almost fixed intervals'. 'Crises return periodically'] (Juglar and Essars 1889, pp. 1355, 1348).

> In our 'theory of development' the solution to the problem of the periodicity of crises, which plays a special role in all earlier crisis theories, *if* such periodicity actually occurs, is simply that in any case and at no economic stage does it have any inner necessity but can only be *random*. Rather, what is periodic, because internally grounded, is simply a certain unevenness in the direction and intensity of the movement of the whole economy. Consequently, only the alternation of rising and falling phases can, at least, be regarded as previously having been 'periodic' (but only in the sense of a 'recurrence', not recurrence at regular, equal intervals of time). *So that* no definite, *generally valid rules can be established either for the length of those phases* or for the length and type of 'turning points' that lie between them …[247]

'That capitalist industry *does not have to pass through a cycle of crises* is best shown (above all in England) by developments in the most recent period, when endogenous crises have, in general, been relatively infrequent.'[248]

Oskar Morgenstern also denies the possibility that crises can be predicted, because the succession of upswings and downswings is purely random and shows no lawfulness. 'Every empirically founded prediction of the cycle presumes a *predictive theory*, which, for its part, must rest on a theory of economic fluctuations.' Such a theory is, however, impossible, according to Morgenstern. All the phenomena that would have to provide the basis for such a theory 'are simply the results of human behaviour … and there is no *regular pattern of the sort that would have to be assumed*. Every attempt at a predictive theory, in half-way rigorous forms breaks down'.[249] According to Wilhelm Röpke, the cycle is a fate; it is 'the constantly changing relationship between supply and demand on a market, which *eludes*, to a great extent, *calculation* and influence'.[250] For Robert Liefmann, the crisis arises from 'a mismatch between consumption and capital formation'.[251] But far from wanting to show any lawful regularities here, Liefmann never tires of emphasising the impossibility of making any predictions or precise pronouncements, because 'the ultimate theoretical [!] grounds for cyclical fluctuations must lie … in the goals that *individu-*

247 Vogel 1917, p. 385. [Grossman's emphasis. Vogel emphasised 'periodicity' and 'a certain unevenness in the direction and intensity of the movement of the whole economy'.]

248 Vogel 1917, p. 387. [Grossman's emphasis.]

249 Morgenstern 1928, pp. 344–5.

250 Wolf 1928, p. 3, quoting Röpke. [Grossman's emphasis.]

251 Liefmann 1928, p. 41.

als pursue'.[252] Liefmann thus combats the view 'that it is possible to describe economic relationships *with precision*' and reckons such efforts 'among the greatest logical confusions of the human mind'.[253] He, nevertheless, claims that his theory 'explains cyclical fluctuations'. In other words, when the mismatch between capital formation and consumption 'reaches *a certain* [!!] *but not precisely determinable level*, the occasion arises for a turn'. Even this vague assertion apparently seems 'too precise' for Liefmann and he therefore adds that whether the turn occurs sooner or later, 'depends on innumerable factors, which cannot be foreseen in advance'. 'The *ultimate reasons* for cyclical fluctuations are of a *pre*-economic kind and lie partly in the natural scientific and technological, partly in psychological and sociological domains.' Liefmann emphasises the accidents of 'fluctuating harvests', 'fluctuating needs', new technological advances etc. 'The number of such factors that trigger the turn can be infinitely large.' In view of the 'incalculable impact' of these factors, 'the question of when and under what circumstances the cycle turns is obviously [!] not susceptible to a precise answer' and Liefmann rejects the possibility of any forecasting of cycles.[254]

According to Böhm-Bawerk's dictum, a theory of the business cycle is only possible as the *final* chapter of a complete economic theory.[255] In that case, by asserting that a theory of the cycle is impossible, bourgeois economics ends by confessing the bankruptcy of economic science.

The repeated attempts to prove the *random* character of crises and to deny their necessary connection with the capitalist economic order have their deeper roots in the apologetic efforts of bourgeois science, defending the existing economic order against every criticism. This connection is especially distinct in Heinrich Dietzel's essay 'Harvest Cycle and Economic Cycle'. If the economic cycle is due to cosmic, natural and incalculable causes then the social order cannot be held responsible for it nor can cyclical fluctuations and crises be subject to the influence of human desires and intervention. Under these circumstances, even changing the present economic organisation could not do away with crises. Dietzel compares the course of the cycle to the ebb and flow of the sea.

> There, it is a matter of an unavoidable phenomenon grounded in the *natural* order. Here, by contrast – according to the dominant theory, most

252 Liefmann 1928, p. 56. [Grossman's emphasis.]
253 Liefmann 1928, pp. 43–4. [Grossman's emphasis.]
254 Liefmann 1928, pp. 41, 56, 60, 77, 78. [Grossman's emphasis.]
255 [Böhm-Bawerk 1898, p. 132.]

> strikingly represented by the collectivists – it is the product of a specific *social* order. The 'wave-like motion of the capitalist economy' (Kautsky) – they claim – is due to the capitalist mode of production, a result of the competitive system. The fault lies with the 'defective organisation of the modern social economy' ([James Ramsay] Macdonald) … The economic cycle – or, as Marxism prefers to call it, the 'industrial cycle' – survives only so long as the current social order remains in force.[256]

Dietzel opposes this view.

> The dominant theory is wrong … the swings in the business cycle are due to the *natural* order. This can be explained by certain '*accidents*' which impact the social economy, at longer or shorter intervals. These *can* occur regardless of which 'mode of production' prevails and whether economic 'organisation' is precapitalist, capitalist or collectivist, they *must* always trigger an economic cycle.
>
> In the first rank is the randomness of harvests …
>
> As a consequence of the randomness of harvests the *social economy can never remain on the same track for long* …
>
> As a consequence of the randomness in harvests *there can be no permanent equilibrium between production and consumption* …
>
> The ebb and flow of the tide occurs according to fixed, clear rules; not so with the ebb and flow of grain. As a consequence of the randomness in harvests, error floats above the social economy, like the *fate of unsteadiness*.[257]

'Variations in the size of the harvest are *without question independent of "organisation" – constitute a category of nature*.'[258] Instead of taking this into consideration, Dietzel continues, 'the bad example of Sismondi, Owen etc. has been followed: randomness in harvests (and all the other random events that are likewise categories of nature) has only been mentioned once in passing or its significance has been explicitly denied … For generations … there have been attempts to explain crises, i.e. the turns from boom to slump, in terms of causes specific to today's social order ('anarchy', 'underconsumption' of the masses etc.); to demonstrate that the shifts between upswings and downturns

256 Dietzel 1909, pp. 1091–2. [Grossman emphasised '*social*'.]

257 Dietzel 1909, pp. 1092.

258 Dietzel 1909, p. 1092. [Dietzel only emphasised '*category of nature*'.]

is *immanent* in the '*bourgeois economy*', *only* this … that the economic cycle is exclusively a phenomenon of the 'capitalist' period.'[259] Dietzel seeks to contradict such attempts.

But even those who concede the necessary periodicity of crises at the same time profess their helplessness when faced with providing concrete causes of this periodicity. Thus *Palgrave's Dictionary*, after listing 13 crises in the period 1753–1890 (more recent crises are not mentioned in the 1925 edition of this work!), stated that 'During these 140 years trade and banking have been carried on in war and peace, with a silver standard, with a gold standard, under a suspension of cash payments, in times of plenty, and in times of want; but the fatal years have come round with a considerable approach to *cyclical regularity* … the fact of their recurrence in something like periodicity remains – a fact which *it is easier to record than to explain*.'[260] In fact, no representative of bourgeois economics could give even a half-way exact causal explanation of the periodicity of crises. At best, they give a mere partial explanation of this or that phase of the economic cycle. If the question of periodicity is touched on, their language becomes vague and shrouded in deliberate or inadvertent semi-darkness. As the number of such thinkers is large, it is impossible to list them all or even the more important. As an example, only [Albert] Hahn is mentioned. He begins his discussion of the cycle with the statement that existing monetary theories of the business cycle have indeed been 'in a position to explain … *fluctuations* in economic data' but 'have not yet explained why these fluctuations are *cyclical*'. What Hahn then regards as the 'cause of cycles', relying on [Knut] Wicksell's book *Interest and Prices*, clearly shows how the decisive question is avoided. After pointing out that the stimulus to a cyclical boom lies in entrepreneurs' extra profit that arises from the effective rate of interest being lower than the natural rate of interest, Hahn continues: 'Now a stage necessarily [!] has to come when this stimulus is exhausted and the number of borrowers no longer expands. Interest rates … now have a restricting effect'.[261] Hahn is sparing with words precisely about the decisive question of why and when this stage of reversal in the direction of movement 'necessarily' intervenes and obviously believes his assertion can substitute for a proof.

Schumpeter is therefore right when, with reference to the problem of periodicity in all previous theories of crisis, he states that 'the phenomenon is never

259 Dietzel 1909, pp. 1092–3. [Dietzel emphasised 'economic cycle' and 'exclusively a phenomenon of the "capitalist period"'. Grossman emphasised '*bourgeois economy*'.]

260 Pownall 1987, p. 466. [Grossman's emphasis.]

261 Hahn 1928, p. 160. [Grossman's emphasis.]

made intelligible if it is not explained why the cause, whatever it may be, cannot act in such a way as to allow the consequences to be continuously and currently absorbed … For even if otherwise free from objection, *none explains precisely this circumstance*'.[262]

The incapacity of the theory to explain the periodicity of crises obviously also removes any theoretical basis for establishing the length of their phases, i.e. the wavelength of the cyclical movements.

In fact, the determination of the length of phases has lapsed into the purest empiricism. The great uproar over the 'exact' results of various economic cycle institutes, during recent years, only conceals the state of theoretical confusion and hopeless empiricism apparent behind the mathematically clad works of these institutes. In the United States on the basis of observations it was thought we could assert that the phases have become shorter than previously in the most recent period and conclude from this that there is now a tendency for the *phases of the cycle to become shorter*. By contrast, others assert that the crisis cycle has become longer. This is true of Tugan-Baranovsky on the basis of his study of the English conditions,[263] as well as of Schmoller.[264] The 'debate over method' fought out four decades ago between the historical and the deductive schools regarding the way theory is constructed, has simply passed over bourgeois economics, leaving no deeper traces. The hopeless empiricism of the historical school is today again dominant in the field of business cycle studies. Only its form has changed, the content remains the same. What was historicism if not an attempt to provide the groundwork for the construction of a theory in the form of the richest possible historical data? Even today, this symptomatology in the field of research on economic cycles is characteristic of the whole orientation of the various institutes for research into economic cycles, in America and Europe, with the only difference being that the evidence used by these institutes is 'up to date', and is no longer drawn from distant historical epochs but from the economic developments of the most recent period. The programmatic declaration of the German Institut für Konjunkturforschung states that

> In a deeper sense, the researches of the German Institute run parallel with those at Harvard. Harvard and comparable American efforts *chiefly*

262 Schumpeter 1949, p. 224. [Grossman's emphasis.]

263 Tugan-Baranowsky 1901, p. 166.

264 According to Schmoller, the factors of periodicity have been so extensively redefined that they lose any concrete meaning. 'The *tempo of the periodicity*', Schmoller writes, 'is variable and determined, in detail, by inventions, expansion of the world market, aggregation of capital, and political and economic innovations. On the whole, the epochs become longer, *crises less frequent*' (Schmoller 1904, p. 491). [Grossman's emphasis.]

> *deal with data*, in contrast to previous German cycle theory which was primarily the theory of crises and therefore placed causal analysis in the foreground, mainly confining themselves to historical discussions … The contrast between the two conceptions is best exemplified in this way: crisis theory sought, as it were, to identify the *pathogen* responsible for cyclical fluctuations or even claimed to have found it; American research was, principally, content with the fullest possible description of the *features* of the disease and its progression … *The more complete the pathology of the features, the symptoms covered, the more certain the diagnosis can be*. Conclusions result – admittedly not as compellingly as those resulting from laws of cause and effect – from *analogical reasoning, from the observation of the movement of regular sequences of typical features*. It is therefore of secondary significance whether or not conjectures about causal connections have played a role in the selection of data series. The decisive characteristics are derived here less from any theoretical assumptions than from certain perspectives imposed by practice.[265]

Seldom has a programme of the complete lack of any theoretical programme been proclaimed with greater frankness! And precisely this lack of any theoretical programme, the unprincipled empiricism of the Americans has been completely adopted by the German Institut für Konjunkturforschung. The study of the economic cycle is only concerned with the type and selection of data. While in America attention was primarily directed to the process of circulation, pricing, markets, in Germany production data are also considered. For the rest, 'the German Institut für Konjunkturforschung also sees *its chief initial task as engaging in symptomatology*, because it *believes that it is today scarcely possible to identify the causes of cyclical movement in a satisfactory manner*. This work, which should not by any means be neglected or even rejected in principle, *can only be successfully approached when more comprehensive studies of the manifest forms of the cyclical movement are available*.' A credo that is, almost in its very choice of words, similar to Schmoller's programmatic points, from the period of the debate over method! Bourgeois economics is already tired of theory; can it be assumed that a second [Carl] Menger will awaken it to new life from its theoretical slumber?[266] The many volumes of the *Vierteljahrshefte zur Konjunkturforschung* are – in accord with the programme – in fact filled with

265 Wagemann 1926. [Grossman's emphasis.]

266 Practical business considerations ensure that it cannot abstain from theory completely:

> Knowledge of the economic situation and, for that reason, of *correct business planning* today require a refined and comprehensive method that makes insights possible into

pure symptomatology. We find there a whole series of indicators, the 'general economy barometers': extent of production and employment in the capital goods and consumer goods industries, orders and raw material imports, the level of inventories, relations between sales volumes and price levels, the volume of credit, the number of bankruptcies and protested bills, the number of unemployed, volumes of income, costs of living, and the purchasing power of money etc., etc. Graphs and mathematical formulaes are provided. But investigation of the causes of upswing, peak and recessionary phases, and of their durations does not receive even a hair's breadth of support. In fact, attempts to determine the duration of the phases of the cycle have yet to move beyond blind gropings and 'observations' of the real process. What are the causes upon which the duration of phases depends? Does the tendency of development move in *one* direction only, towards the shortening of the duration of phases, or is lengthening also possible, under certain circumstances? Bourgeois economics is totally helpless when confronted with these questions. It is therefore true when Adolf Löwe expresses himself as follows about this whole tendency: 'It must be stated that our insights into the *theoretical* connections of the economic cycle … *have not in the slightest been enriched* by all the descriptions of phases and correlation calculations. Basically, over the last decade, cycle theory has *not advanced a single step*.'[267]

---

the interconnections between private business and the national economy, as well as between the individual branches of business, and the intermeshing of different economic movements. Business cycle research is an important foundation for this. *So this branch of research has grown directly out of the practical needs of economic management*. (Wagemann 1926, p. 4) [Grossman's emphasis.]

267 Löwe 1926, p. 166. [Löwe only emphasised '*theoretical*'.] Despite all the reservations that Altschul expresses with respect to the significance of empirical-statistical research for economic theory, he is not free from exaggeration about the significance of economic cycle statistics and overlooks the fundamental incapacity of statistics to enrich our theoretical understanding. As a result of his manifest admiration for the 'refined methods of mathematical statistics', Altschul can therefore scarcely contain himself because, 'in the short space of barely ten years', these methods have led to 'the whole of American economics … being thoroughly saturated by a mathematical-statistical method of treatment' (Altschul 1928, p. 168). In fact, no previous epoch has had at its disposal such wide-ranging *knowledge of facts* as ours. What *results* for theory can this literature credit to its account? It is simply an optimistic delusion when Altschul asserts: 'In the most recent period, research into the economic cycle has received *the strongest support* from the particularly careful and sophisticated observation of cycles in the United States'. 'Thanks to refined statistical analysis, the course of economic life has, in a sense, been brought to a level of description at which it is possible to gain an *understanding of the economic process* [!] that volumes of earlier monographs never even approached in such an immediately striking form' (Altschul 1928, p. 169). A professional author, Carl Snyder, Chief Statistician of the

Yet even among Marxists – thanks to Kautsky, Otto Bauer, Hilferding – there is no less confusion in this field. Marx mentioned the factors that extend or abbreviate the length of the cycle and for his time he assumed that 'for the most important branches of large-scale industry, this life cycle is *now on average a ten year one*'. Yet '[*t*]*he precise figure is not important here*.'[268] The wavelength of the wave movement or, as Marx said, the 'periodic changes of the industrial cycle'[269] may be greater or smaller but the periodicity of the movement itself is not thereby abolished.

Although he does *not* agree with Tugan-Baranovsky's theory of crises, in his discussion of crises Kautsky does believe that he has found 'even more points' on which he must not merely agree with Tugan-Baranovsky but has gained 'new insights' from his work. Among these is 'Tugan-Baranovsky's observations about the *causes of the periodicity* of crises'.[270] That this is logically untenable should be obvious. How is it possible not to agree with a theory of crises and yet accept the causes of periodicity proposed by that theory? Rejecting the alleged causes of the crisis but accepting the periodic appearance of these alleged causes!

And what is Tugan-Baranovsky's epoch-making discovery that impressed Kautsky so much? Kautsky himself writes, 'Like Tugan-Baranovsky we regard the intermittent extension of the international *railways as one of the principal reasons for the alternation of prosperity and crisis*. During the nineteenth century, the extension of the world market and of the rail network go hand in hand.'[271] Extension of railways as a cause of periodic crises! That is how Kautsky completely distorted and vulgarised Marx's theory of crises.

And precisely because Marx's theory was presented in this distorted form by well-known Marxist theorists it could satisfy no-one. So it is understand-

Federal Reserve Bank of New York, acknowledges the slight significance for theory of this whole direction of research: 'If it is asked, what is the sum total of the theorems, which have followed as the widely acknowledged *result* of these extensive and in-depth studies, [then] the answer has to be that the gain in terms of prediction or control of phenomena, the two characteristics of all true scientific knowledge, *is quite slight*' (Snyder 1928, p. 27). [Grossman's emphasis.] In fact, as Löwe remarks in the essay cited above, 'it would be a misconception of the logical relationship between theory and empirical research to expect growing *empirical* understanding to directly promote the construction of *theoretical* systems' (Löwe 1926, p. 166).

268 Marx 1978, p. 264.

269 Marx 1976b, p. 808.

270 Kautsky 1902, p. 133. [Grossman's emphasis.]

271 Kautsky 1902, p. 137. [Grossman's emphasis.]

able that Lederer makes the following critical remarks: 'The labour theory of value – at least tentatively suited to provide a vivid picture of a *static* economic process – has difficulties as soon as it has to deal with *dynamic* phenomena', by which he means economic cycles.[272] 'If Rosa Luxemburg's theory is not accepted, then on the basis of the labour theory of value (as for example in Hilferding and Tugan-Baranovsky) the whole problem of the economic cycle can *only be seen as one of proportionality and disproportionality*, (e.g. Hilferding and Tugan-Baranovsky).'[273] From this Lederer draws the conclusion that 'Consequently with the self-organisation of the capitalist process *crises* must *disappear*'. 'Within the labour theory of value crises are explained either in terms of the contradiction between increases in productivity of the economic apparatus and the lagging capacity of the market to consume or in terms of the mistaken distribution of the means of production to the individual branches. If these are the causes of crisis, however, it is not apparent why *understanding* of these causes could not eliminate crises. Moreover, they do not explain the *periodicity* of crises'.[274] So, on the basis of the labour theory of value, either underconsumption or disproportionality is the sole possible explanation for crises! Yet neither can explain periodicity and, in the logic of their arguments, both ultimately make capitalism economically eternal, which, to Lederer, appears incompatible with the spirit of Marx's theory of accumulation and crisis.

---

272 Lederer 1925, p. 358.

273 Lederer 1925, p. 359. [Grossman's emphasis.] Lederer's critique of disproportionality theory (pp. 372–76) is the best that has been written on this theme. It does not, however, have any bearing on Marx's theory of crises, in which crises emerge from periodically recurring insufficient valorisation. Every theory of disproportionality *primarily* entails a theory of *partial* overproduction. By contrast, Marx derives crises, in 'pure' capitalism, from primarily *general* overproduction that necessarily arises even with full proportionality among all branches of production. It is precisely the possibility of such general crises and not the partial ones that emerge from disproportionality, which forms the object of Marx's debates with the conception of Say and Ricardo! (Marx 1989c, pp. 124 et seq., 150, 158 et seq.). Although '*general* accumulation' is assumed, hence '*parallel production* … which takes place *simultaneously* over the whole field' (Marx 1989c, p. 115) [Grossman emphasised '*production*'], nevertheless a '*general* glut of the market is possible' (Marx 1989c, p. 124). [Marx emphasised 'general glut of the market'. At this point Marx was criticising Ricardo's position which was, to quote the whole of Marx's clause, that 'no *general* glut of the market is possible'.] 'At a given moment, the supply of *all* commodities can be greater than the demand for *all* commodities' (Marx 1989c, p. 135). [Grossman's emphasis.] But Marx also derived the primarily *partial* crises in 'certain spheres', of which he writes, not from disproportionality in the scope of production but rather from the different levels of capital accumulation, as overaccumulation occurs earlier in spheres with greater capital accumulation than in others.

274 Lederer 1925, p. 360. [Grossman's emphasis in the first quotation.]

We have already shown that, precisely on the basis of the labour theory of value, Marx's theory of accumulation leads to a theory of breakdown and crisis for entirely different reasons from those mentioned by Lederer. Further, the *periodic* course of the reproduction process *necessarily* results from the theory of overaccumulation discussed by us. And finally, that it is only possible – and attempted here for the first time – *to explain the length of phases* in the course of the cycle on the basis of this theory.[275] According to the method that underpins

275 In the following discussion of the cycle's course, we can only go into the essential causal relationships, without wanting to exhaust the subject in all its details. So, for example, we have to refrain from a more comprehensive discussion of credit and its effects on the reproduction process, simply on grounds of space. To deal with this theme and to engage critically with bourgeois economics, which in Joseph Schumpeter's and Albert Hahn's theory has again refurbished the old theories of Proudhon and Pecqueur about *crédit gratuit* [free credit] and an economy without crises would go beyond the scope of this book and must therefore be reserved for my principal work. In contrast to Hahn's assertion, 'It is clear that a boom is impossible *without* credit expansion', from the Marxist standpoint it is precisely a matter of showing that crises must necessarily arise quite independently of credit, hence of mechanisms in the circulation process, and indeed emerge from causes that lie within the sphere of production (Hahn 1928, p. 159). [Grossman's emphasis] 'The superficiality of political economy', writes Marx, 'shows itself in the fact that it views the expansion and contraction of credit as the *cause* of the periodic alternations in the industrial cycle, whereas it is a mere *symptom* of them' (Marx 1976b, p. 786). [Grossman's emphasis.] All the 'illusions about the miraculous power of the credit and banking system … arise from complete ignorance about the capitalist mode of production and about the credit system as one of its forms' (Marx 1981, p. 743). As early as 1842, Pecqueur demanded that the banks 'govern production', that 'the credit institution … govern the entire movement of national production'. [Marx 1981, p. 744 [quoting Pecqueur 1842, p. 433.] It was desired that all the ailments of the capitalist system should be cured by means of credit. In contrast, Marx emphasised that 'At first glance … the entire crisis presents itself as simply a credit and monetary crisis' (Marx 1981, p. 621). That is why, 'the origin of these storms [on the world market] and the means of defence against them were sought', by the Currency School, 'within the sphere of currency, the most superficial and abstract sphere of this process' (Marx 1981, p. 681). Nevertheless, credit is not the primary cause of crises and periodically recurring economic cycles are driven by causes that lie within the sphere of production. That is why the analysis the economic cycle and its causes must initially disregard credit. That does not mean that, from the standpoint of capitalist production, credit is of secondary significance or even superfluous. On the contrary. 'Large-scale production … casts the entire product into the arms of commerce; but it is impossible for the nation's capital to double, so that commerce would purchase the entire national product with its *own* capital before selling it again. Credit is thus indispensable here, a credit that grows in volume with the growing value of production' (Marx 1981, p. 612). [Grossman's emphasis.] Thus it must never be forgotten 'that the credit system … is … *an immanent form of the capitalist mode of production* and on the other hand a driving force of its development into its highest and last possible form'. But far from moderating crises or even abolishing them, '[b]anking and credit … become the most powerful means for driving

the present work, this explanation cannot result from statistical investigations and the analysis of empirical economic graphs. Even if we could establish the connections between particular economic phenomena and the length of the economic cycle statistically, that would still not provide proof of the *necessity* of these connections. Statistics, whether served by 'primitive' or 'refined' mathematical observations, can never show why variations in one factor should *necessarily* condition variations in another. Empirically ascertainable relationships among economic facts, for example, particular regularities, remain problematic for theory so long as they are not reducible, as [Friedrich] Hayek rightly states, to connections 'that are clearly *necessary*, independently of their having been established statistically'.[276] 'It is in the nature of business cycle theory, as of all economic theory, that it has only two criteria of correctness. It must be derived from the *basic ideas of the theoretical system* in a logically impeccable manner and be capable of explaining in a purely *deductive* way precisely those phenomena, with all their peculiarities, which we observe in the actual course of the cycle.'[277] Obviously, this is also true when it comes to providing a theoretical explanation of the duration of the cycle's phases. So, in what follows, we want to derive the wavelength of the wave's movement in a purely deductive manner, as the *necessary consequence* of the previously given fundamental elements of the mechanism of reproduction.

The factors on which the length of the upswing depends are yielded exactly by the formula specified earlier. The length of this phase can thus be calcu-

---

capitalist production beyond its own barriers and one of the most effective vehicles for crises and swindling' (Marx 1981, p. 742). [Grossman's emphasis.] Since our analysis initially disregards credit, obviously its modifying effects must be subsequently taken into account. Sixty years after the above formulations, more recent theory about the role of credit can add nothing new to what Marx said and simply confirms the results of his research. So, for example, Löwe describes the function of factors related to credit as follows: 'The monetary sphere, although it is not, in the final analysis, a *causative* factor of … cyclical movements as such, is nonetheless, to the extent that it operates as an *intensifying* factor, of the greatest influence on the *size of the cyclical swings*' (Löwe 2002, p. 210). [Grossman emphasised '*causative*' and '*size of the cyclical swings*'.] All the more amusing are attempts from the Marxist side to reconcile Marx's theory with the conception of a crisis theory based on credit. Dvolaitskii, the Russian translator of Luxemburg's book on capital accumulation, agrees with Luxemburg to the extent that he denies the possibility of accumulation under pure capitalism. His divergence from her is reflected in the special function that he ascribes to credit. This, in other words, acquires the magical property of making accumulation possible once more even under pure capitalism (see Dvolaitskii 1923). [Grossman's reference conflates the article by Dvolaitskii with the critique of Dvolaitskii's theory by Motylev 1923.]

276 Hayek 2002, p. 164. [Grossman's emphasis.]

277 Hayek 2002, p. 165. [Grossman's emphasis.]

TABLE 3

Year	c	v	k	a_c	a_v	AV
1	200,000	25,000	3,750	20,000	1,250	250,000
2	220,000	26,250	2,938	22,000	1,313	272,500
3	242,000	27,563	1,984	24,200	1,378	297,125
4	266,200	28,941	874	26,620	1,447	324,081
5	292,820	30,388	0	29,282	[1,105 available]	
					1,519 [required]	
				[30,387 available]		
				30,801 (!) [required]		
				414 (deficit)		

lated under the conditions clearly set forth in our schema, even though the pure course of the schema is complicated by all sorts of circumstances in empirical reality.

In the following we use Otto Bauer's reproduction schema as an example to show the influence of individual factors on which the length of phases depends. The duration of the upswing is prolonged or abbreviated according to variations in these factors.

1 *The level of the organic composition of capital.* If, for example, Bauer had assumed a smaller reservoir of surplus value at the start of his reproduction schema, *a capital with a higher organic composition*, e.g. 200,000 c + 25,000 v, then the system would have to break down *much faster*, and Bauer would have noticed this immediately, because in this case the consumption fund of the capitalists, the k part, already starts to shrink from the first year. That is to say, if we assume the case where the other conditions of Bauer's schema remain the same, that constant capital grows by 10 per cent a year, variable capital by just five per cent but the rate of surplus value is constant at a 100 per cent, then we would have the development of the system [shown in Table 3, above].[278]

We see that with a higher organic composition, as in this case, the system has to break down earlier, in year 5. For accumulation in the sixth year, 30,801 is necessary (whereupon nothing is left for the consumption of the capitalist class) but with a rate of surplus value of 100 per cent the surplus value only

278 [Rather than reproducing some erroneous figures originally provided by Grossman, those in this and the next table and the following paragraph were calculated in a spreadsheet, using his formulae. They also confirm Grossman's conclusions.]

amounts to as much as variable capital, that is 30,388. This results in a *deficit* of 414 in the surplus value destined for capitalisation – or the rate of surplus value, that is the rate of exploitation, has to rise to 101 per cent, i.e. *wages have to be pressed down*! This would have to happen, in any case, because capitalists cannot live on thin air and therefore also claim a part of the surplus value for their personal consumption.

Only once the great significance of the level of the organic composition of capital for the breakdown tendency is grasped, can it be understood why Marx states, at the very start of his discussion of the general law of capitalist accumulation, that '*The most important factor* in this investigation is the *composition of capital*, and the changes it undergoes in the course of the process of accumulation'.[279]

2 As well as the organic composition of capital, the rate of accumulation, a_c and a_v, is a further factor that either accelerates or slows down the tendency to breakdown. Any rise [in the rate of accumulation of constant capital] likewise has an *accelerating* effect. If the rate of accumulation of constant capital is not 10 per cent but 20 per cent, then the breakdown has to occur *sooner* [as shown in Table 4].

TABLE 4

Year	c	v	k	a_c	a_v	AV
1	200,000	100,000	55,000	40,000	5,000	400,000
2	240,000	105,000	51,750	48,000	5,250	450,000
3	288,000	110,250	47,138	57,600	5,513	508,500
4	345,600	115,763	40,854	69,120	5,788	577,125
5	414,720	121,551	32,529	82,944	6,078	657,821
6	497,664	127,628	21,714	99,533	6,381	752,920
7	597,197	134,010	7,870	119,439	6,700	865,216
8	716,636	140,710	0	143,327 (!)	0	

While, with an accumulation rate of 10 per cent of constant capital, the breakdown comes in year 35, as shown earlier, here with a rate of accumulation that is twice as high, the breakdown already occurs in year 8. In that year, the additional constant capital already must be *larger* than the total surplus value! Nothing is left for additional variable capital a_v or for the capitalist's k part (consumption fund). For this reason, the system must break down.

279 Marx 1976b, p. 762. [Grossman's emphasis.]

In the preceding paragraphs we looked at the rate of constant capital accumulation solely from the side of its *value magnitude*. But what would this factor mean when considered not from its value side but from the aspect of its *natural form*? It is means of production that are necessary for the expansion of the productive apparatus. *What is the influence of the physical and 'moral' lifespan of these elements on the course of accumulation?* Sismondi already stated that crises are closely connected with the lifespan of fixed capital: 'On a pu remarquer que les secousses violentes qu'éprouve aujourd'hui l'industrie manufacturière tiennent à la rapidité avec laquelle les découvertes scientifiques se succèdent'. The effects of so many 'inventions révolutionnaires' are highly regrettable for society. 'Non seulement la valeur de toutes les marchandises déjà produites se trouve diminuée … mais tout le capital fixe, toutes les machines … sont rendus inutiles.'[280] Before Marx, however, no-one demonstrated exactly what this connection was.

In our reproduction schema, it was initially assumed, for the sake of simplicity, that the lifespan of fixed capital was just *one* production period, i.e. that this element was used up in *each* production cycle and therefore had to be renewed from the year's production. This assumption represents a theoretical fiction and thus has to be corrected subsequently. Obviously, in accord with reality it does have to be asserted that the fixed component of constant capital participates in several production cycles and does not need to be renewed every year. While, according to the schema, the natural form of fixed capital participates in the production of new value and surplus value only over *one* cycle of production, in reality it operates in the production of value and surplus value over several years. Even if fixed capital's own value is transferred to the product at lower annual rates of depreciation the longer it functions, it helps to co-produce a growing mass of value and thus also surplus value in proportion with the increase in its lifespan. In this way, the valorisation of the given capital, its profitability, is improved and thus the breakdown tendency is weakened, i.e. the length of the boom phase up to the turning point is prolonged. As a consequence of technological improvements, the physical durability of fixed capital progressively increases. So we have here a factor that increases the length of the economic cycle.

280 Cited in Grossman 2019d, p. 92. ['It has been noted that the violent shocks suffered nowadays by manufacturing industry derive from the speed with which scientific discoveries succeed one another'; 'revolutionary inventions'; 'Not only is the value of all goods already produced diminished … but all the fixed capital, all the machines … are rendered useless', Sismondi 1838, pp. 366, 367.]

The opposite effects occur as a consequence of inventions, that is the 'moral' depreciation of fixed capital, because of which it [fixed capital] becomes unusable long before its physical extinction. The functional duration of fixed capital is abbreviated; it contributes a smaller mass of value and surplus value to production. The valorisation of a given capital is thus worsened; the accumulation (upswing) phase is abbreviated. About this Marx writes

> To the same extent as the *value* and *durability* of the fixed capital applied develops with the development of the capitalist mode of production, so also does the life of industry and industrial capital in each particular investment develop, extending to several years, say an average of ten years. If the development of fixed capital extends this life, on the one hand, it is cut short on the other by the constant revolutionising of the means of production, which also increases steadily with the development of the capitalist mode of production. This also leads to changes in the means of production; they constantly have to be replaced, because of their moral depreciation, long before they are physically exhausted. We can assume that, for the most important branches of large-scale industry, this life cycle is now on average a ten-year one. The precise figure is not important here. The result is that the cycle of related turnovers, extending over a number of years, within which the capital is confined by its fixed component, is one of the *material foundations for the periodic cycle* in which business passes through successive periods of stagnation, moderate activity, over-excitement and crisis.[281]

3a The effect of the rate of accumulation of variable capital a_v is ambiguous. A rise in the rate of accumulation of variable capital operates in the same direction as the rate of accumulation of constant capital, if the population is held

281 Marx 1978, p. 264. [Grossman's emphasis.] In the text an attempt will be made to show the specific effects that a lengthening or shortening of the durability of fixed capital will have. If capitals, whose lifespan is *given*, are devalued, the valorisation of those capitals is thereby improved and the breakdown tendency is therefore weakened. This case, which is to be clearly demarcated from the one discussed in the text, will be taken up in chapter three ('k. The influence of periodic devaluation … on the accumulation process' [pp. 319–325]). The 'moral depreciation', referred to above, means the unusability of means of production (in terms of their use value) and therefore the need to replace them with new means of production. By contrast, devaluation only implies a diminution of value because of continuing employment of existing means of production (as use values) in the production process.

constant or grows at the assumed rate (in Otto Bauer's schema, five per cent a year). Under this assumption, variable capital can accumulate more *rapidly* than assumed in the schema only if *wages* grow from year to year. Additions to variable capital grow each year for two reasons: because the *number* of workers expands and because their [individual] *wages* increase at the same time. Under these circumstances growth in wages means a fall in the rate of surplus value. So let us suppose that the working population increases by five per cent a year, whereas wages rise by 20 per cent. The result, *ceteris paribus*,[282] is the development of the system [shown in Table 5].[283]

TABLE 5

Year	c	v (*workers*)	k	a_c	a_v	AV
1	200,000	100,000	54,000	20,000	26,000	400,000
2	220,000	105,000	50,240	22,000	32,760	430,000
3	242,000	110,250	44,772	24,200	41,278	462,500
4	266,200	115,763	37,133	26,620	52,010	497,725
5	292,820	121,551	26,736	29,282	65,532	535,921
6	322,102	127,628	12,847	32,210	82,571	577,358
7	354,312	134,010	0	35,431	98,578	622,331
8	389,743	140,710		[134,009 available] 139,770 (!) [required] 5,461 (deficit)		

While, that is, in Bauer's schema the rate of accumulation of variable capital *keeps pace* with the increase in population and the breakdown only occurs in year 35 (see Table 2 on page 136), an increase in the rate of accumulation a_v has the effect of *accelerating* the breakdown; it now occurs in year 8. The surplus value needed for accumulation in that year is 139,770, while the surplus value actually available amounts to only 134, 009, resulting in a deficit of 5,461.

282 [‘*Ceteris paribus*’ means ‘other things being equal’.]

283 [Rather than reproducing some erroneous figures originally provided by Grossman, those in this table and the following paragraph were calculated in a spreadsheet, using a corrected formula for a_v. See the Appendix for Grossman's original Table 5 and the correct formula. The corrected table confirms Grossman's conclusions.]

3b This case, in which the rate of accumulation of variable capital grows only because of rising wages, while the rate of growth of population remains constant, as assumed at five per cent, must be sharply distinguished from that in which the rate of accumulation of variable capital likewise grows, not, however, due to rising wages but rather because the *population* expands faster than five per cent a year. Expansion in the basis of valorisation must – *ceteris paribus* – *weaken* the breakdown tendency. If population grows not by five per cent, as assumed so far, but by eight per cent then the mass of surplus value likewise grows by eight per cent instead of five per cent, thus – *ceteris paribus* – the breakdown occurs at a *later* point in time, namely, under the conditions postulated in the example before last [Table 4], not in year 8 but in year 9 [as shown in Table 6].[284]

TABLE 6

Year	c	v	k	a_c	a_v	AV
1	200,000	100,000	52,000	40,000	8,000	400,000
2	240,000	108,000	51,360	48,000	8,640	456,000
3	288,000	116,640	49,709	57,600	9,331	521,280
4	345,600	125,971	46,774	69,120	10,078	597,542
5	414,720	136,049	42,221	82,944	10,884	686,818
6	497,664	146,933	35,645	99,533	11,755	791,530
7	597,197	158,687	26,553	119,439	12,695	914,572
8	716,636	171,382	14,345	143,327	13,711	1,059,401
9	859,963	185,093	0	171,993	14,807	
				[185,093 available]		
				186,800 (!!) [required]		
				1,707 (deficit)		

In year 9 the surplus value for accumulation must be 186,800, while the total available mass of surplus value comes to only 185,093, thus there is a deficit of 1,707, meaning that there is nothing left for capitalist consumption so the deficit is even larger!

In this context it is appropriate to mention Lederer's critique of the labour theory of value. On the basis of his critique, Lederer thinks that Marx's theory of

284 [Rather than reproducing some erroneous figures originally provided by Grossman, those in this table and the following paragraph were calculated in a spreadsheet, using his formulae. They also confirm Grossman's conclusions.]

accumulation is incapable of explaining dynamic phenomena, that is the economic cycle. It can only help to illustrate a *static* economic process. Lederer has the strange idea of discussing development while assuming a *static population* and criticises Marx's theory of accumulation on the basis of this assumption!

> *With a static population* economic *development* would be an illusion, comparable to the ebb and flow of waves … Creation of excess capital that cannot be valorised during the boom; paralysis, economic annihilation of the same and the creation of a relative surplus population in the crisis; restoration of the equilibrium between production and consumption during the depression; and the start of a new cycle in the boom. Thus [!] a theory of the economic cycle that is grounded in the labour theory of value offers an extremely unsatisfactory picture.[285]

That such an approach is bound to run into problems 'thanks to its rigid conception of magnitudes' is clear. Only, the 'rigid' conception of magnitudes is Lederer's own product and has nothing to do with Marx's labour theory of value. We saw above (page 165) that a steady increase in the number of workers, in 'additional labour power' according to Marx, is an essential constitutive element of the concept of accumulation.

However, even if it is assumed that population grows (Lederer cites Otto Bauer's attempt to explain accumulation in terms of expanding population), this is 'not a sufficient explanation on the basis of the labour theory of value'. True, according to Lederer 'population expansion is an essential factor in economic development but it *does not suffice to explain its tempo*, unless rising mass consumption during boom periods is also assumed'.[286] That is, the tempo of capital accumulation cannot be explained by population growth alone. Correct. But it does not necessarily depend on rising mass consumption, rather it is conditioned by the level of the organic composition, that is by the magnitude of the rate of accumulation of constant capital a_c. Rosa Luxemburg already raised the objection that population increase cannot account for the *tempo* of accumulation. This was justified in her argument against Bauer's false *theory*, according to which 'There exists, in the capitalist mode of production, a tendency for *the adjustment of capital-accumulation to the growth of population*'.[287] After pointing out that in Germany the annual increase in population

285 Lederer 1925, p. 358. [Lederer only emphasised '*development*'.]
286 Lederer 1925, p. 359. [Lederer only emphasised '*tempo*' and 'unless'.]
287 Bauer 2012b, p. 739. [Bauer also emphasised 'a tendency'.]

over the 30 years from 1880 to 1910 was 'barely a third of a percentage point', she ironically writes against Bauer: 'How compatible or realistic does that seem in comparison with the *unparalleled roaring tempo* of growth for German capitalism during the last quarter of a century!'[288]

This objection, valid against Bauer's theory of accumulation, loses all meaning when directed against Marx's theory of accumulation. Within the limits to valorisation defined above, the tempo of accumulation is independent of the rate of population growth. The rate of accumulation varies in parallel with the level of the organic composition of capital. It can *differ* with the *same* rate of population growth, be faster or slower, depending on how high or low the organic composition is. From the reproduction schema (see Table [2]), it is apparent that, with the organic composition of capital assumed here, population grows by about 20 per cent in the first five years (from 100,000 to 121,551), while constant capital grows by about 46 per cent over the same period, from 200,000 to 292,820, with an organic composition that is determined by the level of technology. With a higher organic composition (see, for example, Table 4) the tempo of accumulation accelerates; in this case, while the rate of growth of population remains the same, the accumulation of the constant capital rises from 200,000 to 414,720, by 107 per cent, in the same period. Of course, this example shows us that with an accelerated tempo of accumulation the length of the accumulation cycle's phases is *abbreviated*. That is why, precisely in the USA during a period of powerful capital accumulation, the abbreviation of the length of the phases was observed. So too in Germany where, as the *Frankfurter Zeitung* observes in its retrospective of 1927, 'the boom ended in a standstill *faster than in the cycles of the pre-war period*'.[289] We return to this problem in Chapter 3 below, in a different context.

4 Finally, the *level of the rate of surplus value*, the fourth factor considered here, is likewise of decisive significance. It was previously assumed that it is constant and amounts to 100 per cent of variable capital. It is clear that a *higher* rate of surplus value slows down the breakdown of the system; with a *lower* rate it is, on the contrary, accelerated. As the last example, let us suppose that the rate of accumulation of the constant capital is 20 per cent, that of variable capital 5 per cent but the rate of surplus value is just 50 per cent. Then we get:

288 Luxemburg 2015b, p. 407. [Grossman's emphasis.]
289 [*Frankfurter Zeitung* 1927c.]

TABLE 7

Year	c	v	k	a_c	a_v	AV
1	200,000	100,000	5,000	40,000	5,000	350,000
2	240,000	105,000	0	48,000	4,500	
				[52,500 available]		
				53,250 (!) [required]		
				750 (deficit)		

Thus here, where both factors, of a higher rate of accumulation and a lower rate of surplus value, operate together, the breakdown must already occur in year 2, as the amount of surplus value required for accumulation comes to 53,250 while the total available surplus value, at a rate of surplus value of 50 per cent, is just 52,500, leaving a deficit of 750.

Conversely, the collapse would emerge *later* than year 8 if the rate of surplus value was not 100 per cent but, for example, 150 per cent.

It is apparent that the *point in time* at which the breakdown tendency leads to crisis, hence the duration of the upswing (and only that can be determined exactly) is a function of four elements, which vary but can be determined: it depends on 1) the level of the organic composition of capital, 2) the rate of surplus value, 3) the rate of accumulation of constant capital a_c, and 4) the rate of accumulation of variable capital a_v. If the rate of surplus value is assumed, as here, to be constant, then it follows from the law of value that the *higher* the organic composition of capital and the *greater* the rate of accumulation a_c, the *faster* the system will break down. If these elements of the system are known, the duration of accumulation and the point in time of the final reversal are *calculable*.[290]

290 However great the practical difficulties for the *statistical* assessment of these factors, really precise investigation of cyclical fluctuations and abandonment of the vacuous symptomology of the business cycle research institutes is only possible through an understanding of the laws that govern the capitalist process of accumulation. Röpke's essay 'Foreign Loans and the Business Cycle' shows just how inadequate his conception of the most basic relationships in the accumulation of capital is. Röpke wants to throw light on the significance of foreign loans by means of a 'theoretical analysis that takes the most recent experience of Germany as its starting-point' (Röpke 1928, p. 218). When he comes to the question of the influence of foreign loans on domestic (German) *capital formation*, he has to assert that 'the nature of the capital formation process in a capitalist economy has been subject to little explanation' (Röpke 1928, p. 233). But it is precisely clarity that Röpke himself

13 The Crisis and Underconsumption Theory. Incorporating Credit into the Analysis. The Cycle within the 'Three Markets': The Impetus to the Boom within the Sphere of Production (Business). The Spillover of the Wave Movement from Production into the Money Market (Money), Finally to the Stock Exchange (Speculation)

Once the *reasons* for the course of the cycle have been grasped, it becomes possible to explain a series of phenomena, which have been established empirically but which previous theories of crisis have not been able to explain adequately. It has been repeatedly observed that *inflation* creates an 'artificial' boom. But what does this artificiality consist of? How do the different theories of crisis explain this 'artificial' upswing and how is it different from a real upswing? For example, if the underconsumption of the masses is regarded as the cause of crises then inflation should trigger a massive crisis, as inflation, it is well-known, has the effect of only adjusting wages to higher prices extremely gradually, so that real wages fall and the underconsumption of the working class suddenly increases. If, nevertheless, inflation signifies an upswing, this only proves that the underconsumption of the masses cannot be an adequate explanation of what causes crises. From the standpoint of the conception presented here, the occurrence of the upswing due to inflation is self-evident. For the *rate of profit* necessarily *rises* as a result of the fall in real wages, valorisation improves.[291]

---

has failed to create, which is hardly remarkable considering that problems as complicated as the accumulation of capital are scarcely soluble with the primitive methods of 'observation', without the help of more refined methods of analysis such as those represented by Marx's reproduction schema. The 'capacity for savings', according to Röpke, 'is determined by the scope that the level of the social product … allows for accumulation … *The greater the capital fund at the disposal of the economy* … the greater is the social product and *the scope for further capital formation*; the greater the already existing capital formation, the larger scale at which further capital formation can proceed' (Röpke 1928, p. 234). [Grossman's emphasis.] According to Röpke's account, capital accumulation would be able to continue in a rising progression *ad infinitum*! ['*Ad infinitum*' means 'to infinity'.] The error in this conception is clearly apparent from the law of accumulation developed in the present work. Röpke confuses the magnitude of the *rate* of accumulation a_c and a_v with the scope for further accumulation, i.e. with the amplitude of the wave movement. The greater 'the already existing capital formation', i.e. c, the greater is the extent of the *rate* of accumulation a_c and a_v. But it is not correct to write that 'the *scope for further capital formation* is greater'. On the contrary. As the extent of capital accumulation accelerates, the scope for further capital accumulation is narrowed. This is precisely why the phases of the economic cycle have become strikingly shorter since the War.

291 The circumstance that the country as a whole loses and is impoverished by inflation changes nothing in this claim. A part of the surplus value is lost through exports at dump-

We have explained the necessary course of the economic cycle in terms of the mechanisms at play *within the production process* and we have initially abstracted from all movements in prices, wages and interest rates. For, in identifying the courses of cyclical fluctuations, it is a matter of finding the place from which the impetus for the whole movement originates. The movements of prices, interest rates and wages are themselves only the results of those fundamental wave movements and, to avoid falling into circular reasoning, should not, therefore, be assumed in advance. Such circularity is clear as day in Spiethoff. The depression is the cause of the later upswing; the upswing is the cause of the depression. Because the upswing raises prices, wages and interest rates, it contributes to its own abolition. The same is true of the recession. 'The low prices of indirect consumption goods during a recession and low wages and interest rates reduce the construction cost of investment goods, and increase profit on invested capital … *A downswing contains powerful self-annihilating forces and is thus itself, to a large degree a cause of the subsequent upswing*.'[292]

---

ing prices. Lederer's explanation of crises in terms of differentiation of prices and hence also of incomes during the business cycle (Lederer 1925, p. 392 et seq.) is basically an *underconsumptionist theory* and is afflicted with all the deficiencies of such a theory. Because of insufficient purchasing power, society is not able to expand finished goods production as rapidly as it does the industry producing means of production. Lederer overlooks the fact that this disproportionality which, according to him, emerges from the economic cycle as its *result*, necessarily, according to his own conception, already exists at the *start* of the movement and always exists under capitalism. The differentiation between workers' and capitalists' incomes is already given at the outset of the movement! It follows that crisis has to be a permanent phenomenon under capitalism and even temporary equilibrium between the two groups of industries would be impossible.

292 Spiethoff 1953, p. 150. [Grossman's emphasis.] This idea is not, however, thought through to the end or demonstrated by Spiethoff. In fact, Spiethoff provides another explanation of crises and arrives at a disproportionality theory, in its most banal form, with disproportionality that stems from *lack of knowledge of the market situation*. He starts from the fact that 'Overproduction invariably sets an end to all upswings' (Spiethoff 1953, p. 155). What brings about this overproduction? 'Overproduction of indirect consumption goods and of investment goods is influenced by a *number of factors*. Indirect consumption goods and investment goods form part of complicated capital relationships, the study of which affords the *key to the origin of overproduction*' (Spiethoff 1953, p. 156). [Grossman's emphasis.] The revelation of this 'key' is excitedly awaited and the following answer is offered: the production of goods for indirect consumption and savings '*must be in mutual accord* if the equilibrium of the national economy is not to be disturbed' (Spiethoff 1953, p. 156). [Grossman's emphasis.]

> Since the indirect consumption goods are only bought out of savings, indirect consumption depends on the investment of savings. The formation of savings proceeds quite independently of the production of the indirect consumption goods and of the construction of investment goods; at the same time, both are produced without entre-

That reasoning of this sort results in an economic *perpetuum mobile*[293] is overlooked by Spiethoff. He fails to realise that upswings and downswings cannot last forever, if the wave movement is not subject to any new impetus, that without such a periodic impetus the swings would eventually, sooner or later, stabilise. In physics, attempts to construct a *perpetuum mobile* were long ago finally discarded from scientific discussion. In economics, the notion that such theoretical constructions are scientifically untenable has not yet been universally established.

By contrast, we have sought and found such a periodically recurring impetus for the wave movement within the sphere of production, that is in *one* of the three 'markets', which the Harvard School talks about (business). From that starting point we will have no difficulty explaining fluctuations in both of

---

> preneurs having any precise knowledge of the extent of capital formation or of the propensity to invest. If the makers of indirect consumption goods and the potential investors wanted to make production and the formation of savings keep pace with each other, then the two processes would have to be adjusted to each other, *in mutual knowledge. As such knowledge is lacking and adjustment is impossible*, there is always the risk of one process lagging behind the other. This is decidedly the case during the last two stages of an upswing. (Spiethoff 1953, pp. 156–7) [Grossman's emphasis.]

But '[t]his by no means exhausts the *series of disproportions*' (Spiethoff 1953, p. 158). [Grossman's emphasis.] Elements from different theories are then drawn together in an unbearably confused attempt to explain the causes of overproduction. One is Aftalion's theory of overproduction due to the considerable time required to complete productive investments (Spiethoff 1953, p. 158); another cause is the shortage of labour power. That 'can raise wages disproportionately and impair profits and the ability to form capital', which must result in a lack of money capital for the purchase of indirect consumption goods. Further, the lack of money capital: 'The expansion of indirect consumption, and thus of the whole economy presupposes the possibility of increasing the quantity of the circulating medium … The exhaustion of the stock of money is a regular feature and also a cause of the end of every upswing' (Spiethoff 1953, p. 159). We see that Spiethoff's 'explanations' are simply empirical statements that themselves have to be explained. He fails to understand that adjusting the expansion of production to demand, which is only possible on the basis of knowledge of previously calculated needs, is a characteristic of a socialist, planned economy. By contrast, in a capitalist market economy this adjustment can never happen in advance, in a planned manner, but always occurs *ex post*, *by means of regulation by prices and profit*. ['*Ex post*' means 'after the event']. According to the theory of equilibrium espoused by bourgeois economics, however, there is nevertheless a constant tendency for the productive system to establish equilibrium in market economies, because the mechanism of prices and profit displays all deviations with the exactness of a seismograph and thus makes the adjustment of supply to demand possible. The real problem, unnoticed by Spiethoff, is the question of why the price and profit regulator fails in the moment of crisis, why instead of leading to adjustment of supply to demand, it leads to a discrepancy between them, i.e. to generalised overproduction.

293 ['*Perpetuum mobile*' means a 'thing in perpetual movement'.]

the other markets (the stock exchange; and the money market), since movements in these markets depend on processes in the sphere of production.

In our previous considerations, we have assumed complete *equilibrium* as the *starting point* of the analysis, thus assumed that the accumulation of capital – although it occurs on an ever higher technological level from year to year – proceeds so strongly that it not only absorbs workers who were *previously set free* but also the entire *population increase into production*. When there is a state of accumulation in which increases in capitals and labour power as well as an increase in purchasing power occur in proportion with each other, accumulation can proceed *without changes in prices*.[294] We have seen that even under these circumstances, favourable for the continued existence of the capitalist mode of production, there must come a point in development at which accumulation breaks down.

There is, however, actually no such proportional accumulation in reality. So what is the value of our previous assumption of equilibrium, as the starting point of our analysis, for our understanding of reality? Who actually maintains the proportions that are necessary to sustain equilibrium in reality? The capitalist mechanism contains no regulator that could consciously adapt the scale of accumulation to the required state of equilibrium. Consequently, accumulation on the scale described could only come about *by chance* and therefore as an exception. In reality, the scope of accumulation will, as a rule, deviate from the equilibrium levels specified in our schematic model of reproduction. The magnitude of accumulation depends, as we have seen, on how much surplus value is accumulated as a_c and a_v and how much goes into the k part, the personal consumption of the capitalists. '[I]t is the owner of the surplus value, the capitalist, who makes this division. It is an *act of his will*.'[295] Abstractly, two cases are possible: accumulation may either surpass the equilibrium level or fall short of it. In practice, however, only the second case is possible and is therefore discussed here. For if it is assumed that accumulation proceeds on the basis of the latest technologies from year to year, then *excessive* accumulation must miscarry because of a lack of labour power. If some entrepreneurs accumulate too much, the others will necessarily accumulate that much less. Once the whole labour force is absorbed into production, any further accumulation on the basis of the same, theoretically assumed technology is impossible.

This leaves only the second case: that accumulation is *too low*, i.e. that it does proceed to the extent foreseen for any given year but that only a *part* of surplus

294 The idea of such a proportional accumulation is found in Stucken 1926, p. 43.

295 Marx 1976b, p. 738. [Grossman's emphasis.]

value is used for the purposes of accumulation, so that constant capital grows, e.g. by just five per cent a year instead of 10 per cent. The necessary result is that not all of the annual growth in the working population can enter into active production, that a[n expanding] reserve army will thus emerge every year. The size of the active workforce and the reserve army can be calculated exactly for each year in our schema. If we take Table 3 (page 208) as the basis for our considerations then, in the first year of reproduction, an equilibrium obtains with the following magnitudes:

Year	c	v	k	a_c	a_v	*AV*
1	200,000	25,000	3,750	20,000	1,250	250,000

For year 2, on the assumption of equilibrium, the required magnitudes are

2	220,000	26,250

If it is now assumed that constant capital grows by only five per cent (to 210,000), then v, i.e. the active army of workers, will only grow to 25,057 (according to the proportion that results from the table of the normal state; 220,000 c : 26,250 v = 210,000 c : 25,057 v). Consequently, the reserve army will amount to 1,193, in this year. For this reason, the magnitudes of the accumulation quotas that have to be kept aside from the surplus value of *year 1* must be 10,000 for a_c and 57 for a_v. The remainder, not expended on accumulation in the capitalist's own enterprise, amounts to 14,943 (25,000 s – 10,057). What happens to this remainder? Only a part of it will be allocated to the capitalist's consumption, the k part; the rest will be set aside for investment purposes as *loan capital*, the LC part. If we now assume – to avoid any arbitrariness – that capitalists consume 10 per cent of the surplus value gained each year then, taking Table 3 as our point of departure, we arrive at the following magnitudes:[296]

296 [Rather than the reproducing some erroneous figures originally provided by Grossman, those in this table and following paragraphs were calculated in a spreadsheet, using his formulae. They also confirm Grossman's conclusions. See the Appendix for Grossman's original version of Table 8.]

TABLE 8[297]

Year	c	v	*Reserve army*	k	LC	k+LC	a_c	a_v
1	200,000	25,000	0	2,500	12,443	14,943	10,000	57
2	210,000	25,057	1,193	2,506	11,994	14,500	10,500	57
3	220,500	25,114	2,449	2,511	11,520	14,032	11,025	57
4	231,525	25,171	3,770	2,517	11,020	13,537	11,576	57
5	243,101	25,228	5,160	2,523	10,493	13,016	12,155	57
6	255,256	25,285	6,622	2,529	9,937	12,465	12,763	57
7	268,019	25,343	8,160	2,534	9,350	11,884	13,401	58
8	281,420	25,400	9,777	2,540	8,732	11,272	14,071	58
9	295,491	25,458	11,478		85,489		14,775	

We have previously regarded the total social capital that is productively employed in the process of reproduction as a *single unit* and assumed that functioning capitalists utilise their *own* capital. This assumption was a theoretical fiction, made on methodological grounds to simplify the analysis. It is the same as excluding money capitalists, rentiers, and has a purely provisional character. 'If all capital were to be found in the hands of industrial capitalists, there would be no interest and no rate of interest.'[298] But interest does in fact exist and the fictitious, provisional assumption has to be corrected subsequently. For, in reality, only a small fraction of capitalists exclusively use their *own* capital. '[T]he majority of industrial capitalists operate both with their own and with *borrowed* capital ...'[299] In further discussion we therefore have to bring credit – and indeed credit to the extent that it arises out of saved surplus value, representing transfers of capital – into the analysis. In this way our abstract reproduction schema is enriched by a further empirical moment and thus the analysis approaches concrete reality.

The productive capitalist and the money capitalist play completely different roles in the reproduction process. The latter simply lends capital, the former makes productive use of it. 'For the *productive* capitalist working with borrowed

297 [LC column in Table 8 is the sum of the figures above it. Rather than reproducing some erroneous figures originally provided by Grossman, those in this table, and the following paragraphs were calculated in a spreadsheet, using formulae which he used. See the Appendix for Grossman's original table and an extension of Table 8 to year 19. The extended table also includes figures for k, k + LC and a_v in year 9.]

298 Marx 1981, p. 500.

299 Marx 1981, p. 499. [Grossman's emphasis.]

capital, the gross profit breaks down into two parts, the interest that he has to pay to the lender, and the excess over and above this interest, which forms his own share in the profit.'[300] Thus in reality the magnitude of the industrial capitalist's profit (surplus value) is influenced by the level of the rate of interest. '[T]he part that belongs to the functioning capitalist is determined by the interest, since interest *is fixed by the general rate of interest* … and presupposed in advance before the production process begins.'[301]

Even if 'there is no law of distribution'[302] that determines the rate of interest or the division of surplus value between profit and interest, and this division depends only on competition, i.e. on supply and demand; if, therefore, 'there is no "natural" rate of interest' either[303] then there is nonetheless in every country, in a particular epoch, depending on its wealth, the level of its capital accumulation and the number of money capitalists, an average 'medium level'[304] or 'average level'[305] of the rate of interest, which corresponds to the 'normal state' of the productive system, to its equilibrium state. In the state of equilibrium, in other words, the entire social surplus value will be used for accumulation and *can find productive application*, to the extent that it does not service individual consumption. One group of capitalists (money capitalists, rentiers) does not function directly in the production process but assigns its capital to other capitalists for investment. The interest that they obtain from their capital, under these circumstances and, depending on the number of money capitalists, the size of their capitals etc., can be regarded as the 'normal interest'.[306]

The loan capital that is being discussed here in relation to real cycles of production is completely different from loan capital in that ideal normal state. For here we are dealing with a case in which, according to the assumptions we have made, the productive system is *too small* (we assumed that *c* grows by only five per cent a year instead of the 10 per cent that was needed), hence a part of the surplus value destined for accumulation *cannot find any productive application* in the production process.

---

300 Marx 1981, pp. 495–6. [Grossman's emphasis.]
301 Marx 1981, p. 496. [Grossman's emphasis.]
302 Marx 1981, p. 478.
303 Marx 1981, p. 487.
304 Marx 1981, pp. 644, 704.
305 Marx 1981, pp. 620, 677.
306 Marx 1981, p. 730 [this reference, which deals with usury, does not seem relevant] (see above, p. 121–122). Marx's concept of 'normal interest' thus has the fictitious character of an interest [rate] that would arise if the social productive apparatus was in an *ideal state of equilibrium*. Wicksell's 'normal interest rate', according to which the general level of commodity prices has no tendency to move up or down, arises from the same conception as Marx's.

Loan capital *LC* that lies idle and appears on the money market looking for investment *depresses the rate of interest* below its 'normal level', in the sense just defined. This stimulates business activity; accumulation is thus accelerated. '[T]he expansion of the accumulation process proper is promoted, because the low rate of interest … *increases the portion of the profit that is transformed into profit of enterprise*.'[307]

Applied to the relationships in our schema, this means that, while in its equilibrium state the whole of the surplus value remaining came to only 3,750 in year 1 [see Table 3, p. 208] and was entirely consumed, it has now grown to 14,943, of which 2,500 is consumed, so that 12,443 comes onto the money market as loan capital. Even if in the years that follow (assuming that constant capital always grows by only five per cent) the rate of increase of loan capital declines, the mass of loan capital grows absolutely and attains a level of 85,489 by the end of year 8 (see Table 8). This means that interest rates must consistently fall and the rate of profit increase.

An analogous change occurs on the labour market, compared with the normal situation. If, earlier, all workers were employed in the production process (at a wage of 1 *v* per worker), now a reserve army starts to emerge from year 2 and to expand from one year to the next. This pushes the *wage* below 1 *v*, which in turn acts as a stimulus to business activity. Thanks to both of the factors mentioned, the rate of surplus value will now be *higher than* 100 per cent (as previously assumed) and growing profitability, brought about by cheapening of the elements of production, *will accelerate the tempo of accumulation*. Constant capital will, therefore, no longer grow by five per cent a year, as previously assumed, but at higher rates – six per cent, eight per cent, nine per cent, 9.5 per cent a year – and approach the normal rate of accumulation of the equilibrium state, presented in Table 3. Only then will the rate of surplus value fall to its normal level of 100 per cent, the rate of interest reach its 'normal level' and the stimulus to more rapid accumulation fall away. Table 8 is significant because it shows us that, even on the assumption of constant capital expanding by only five per cent a year, *loan capital is progressively exhausted in the course of accumulation*. If it amounted to 12,443 in year 1, it declines to 9,937 by year 6, only to disappear completely [in year 19].[308] If a higher rate of profit drives up the rate of accumulation of constant capital to over five per cent a year, the mass of loan capital will be exhausted even sooner. This is what Table 9 shows us. Here we assume that constant capital grows by an additional two per cent

307 Marx 1981, p. 627. [Grossman's emphasis.]

308 [See the Appendix for the extended table.]

TABLE 9[309]

Year	*c*	*v*	*Reserve army*	*k*	a_c	a_v	LC
1	200,000	25,000	0	2,500	10,000	57	12,443
2	210,000	25,057	1,193	2,506	14,700	535	7,316 balance 19,759
3	224,700	25,592	1,970	2,559	20,223	1,035	1,775 balance 21,534
4	244,923	26,627	2,313	2,663	26,942 credit 4,562	1,586 balance 16,971	–4,562
5	271,865	28,213	2,175	2,821	35,342 credit 12,169	2,219 balance 4,802	–12,169
6	307,207	30,432	1,475	3,043	46,081 credit 21,667	2,974 deficit –16,865	–21,667
7	{353,288}	{33,406}	{97}	0			

every year and not at a steady rate of five per cent. Thus the rate is five per cent in year 2, seven per cent in year 3, nine per cent in year 4, in the following years 11, 13, 15 per cent, all other conditions of the schema remaining the same.

As Table 9 shows, the course of accumulation breaks up into two quite distinct phases. In the first phase, extending over three years, there is a *growing* mass of loan capital, which reaches its maximum of 21,534 at the end of year 3. Obviously, the growing mass of loan capital pushes the rate of interest below its normal level and thus encourages entrepreneurs to progressively expand the apparatus of production. In year 4, however, there is a turning-point. As a consequence of accumulation, the apparatus of production reaches a scale at which surplus value no longer suffices to valorise the accumulated capital. There is a deficit of additional constant and variable capital of 4,562 which can, however, initially be covered by borrowings from the reserves of loan capital. Thus the total mass of loan capital is *reduced* from 21,534 to 16,971. Reductions persists from year 4 on, until the available loan capital is fully used up by year 6.

309 [Rather than the reproducing some erroneous figures originally provided by Grossman, those in this table and following paragraph were calculated in a spreadsheet, using his formulae. See the Appendix for Grossman's original version of Table 9.]

Thus from year 4 *interest rates necessarily* rise. In year 6 a crisis therefore must occur, as the rates of accumulation, a_c and a_v, require 49,055, while the total surplus value of 30,432 is no longer sufficient for accumulation to continue ([and, in this year], there is a [loan capital] deficit of 21,667, which after deduction of available loan capital of 4,802 translates into an absolute [accumulated loan capital] deficit of 16,865). This only means that the already functioning industrial capital has been *overaccumulated*, i.e. there is too much of it.[310]

So we have completely explained the *different movements of the rate of interest* in both phases of the cycle as well as of the phases themselves. A forced, abnormal upswing occurs because underaccumulation expands the volume of loan capital, depressing the rate of interest and increasing the rate of profit. This development is illustrated in Figure 3, below.

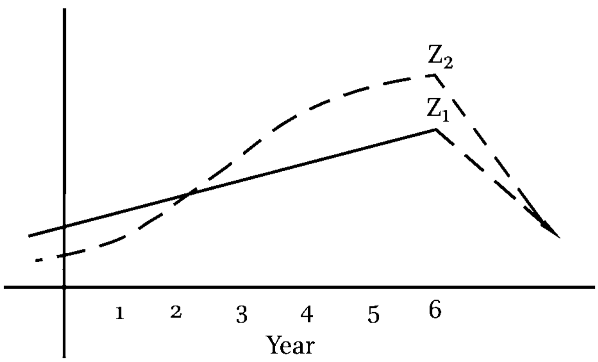

FIGURE 3

This figure shows us that the upswing is not a simple straight line but assumes the shape of a curve that rises steeply upwards from a shallow start. The slow pace of accumulation at the start of this rise progressively increases under the stimulus of a low rate of interest, so that above average progress during the second half of the rising phase offsets the initial below average progress. This offset, however, can only operate within the limits set by the capital reserves amassed. Once the reserves of loan capital are exhausted, accumulation comes to a standstill and there is necessarily a turn to crisis.

310 Marx writes: '*Interest now rises to its average level.* It reaches its maximum again as soon as the new crisis breaks out, credit suddenly dries up, payments congeal, the reproduction process is paralysed and … there is an almost absolute *lack of loan capital* alongside a surplus of unoccupied *industrial capital.* By and large, therefore, the movement of loan capital, as expressed in the rate of interest, runs in the opposite direction to that of industrial capital' (Marx 1981, p. 620). [Grossman's emphasis.]

An analogous movement to that on the money market can be observed on the *labour* market. The assumed underaccumulation indicates that unused labour power is available. This exerts a downward pressure on wages, which fall *below* the value of labour power, thus enhancing the rate of profit. The resulting stimulus to progressively expand production must initially be stronger, as the *size of the reserve army in the first half of the expansion phase – despite progressively rising accumulation* – increases from 1,193 in year 2 to a peak of 2,313 in year 4 of our schema. Finally, growing accumulation brings about a turn: in years 5 and 6 the number of unemployed declines to 2,175 and 1,475 respectively and would be just 97 by year 7, if the exhaustion of surplus value and capital reserves did not lead to a crisis and thus to renewed growth of the reserve army. From year 5 wages must, consequently, rise.

It is apparent that, with the incorporation of credit into the analysis, the process of accumulation does acquire a more realistic character – we gain insight into the movement of interest rates and wages in different segments of the expansion phase. *No new moments have been gained*, however, in the explanation of the industrial cycle and particularly the causes of crises. The below average levels of the interest rate and wages during the first half of the rising phase parallel their above average levels during the second half. If the expansion phase is considered as a whole then the below and above average levels of interest rates and also of wages offset each other to yield their normal, average levels, which expresses the methodological starting point of our analysis. The assumption of such a starting point is therefore justified, because deviations above and below are unintelligible without such a 'normal basis'.

While Otto Bauer believed that accumulation on this basis could go on without limit, we have shown that before long an *overaccumulation* and therefore the turn to crisis must necessarily emerge from accumulation's internal mechanism. Valorisation is insufficient to maintain the previous tempo, i.e. 10 per cent annually. If constant capital is expanded further, the absolute mass of surplus value cannot be expanded any more (at a given level of population and wages). Wage reduction can also *only occur down to a definite, insuperable limit*. Thus accumulation necessarily comes to a standstill and the result is the breakdown of the system. Starting from the *Z* point, overaccumulated capital can find no 'productive', i.e. profit-yielding, application in the process of production, even in the 'normal case' where there are no increases in prices, wages and interest rates.[311] Consequently, capital, i.e. the a_c and a_v parts destined for fur-

311 As opposed to the conception presented here, Hahn believes there is 'no ground' for the assumption that accumulation without price increases – he calls them '*quantitative*

ther accumulation are withdrawn from the process of production at the moment of the crisis. *Absolute overproduction occurs*. Unsold stocks pile up, warehouses are filled up. Money capital in search of investment no longer finds profitable application in the sphere of production. *From now on interest rates must steadily fall*, and unemployed, idle money capital pours out of production into the stock exchange, where *in the meantime* – until profitability (valorisation) is restored in the sphere of production – it fishes in muddy waters. The 'activity' of the stock exchange is most closely related to the movement of interest rates on the money market. Money market interest rates are decisive for the course of prices of all government and other fixed-income securities on the stock exchange. Their value reflects an 'independent movement' and indeed 'the prices of these securities rise and fall in inverse proportion to the rate of interest'. We have distinguished and explained two segments in the movement of interest rates, in terms of the nature of capital accumulation. As accumulation starts, interest rates are low and still falling, but gradually *rise* to a peak, the *Z* point, from which they must necessarily *fall*. The gradual rise in interest rates until the endpoint of the accumulation phase (the upswing) is expressed in the falling prices of government securities. If an acute crisis breaks out at the end of the upswing and interest rates temporarily rise sharply, the collapse in their prices is also severe. 'In times of pressure on the money market, these securities fall in price for two reasons: first, because the interest rare rises, and second, because they are put up for sale in massive quantities, to be converted into money.'[312] In the case

---

booms' – must progress cyclically. If there are no price increases, 'no boom mentality proliferates … For this reason, however, the factor which leads, in *normal* booms, to a rise beyond the average level and then back to its reversal is missing' (Hahn 1928, p. 163). [Grossman emphasised '*normal*'.] We have shown that the movement of the cycle is independent of all price increases. Confronted by American experience, where there has been an upswing with *falling* prices since 1925, credit-based crisis theory has tried to circumvent the difficulty it faces by recourse to a truly scholastic distinction between 'normal' booms and 'quantitative booms'.

312 Marx 1981, p. 598. In October 1907, Holland witnessed a frightful crash in stock prices which wiped out 50 per cent and more of leading securities' value on the Amsterdam exchange in a few days. In Germany too securities suffered a massive devaluation in 1907.

> The shares of the big banks declined by 20 per cent or more; leading coal and steel industry shares fell by 53 per cent (Bochum), 42 per cent (Phoenix), 35 per cent (Gelsenkirchen) and 22 per cent (Harpener). [Among shipping companies] Hamburger Paketfahrt showed a loss of 42 per cent, Norddeutscher Lloyd 27 per cent. It was, however, chiefly the cash market for industrial securities that suffered. Declines of 30 and even 50 or 70 per cent for most and a large number of stocks showed even heavier losses still. (Feiler 1914, pp. 12, 22)

of industrial shares, there is a third possible reason for devaluation, in addition to the two just mentioned, because 'the valorisation of the real capital they represent may be affected' by the disruption of the reproduction process.[313]

But the depreciation of securities triggers massive purchases by stock exchange speculators. So, precisely at the end of the crisis, during the depression, speculation, the stock exchange, start becoming active. We have seen that from the *Z* point in capital accumulation there is overaccumulation, a shortage of investment opportunities, in short, *disposable* capital. This capital turns to the stock exchange. Lederer's argument that 'even in times of depression savings find outlets for investment'[314] overlooks the illusory character of these investments. From the individual economic standpoint of the creditor, investments on the stock market are as profitable as any other investment. But 'investments' on the exchange create neither value nor surplus value. Their only purpose is higher stock prices and capital transfer. For, after a sudden rise during the crisis, interest rates fall in the depression and, as has been demonstrated, also at the start of the upswing. Thus *the prices of securities start to rise again*. 'Once the storm is over, these securities rise again to their former level.' The stock exchange disposes of these securities, cashes in the gains from the difference in prices and can also pay the banks interest on borrowed money promptly. So the depreciation of these securities 'in a crisis is a powerful means of *centralising money wealth*'. 'Profits and losses that result from fluctuations in the price of these ownership titles, and also their centralization in the hands of railway magnates etc., are by the nature of the case more and more *the result of gambling*, which now appears in place of labour as the original source of capital ownership, as well as taking the place of brute force.'[315] The centralisation of money wealth through the rise in the prices of these securities is accelerated further because these prices show a long-term tendency to rise, quite independently of fluctuations during the cycle. 'Their values, i.e. their listings on the stock exchange, have a necessary tendency to rise with the fall in the rate of interest, in so far as this is a simple result of the tendential fall in the rate of profit … so that this imaginary wealth, which according to its value

In 1913 the market declines were even greater and, for the darlings of daily speculation, exceeded 100 and even 200 per cent (Feiler 1914, p. 153). [In Feiler's text the meaning of these percentage declines is no clearer.]

313 Marx 1981, p. 598.

314 Lederer 1925, p. 377. [Lederer emphasised 'savings'.]

315 Marx 1981, pp. 599, 609. [Grossman's emphasis.]

expression gives each person his aliquot share of a definite original nominal value, already expands for this reason as capitalist production develops.'[316]

This completes the causal chain. Starting from the *sphere of production* we have demonstrated the necessarily *cyclical course* of accumulation, on the basis of its immanent laws, and proved that this cyclical movement is then transposed from the sphere of production to the *sphere of circulation* (money market, securities exchange). The former is the independent variable, the latter the dependent variable. Starting from a state of equilibrium we have shown where the boom comes from, why accumulation is gradually exhausted and capsizes into breakdown. In this way we have followed the movement in each of the three 'markets' across the whole cycle and explained it in causal terms.

Now, once the counteracting tendencies start to operate – they form the subject matter of Chapter 3 below – once the valorisation of capital investments in the production process is restored, a further period of accumulation sets in anew. The rate of profit rises. Once it exceeds the yield on fixed-interest securities, money flows anew from the stock market back into the sphere of production, to find productive application there. The rate of interest starts to rise and the price of securities to fall. These are now purchased by the 'public' which is seeking *long-term* investments, i.e. valorisation, and not enrichment through speculation on changes in the price of securities. But this 'long-term' investment only lasts until the next crisis, the next spell of tightness on the money market, when the rate of interest reaches its peak, money is hard to come by and therefore securities must be offloaded onto the market, in order to meet payment obligations. These are bought by the stock exchange anew. The game repeats itself but on a modified basis: *the centralisation of money wealth is now greater*. This is what explains the growing power of finance capital.

14 The Elasticity of Accumulation. The Problem of Sudden Leaps and One-Sided Development in Individual Branches of Production. The Relationship between the Size of the Apparatus of Production and the Size of Sales Turnover

The problem of 'sudden leaps' in production should be discussed briefly here. Luxemburg has raised the objection against Marx that the empirically known

316 Marx 1981, pp. 608–9.

fact of sudden leaps in accumulation within the individual spheres of production cannot be explained by his account of the accumulation process. 'The scope of any given expansion of production is given *a priori* by the amount of surplus value available (to be capitalised).'[317]

> In this way, the schema precludes sudden leaps in the expansion of production. It only provides for a steady expansion, one that is precisely in step with the formation of surplus value … For the same reasons, the schema presumes an accumulation that *takes hold of both departments, and thus all branches of capitalist production, to the same degree*. Sudden leaps in the expansion of sales are ruled out, as is the one-sided development of individual branches of capitalist production, running far ahead of the others. The schema thus presupposes a movement of the total social capital that contradicts the actual course of capitalist development.[318]

This criticism has generated a whole school. A series of Marxist writers have repeated Luxemburg's objections, assuring us that it was Lenin who first formulated the law of the uneven development of capitalism. [Jenö] Varga tells us, 'In *Capital* Marx does not provide a purely economic foundation for the law of the uneven development of capitalism. He takes the totality of phenomena as his starting point'.[319] 'Lenin was the first to propose the law of uneven development'.[320] So too Bukharin, who refers to Lenin's 'law of the unevenness of capitalist development'.[321]

As always, Sternberg uncritically repeats, *in verba magistrae*,[322] Luxemburg's assertion that: 'in the rigid model of exchange under pure capitalism' 'the sudden development of individual industries would be impossible'.[323]

The falseness of this view is perfectly clear. It was precisely Marx who ridiculed the harmonist theory of a balanced, proportional accumulation of capital in all spheres of production. If such accumulation were possible, crises would be impossible. Thus Marx writes

317 Luxemburg 2015a, p. 236.
318 Luxemburg 2015a, pp. 245–6. [Grossman's emphasis.]
319 Varga 1926a, p. 248. [Varga emphasised the entire sentence.]
320 Varga 1926a, p. 246. [Varga emphasised the entire sentence.]
321 Bucharin 1926, p. 9.
322 ['*In verba magistrae*' means 'in the words of the master', i.e. in Luxemburg's words.]
323 Sternberg 1971, p. 153.

> There would be no overproduction, if demand and supply corresponded to each other, if the capital were distributed in such proportions in all spheres of production, that the production of one article involved the consumption of the other, and thus its own consumption… Since, however, capitalist production can allow itself free rein *only in certain spheres*, under certain conditions, there would be no capitalist production at all if it had to develop *simultaneously* and *evenly* in all spheres.[324]

The conception criticised here could only have arisen through failure to grasp the essential aspects of Marx's method. Marx's reproduction schema depicts the average line of accumulation, that is, the ideal normal course, in which accumulation takes place evenly in both spheres of production. In reality there are deviations from this average line – and Marx himself repeatedly drew attention to the potent elasticity of capital – but these deviations are only intelligible on the basis of that ideal average line. Luxemburg's mistake is precisely that she regards something that only describes an ideal normal course, among many possible cases, as an exact description of the actual course.[325]

And the same is true of Otto Bauer. He thinks that the magnitudes in his reproduction schema are the only possible form in which the process of reproduction can proceed without disturbance, i.e. in equilibrium.

Even from Bauer's standpoint, this is obviously a mistake. It is completely unnecessary for constant capital, in the second year of production, to amount to 134,666 in department I and 85,334 in department II. In the following table, we provide variants for each year in Bauer's schema.[326] They are a schematic way of showing *that there are many different possible ways in which the scale of production can be configured in its individual branches*, while the overall scale of social production remains the same in all these cases.

---

324 Marx 1989c, p. 161. [Grossman emphasised '*only in certain spheres*'.]

325 How radically Luxemburg misunderstood the fictitious character of Marx's reproduction schema, conceived as an aid to our thought, is already evident when she asks whether the schema has 'any *objective* [!] existence [!] in relation to society as a whole' (Luxemburg 2015a, p. 43). [Grossman's emphasis.] Her answer to this question is positive: 'This demonstrates the objective social validity of the schema' (Luxemburg 2015a, p. 86).

326 [Rather than reproducing some erroneous figures originally provided by Grossman, those in this table and the following paragraphs were calculated in a spreadsheet, using formulae which seem to be those that Bauer and he used. They also confirm Grossman's conclusions. See the Appendix for Grossman's original version of Table 10.]

TABLE 10

Bauer's version

Year	Department	c	v	k	a_c	a_v	AV
1	I	120,000	50,000	37,500	10,000	2,500	220,000
	II	80,000	50,000	37,500	10,000	2,500	180,000
	I+II	200,000	100,000	75,000	20,000	5,000	400,000
2	I	134,667	53,667	39,739	11,342	2,586	242,000
	II	85,333	51,333	38,011	10,658	2,664	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000
3	I	151,133	57,533	42,028	12,834	2,671	266,200
	II	90,867	52,717	38,509	11,366	2,841	196,300
	I+II	242,000	110,250	80,538	24,200	5,513	462,500
4	I	169,597	61,612	44,363	14,492	2,756	292,820
	II	96,603	54,151	38,991	12,128	3,032	204,905
	I+II	266,200	115,763	83,354	26,620	5,788	497,725

Variants

Year	Department	c	v	k	a_c	a_v	AV
2a	I	140,000	51,000	35,750	12,000	3,250	242,000
	II	80,000	54,000	42,000	10,000	2,000	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000
2b	I	120,000	61,000	40,750	16,000	4,250	242,000
	II	100,000	44,000	37,000	6,000	1,000	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000
2c	I	110,000	66,000	38,750	22,000	5,250	242,000
	II	110,000	39,000	39,000	0	0	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000
2d	I	130,000	56,000	52,000	0	4,000	242,000
	II	90,000	49,000	25,750	22,000	1,250	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000
2e	I	130,000	56,000	56,000	0	0	242,000
	II	90,000	49,000	21,750	22,000	5,250	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000

TABLE 10 (*cont.*)

Year	c	v	*Reserve army*	k	a_c	a_v	AV
2f	I	132,000	55,000	46,000	6,000	3,000	242,000
	II	88,000	50,000	31,750	16,000	2,250	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000
2g	I	134,000	54,000	40,073	11,244	2,683	242,000
	II	86,000	51,000	37,677	10,756	2,567	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000
3a	I	162,000	52,100	40,050	10,050	2,000	266,200
	II	80,000	58,150	40,489	14,150	3,511	196,300
	I+II	242,000	110,250	80,539	24,200	5,511	462,500
3b	I	120,000	73,100	60,539	10,050	2,511	266,200
	II	122,000	37,150	20,000	14,150	3,000	196,300
	I+II	242,000	110,250	80,539	24,200	5,511	462,500
3c	I	130,000	68,100	40,000	24,200	3,900	266,200
	II	112,000	42,150	40,539	0	1,611	196,300
	I+II	242,000	110,250	80,539	24,200	5,511	462,500
3d	I	130,000	68,100	38,389	24,200	5,511	266,200
	II	112,000	42,150	42,150	0	0	196,300
	I+II	242,000	110,250	80,539	24,200	5,511	462,500
4a	I	186,200	53,310	38,386	12,633	2,291	292,820
	II	80,000	62,453	44,969	13,987	3,497	204,905
	I+II	266,200	115,763	83,355	26,620	5,788	497,525
4b	I	120,000	86,410	62,219	20,046	4,145	292,820
	II	146,200	29,353	21,135	6,574	1,643	204,905
	I+II	266,200	115,763	83,355	26,620	5,788	497,725
4c	I	154,000	69,300	65,000	0	4,300	292,820
	II	112,000	46,462	18,354	26,620	1,488	204,905
	I+II	266,200	115,763	83,355	26,620	5,788	497,725
4d	I	154,000	69,300	69,300	0	0	292,820
	II	112,000	46,462	14,054	26,620	5,788	204,905
	I+II	266,200	115,763	83,355	26,620	5,788	497,725

We see that, with the same scale of production in society as a whole, *various equilibrium states* are conceivable. We have provided seven possible variants of year 2, in addition to the example used by Bauer himself. While, according to Bauer, accumulation proceeds at almost the same pace in both departments of production, in case 2a we show accumulation occurring only in department I, while in department II there is no accumulation at all. Conversely, in case 2b there is a sudden expansion of department II, while there is no change in the scale of department I. In the other five cases, c to g, accumulation is divided between the two departments in various proportions. The greater the accumulation in department I, the smaller it is in department II, and vice versa. Finally, in variant 2c we have a case in which the scale of constant capital even declines in department I.

We observe the same phenomena in year 3. In case 3a a strong surge of accumulation occurs that is confined to department I. This uses up the entire social reserves of additional constant capital. By contrast, department II sees no accumulation at all and has the same scale of constant capital as in year 1. And the same pattern is repeated in year 4. So this is a case in which we have a powerful surge of accumulation over several years only in *one* department, while the other department does not develop, stagnates. The social equilibrium of the reproduction process therefore does not have to be disrupted, if the requisite functional shifts are carried through in both departments. Far from prescribing magnitudes for the scale of accumulation in individual branches that are *rigidly fixed*, the schema shows rather how *elastic* the scale of accumulation can be in any year.

Nothing is more characteristic of Luxemburg's scholasticism than the way she criticises Marx's reproduction schemas. In one instance, where Marx analyses equal accumulation in *both* departments, Luxemburg objects that he 'presumes an accumulation that takes hold of *both* departments, and thus all branches of capitalist production, to the same degree. Sudden leaps in the expansion of markets are ruled out, as is the one-sided development of individual branches of capitalist production, running far ahead of the other.'[327] When in another passage Marx sets out to illustrate the one-sided development of one of the departments (namely department I), this too is cause for complaint for the never satisfied Luxemburg:

> Marx extends accumulation ever further by having department I produce on a broader basis; accumulation in the second department appears only

327 Luxemburg 2015a, pp. 245–6. [Grossman's emphasis.] See above p. 230.

> as the consequence of, and condition for, accumulation in the other one … In this movement, it is always department I that retains the initiative; department II is no more than a passive satellite. Thus, at all times, the capitalists of department II may only accumulate so much and must consume as much as is *required* for accumulation in department I.[328]

This criticism again clearly demonstrates how completely Luxemburg has misunderstood the meaning of Marx's method. For, in empirical reality, who could ensure that accumulation proceeds *proportionately* in both departments of the schema, that is among all branches of capitalist production? No such regulator exists nor can exist under capitalism. It follows that proportional accumulation in both departments is simply a theoretical ideal case, a fiction, which in reality can only come about as an exception, so it is merely an *accident*. As a rule, accumulation across the various branches lacks *proportionality* and the sphere from which the impulse for accumulation comes is decisively important for the course of accumulation. If the initiative comes from department I, this department extracts a certain quantity of means of production from the social reserves available. It is therefore clear that this, at the same time, determines the scope of accumulation in department II. Conversely, if – under given, concrete market relations – the initiative proceeds from department II, then the scope for accumulation in department I is also determined. In fact, there is a struggle among the different branches of production for machinery, raw materials and the other means of production required for accumulation. The 'active' department at any time seizes the elements of production needed for its accumulation and thus imposes the scope of accumulation in the other department. By and large, however, department I predominates, for precisely the reasons with which we will become familiar.[329]

---

328 Luxemburg 2015a, p. 79. [Grossman's emphasis.]

329 This reference to the elasticity of the capitalist mode of production and to the possibility of the sudden development of individual branches of production, because elements of production are transferred from department I to department II or vice versa, at the same time indicates the value of Luxemburg's statements about the 'unsaleable remainder' in department II. The transfer of elements of production between the individual spheres of production may well be bound up with friction in practice, but it nevertheless takes place every day to a massive extent. The reconversion of production from war industry to peace time production has confirmed the great elasticity of industry. Those like Sternberg (1971, p. 100) who wish to deny the fact of such transfers are thus also denying that it is possible for an average rate of profit, which results from these transfers, to come about. They therefore also deny the regulative basis of the capitalist mechanism and that a misunderstood formula, rather than the real capitalist mechanism, has become the sole source of their 'knowledge'. Also see Lederer (1925, p. 372), who emphasises that 'reorientation of

The elasticity and extensibility of capitalist production are, however, apparent in another extremely important respect as well. The predominant view is that, for any given scale of productive apparatus, the value magnitude of the mass of commodities that come onto the market is exactly determined. Otto Bauer believes, for example, that the total value of the commodities that come onto the market from each department[330] in his reproduction schema is 95,991 in year 2; 102,232 in year 3; and 108,731 in the following year. From our variants, presented above [in Table 10] it is apparent that *there is no such fixed relationship between the size of the productive apparatus* (*accumulation*) *and the value magnitude of the mass of commodities which come onto the market*. So we see that in year 2, in case 2a commodities to the value of 90,000 come onto the market from each department; 96,756 in 2g; 104,000 in 2f; 106,000 in 2b; and 110,000 in 2c. Yet, in all these cases, the size of the productive apparatus is the same. In year 3, in case 3a, although the productive apparatus has grown, commodities to a value of only 94,150 are exchanged on the market, which is less than the sales turnover from the smaller apparatus of production in the previous year in case 2g. Furthermore, here again there are the same differences in turnover with a productive apparatus of same size: 94,150 in case 3a; 112,000 in 3c [and 3d]; 136,150 in 3b. The same holds for year 4: 93,987 in case 4a; 138,620 in 4c [and 4d]; and 152,774 in 4b.

This raises the question: how can productive apparatuses of identical total sizes and with identical numbers of workers employed cast masses of commodities with unequal magnitudes of value onto the market? The answer is obvious once we examine the different variants of our schema in each year more closely. It is apparent that *the larger the constant capital in department I the smaller is the mass of commodities which come onto the market*.[331]

production' is very possible, because the most diverse commodities can be produced with the same raw and auxiliary materials, and with the same labour power. A crisis which only arises from disproportionality between branches of production can, consequently, 'be easily surmounted by changing [their] disposition'. [Editor's interpolation.]

330 [I.e. the value of means of production from department I exchanged for the same value of means of consumption from department II. This excludes means of production invested in department I and means of consumption consumed in department II.]

331 [This does not hold for cases 2d and 2e, where there is no accumulation of constant capital and which Grossman did not include in the following table.]

Year	Constant capital	Sales of each department
2a	140,000	90,000
2g	134,000	96,756
2f	132,000	104,000
[2d and 2e	130,000	112,000]
2b	120,000	106,000
2c	110,000	110,000
3a	162,000	94,150
3c and 3d	130,000	112,000
3b	120,000	136,150
4a	186,200	93,987
4c and 4d	154,000	138,620
4b	120,000	152,774

This result is understandable. The schema shows us only 'the major exchange between the two departments'.[332] But the constant capital of department I 'circulates within department I',[333] i.e. 'among the individual capitalists of department I'.[334] The larger the constant capital of department I, the larger is the share of the annual product that is excluded from the great exchange between the two departments and only sold within department I; this is not expressed in the sales turnovers of the schema.

15 Fetters on the Development of the Productive Forces under Capitalism

Once we recognise that due to the relative decline in the mass of profit the capitalist system necessarily approaches its breakdown, we understand why Marx ascribed such overriding importance to the law of the tendential fall in the rate of profit, which *denotes* the breakdown tendency, and why he referred to 'the great importance that this law has for capitalist production'. We also under-

332 Marx 1978, p. 474.
333 Marx 1978, p. 499.
334 Marx 1978, p. 474.

stand how this law 'forms the mystery around whose solution the whole of political economy since Adam Smith revolves'.[335] For 'it does prove that' the breakdown of capitalism 'is a self-evident necessity, deriving from the nature of the capitalist mode of production itself'.[336] It is also only now clear what Marx means when he writes, 'The *true barrier* to capitalist production is *capital itself*. It is that capital and its *self-valorisation* appear as the starting and finishing point, as the motive and purpose of production.'[337]

'*The limits to production are set by the profit of the capitalist.*'[338] Marx criticises Ricardo for confusing the capitalist mode of production, to the extent that it is a labour process, which therefore has the goal of creating products, with the production of values, i.e. the valorisation process. 'He cannot therefore admit that the bourgeois mode of production *contains within itself a barrier to the free development of the productive forces*, a barrier which comes to the surface in crises.'[339] The development of the productive forces, that is the relation $MP : L$, which can proceed unfettered in the technical labour process encounters a barrier in the nature of the valorisation process, in which the elements of production figure as capital that has to be valorised, i.e. as the relation $c : v$ from which surplus value s is necessarily expected. If profit disappears the labour process is interrupted, fettered. The aim of the capitalist production process is not the most bountiful possible provision of goods but the greatest possible valorisation, profitability. It therefore follows that production might be cut back if profits can be increased in that way.

The barrier to the development of the productive forces under capitalism has a twofold nature. The highest level of technological perfection attainable under capitalism is much lower than it would otherwise be, i.e. from the social standpoint. The classical economists failed to see the two sides of the problem and thus confused them. Ricardo, in particular, simply takes the possibility of applying machinery for granted, where machinery *saves labour*.[340] Marx was the first to show that the *scope for applying improved means of production within the capitalist mode of production is much more limited*. 'The capitalist cost of the commodity is measured by the expenditure of *capital*, whereas the actual cost

335 Marx 1981, p. 319.

336 Marx 1981, p. 319. [In Marx's original context, it is the tendency for the rate of profit to fall, rather than breakdown, which Grossman identified as its corollary, that is 'a self-evident necessity'.]

337 Marx 1981, p. 358. [Grossman emphasised '*self-valorisation*'.]

338 Marx 1989c, p. 156. [Grossman's emphasis.]

339 Marx 1989c, p. 157. [Grossman's emphasis.]

340 Ricardo 1912, chapter 31 [pp. 263–71].

of the commodity is measured by the expenditure of labour.'[341] In other words, from the capitalist standpoint what matters is savings in the use of paid labour, not savings in the use of labour as such. Depicted graphically, what matters for capital is not savings in the line A–B but those within the narrower limits of the segment A–C.

	Total labour			
A	――――――――	C	――――――――	B
	Paid labour		Unpaid labour (Surplus labour)	

From the standpoint of capitalist profitability, the highest level of technological progress is often already reached (e.g. at point C in our graphical example above, having started at point A) where, from the social standpoint further room for the development of the productive forces, i.e. for still further saving of human labour (out towards point B), would be possible. If, for example, society expends 10 hours of labour time to produce a commodity, then it would make use of and find advantageous *any* machine that could economise on labour time, however small the saving, e.g. if the production of this commodity required only 9.75 hours or 9.5 hours instead of 10. If, however, entrepreneurs pay workers the equivalent of five hours of labour time, they would only find it advantageous to use machinery when it costs them *less* than five hours, for e.g. 4.75 hours or 4.5 hours. For, they get the surplus labour for free, in any case. The scope for applying the expansion of the productive forces on the basis of capitalism is narrower than and not identical to the development of the productive forces in general.[342]

341 Marx 1981, p. 118. [Marx also emphasised 'labour'.] In his book *The Question of Nationalities and Social Democracy*, Bauer shows that the capitalist mode of production is a 'barrier to technological progress' and that it 'hinders the application of the most productive forms of industry' (Bauer 2000, pp. 90–1).

342 For example, Tugan-Baranovsky writes: '*Many labour saving* devices are technologically feasible but economically not profitable. An improved machine, which would be advantageous for a new factory that is about to be established, often does not *bring any profit* to already existing factories, equipped with numerous costly machines of older types. Even if a fixed investment might be *rational*, it is not therefore objectively possible' (Tugan-Baranowsky 1913, p. 38). [Grossman's emphasis.] Tugan-Baranovsky does not notice that he is confusing two separate perspectives. An investment may be 'labour saving', 'rational' from the *social* standpoint. To be sure, this standpoint is not objective in Tugan-Baranovsky's eyes. For a capitalist economy only that which brings profit is objective. Many investments and technological improvements are often implemented only when interest rates fall, because a fall in interest rates means improvement in private economic profitability.

Not only in the regions of Asia and Africa, which have only been opened up a little by capitalism, but also in large parts of eastern and south-eastern Europe today, living labour is so cheap that it does not pay the entrepreneur to use machinery. Although, then, human labour could be replaced, i.e. saved, by machinery, it is in fact wasted massively, the development of the productive forces is fettered. But even in the most developed capitalist countries, like Germany and the United States of America, advanced technologies are confined to a relatively small group of enterprises, while next to them is a large mass of technically backward firms, which waste human labour, using outdated machinery or even manual labour. Data cited by [Karl] Ballod on the situation in the German grain milling industry are instructive.[343] In 1907 the number employed in mills was 101,000, working in 39,905 mills, with 441,000 horsepower. According to statistics published in 1913 by the Interior Ministry on relations of production in the milling industry, *apart* from windmills, there were watermills with a horsepower of 298,383, steam mills with 182,037 horsepower and other motorised mills with 54,994, a total of 535,414 horsepower.[344] According to Ballod's calculation, if modern rational techniques were used only 1,300 mills with a total of 137,500 horse power and personnel of 26,000 would be needed to grind 6.1 million tonnes of rye and 5.05 million tonnes of wheat and to rough grind about 700,000 tonnes of rye (these figures represent actual averages for the years 1909 and 1910 in Germany).[345] 'In any case, this need for power signifies a huge reduction compared with the actual use of power by mills today … We therefore see what a *waste* of motorised power has occurred in the milling industry; with rational organisation, one sixth the number of workers and three tenths of the existing power would suffice.'[346]

The waste of human labour involved in the use of backward technologies is finally apparent in the fact that even the best technologies *actually in* use are not identical with the best possible development of the productive forces that is already possible, technologically and financially, at present. Of course, many inventions and patents are bought up by cartels and trusts but they do not actually use them until driven to do so by the pressure of competition. The actual use of technological inventions and processes lags way behind the development of the productive forces that is already possible. The latter are fettered by capitalist concern about profitability. So, for example – as Otto Corbach

343 Ballod 1919, pp. 136–8.

344 [Ballod 1919, p. 138.]

345 Ballod 1927, pp. 179–80.

346 Ballod 1919, p. 138. [Grossman's emphasis.]

reports – 'even in the United States, *the possibilities for increasing production capacity by using mechanical power are far from exhausted*'.[347] 'Approximately 60 per cent of the power utilised on farms is animal power.'[348] The use of electricity in agriculture is still in its initial stages. 'The number of electric installations does not exceed 500,000 and the amount of electrically produced power used on United States farms does not amount to more than 5.5 per cent of all power (animal and mechanical) used, while the number of farms connected with a central electrical service is less than 3 per cent. But distribution is very uneven over different parts of the United States. California, shows 27 per cent of all farms electrically served.'[349] Even in the United States the electrified 'farm of the future' is thus still only in its initial stages.

The fettering of the forces of production in agriculture is inevitable on a capitalist basis and determined by the facts that 1) capital will only be employed in agriculture when, apart from the payment of wages and the average profit, it is *also in a position to pay ground rent*: 'Here landed property is the barrier that does not permit any new capital investment on formerly uncultivated or unleased land without levying a toll, i.e. demanding a rent';[350] 2) large estates, even where capital has been admitted, have no occasion, however, to develop the productive forces fully. Absolute ground rent is an excess in the value agricultural produce above production price (above the average rate of profit). While every advance in industry *raises the level of ground rent by reducing the price of production*[351] and so permits landowners 'to put away in their own private purses the result of a social development achieved without their participation',[352] in agriculture itself every development of the productive forces, by reducing the *value* of agricultural products, works in the opposite direction, i.e. *ground rent falls as a result*. Self-evidently this capitalist concern with profitability is 'one of the greatest obstacles to a rational agriculture'.[353] 'Already [William] Petty tells us [1699] that the landlords of his time *feared* improvements in agriculture because they would cause the price of agricultural products and *hinc* (the level of) rent to fall'.[354] Even bourgeois land reformers see the fettering influence of capitalist private property in land on the development of

347 Corbach 1928, p. 2. [Grossman's emphasis.]
348 Riddell 1926, p. 320 [quoting the US Department of Agriculture].
349 Riddell 1926, pp. 320, 318, 319.
350 Marx 1981, p. 896.
351 Marx 1989b, p. 340.
352 Marx 1981, p. 757.
353 Marx 1981, p. 757.
354 Marx 1989b, p. 343. ['*Hinc*' means 'thus'. The first interpolation is the editor's. Grossman's emphasis.]

the productive forces. Only Kautsky mislearned all of this, developed into an admirer of the unlimited expansion of productive forces by capitalism and thus fell below the level of Henry George in his understanding.

Relations in industry are no different. The 1 March 1928 issue of *The Iron Age* does not regard as exaggerated Harrington Emerson's calculation which shows that, with extreme rationalisation, labour time could be shortened by 30 per cent while simultaneously *labour output* could be doubled.[355] This rationalisation is not, however, carried out. Moreover, even with its lower actual productive capacity, American capitalism runs into obstacles as a consequence of difficulties in finding markets. Thus *The Iron Age* counsels American managements to concern themselves more, in future, with 'discovering new ways of employing old things' than with methods of production. In the meantime (May 1928), despite the most powerful efforts to boost the domestic market's capacity to absorb, there are growing signs of an impending crisis in the United States.

It would be superfluous to multiply the number of examples. Only one more will be cited, to demonstrate the technological backwardness that prevails in the coal industry in England, the classic country of coal. In England in 1923 17.2 per cent of all coal mining was mechanised, compared with 45.4 per cent, in Belgium and 65 per cent in the USA.[356] Likewise, in the German Ruhr district, even in 1925, scarcely 48 per cent of output was mined mechanically and only in recent years, as a consequence of rationalisation and under the pressure of English competition has this increased to 82.85 per cent, as is apparent from the following table:[357]

Extraction method	**1925**		**1926**		**1927**	
	Million tonnes	**Per cent**	**Million tonnes**	**Per cent**	**Million tonnes**	**Per cent**
Mechanised	45.89	48.1	70.49	67.4	91.23	82.85
Manual and blasting	49.60	51.9	34.03	32.6	18.88	17.15
Total	95.49	100.0	104.52	100.0	110.11	100.00

355 [*Iron Age* 1928, p. 620. This editorial states that Emerson's argument was that these results could be achieved 'when all available human effort is placed at the supervising machinery'.]

356 *Wirtschaftsdienst* 1926c, p. 899.

357 *Frankfurter Zeitung* 1928g.

Secondly however, it is recognised that '*competitive capitalism*' with its overproduction of commodities on the one hand, unemployment on the other, with competitive struggles for markets, entails a gigantic waste of productive forces. 'Today', Liefmann states, 'it is known that this competitive struggle does make the cheapest satisfaction of the consumers' needs possible, but that *it is extremely uneconomic, often involving a great waste of capital*.'[358]

But are things any better in the era of *monopoly capitalism*? Liefmann now asserts that there can be no talk of conscious forward-looking regulation of production by cartels. On the contrary, it is apparent that while 'the formation of cartels is a strong stimulus to the expansion of production and especially to the establishment of *new* firms … The cartels then often have the greatest difficulty in selling the greatly increased production.' 'Restrictions of production and the like are measures which cartels can only apply *subsequently*; generally, it is *not* possible for them to prevent excessive expansion of enterprises.'[359] Add to this the tendency of cartels to promote production by outsiders, precisely because 'the elimination of competition and the high prices that result have continually encouraged the formation of new enterprises. This is one of the most unfortunate effects of the formation of monopolies, which rests on the fact that competition is always in the background … and thus causes severe *overcapitalisation* in the industry.'[360] Liefmann illustrates this with concrete examples and shows how 'the already existent overcapitalisation of the potash industry was intensified by the law [of 1910] to a shocking extent'. 'About a dozen efficient works with a capital of perhaps 100 million marks could supply the whole demand; instead, there were … almost 2,000 million marks invested in this industry, that is perhaps the most tremendous overcapitalisation which has ever occurred in any industry. Unfortunately, it is still not entirely clear to people what such a waste of capital means for the economy, how the *underutilisation of plant* enormously increases the cost of production and leads to high prices …'[361]

Does this underutilisation of plant, at the same time as agriculture is still provided with potassium fertiliser to the smallest extent, not indicate the *fettering of the productive forces* or, as [Thorstein] Veblen puts it, 'sabotage [of] the productive capacity of the industrial system',[362] because of concerns about

358 Liefmann 2001, p. 77. [Grossman's emphasis.]

359 Liefmann 2001, p. 100. [Grossman's emphasis.] To take only one example: at the start of 1908 the American Steel Trust had a whole 13 per cent of its blast furnaces in operation.

360 Liefmann 2001, p. 102. [Grossman's emphasis.]

361 Liefmann 2001, p. 105.

362 Veblen 1920, p. 135. [Editor's interpolation.]

profitability? As a matter of fact, underutilisation of plant capacity became a general phenomenon in the leading capitalist countries after the War. Concerns about profitability put a brake on the development of the forces of production.[363] This is precisely what the celebrated 'regulation' of production by cartels and trusts consists of: their goal is not planned, prior calculation and distribution of production according to need but *subsequent restrictions* on use of capacity with the purpose of raising prices and profits.

Marx, therefore, writes, 'This only goes to show how the *valorisation* of capital founded on the antithetical character of capitalist production permits actual free development *only up to a certain point*, [so that in fact it constitutes an immanent fetter and *barrier to production*]'.[364] It is apparent 'that the capitalist mode of production comes up against a *barrier* to the development of the productive forces which has nothing to do with the production of wealth as such; but *this characteristic barrier in fact testifies to the restrictiveness and the solely historical and transitory character* of the capitalist mode of production; it bears witness that this is not an absolute mode of production for the production of wealth but actually comes into conflict at a *certain stage* with the latter's further development'.[365]

The capitalist mode of production began in England in the early stages of capital accumulation with the technological revolution during the last third of the eighteenth century. After 1815, after Waterloo, England was able to revolutionise her industry. She had two new technical processes available to her – the puddling process and the new casting process – thanks to which she, in practice, had monopoly in iron production. But as capital accumulation developed, the tempo of technological advance slowed. In 1856 the Englishman [Henry] Bessemer in Cheltenham informed the British Association of the Iron Trade about the process named after him. It was 'destined to revolutionise the iron industry by the substitution of steel for iron'. Yet for 20 years England simply ignored the new discovery and retained the puddling process, until competition from Germany, France and Belgium (the successes in Le Creusot and Essen) compelled her to adopt and refine the new invention. The same story was repeated in 1879 when the Englishman [Sidney Gilchrist] Thomas discovered the process named after him, which was capable of making better use

363 'It may be found more profitable', writes Spiethoff, 'to sell a *smaller quantity* at higher prices rather than a larger quantity at lower prices' (Spiethoff 1953, p. 163). [Grossman's emphasis.]

364 Marx 1981, p. 572. [The words in square brackets do not appear in the Penguin translation of *Capital*, but are included here from Marx 1998, p. 439. Grossman's emphasis.]

365 Marx 1981, p. 350. [Grossman's emphasis.]

of phosphorus-rich ores. England indifferently passed by this invention, calmly allowing foreigners to buy it until in three years it revolutionised all the works on the Continent. England's monopoly was over, leadership in the field of iron and steel production gradually passed into other hands.[366] The same picture is found in the field of electrical engineering around the turn of the century. It was ignored in England, at a time when – according to the reports of British consuls – there was practically no city in Germany that did not have it own 'electricity company'. [Victor] Bérard already asserted this in 1900, [Gerhart von] Schulze-Gaevernitz made the same observation a few years later and asserted 'that, in the field of iron and steel production, England has been outstripped by the United States and Germany'.[367] Like Bérard before him, he writes about her 'technological conservatism', although he traces this back to 'natural' or accidental causes, and lists a whole series of industries like iron and steel, machine building, shipbuilding, electrical engineering, chemicals in which America and Germany had either achieved dominance or where such a threat to England was imminent. But Schulze-Gaevernitz rejects *economic* causes as the explanation of English 'conservatism' and prefers to trace it to *'processes of historical intellectual decline'*.[368] Thus he only displaced the problem but did not solve it. For why does such intellectual decline only assert itself at a specific stage in England's development? Why did the progressive and even revolutionary character of English economic development change so dramatically in a few decades? We have shown that, within the framework of capitalism, technological development must slow down at a certain level of the capital accumulation, because the *valorisation* of capital is not up to this task.

This account indicates that it is misleading to write in general about the stagnation of the productive forces 'of capitalism'. We have seen that this is precisely why Kautsky denies the possibility of the economic breakdown of capitalism, because in his conception 'capitalism' has proved its capacity to develop the productive forces. It is not a matter of some abstract capitalism, outside space and time, but of the concrete development of particular, historically specific capitalist countries, *each of which lies at a different stage of capital accumulation*. It is a fact that the oldest capitalist country in Europe, which for more than a century had the leading role in industrial production, the country with the greatest accumulation of capital prior to the War, gradually 'lost its leadership to other nations in several of the most important industries. Advances

366 Bérard 1906, pp. 263–6. [The quotation is on p. 265.]
367 Schulze-Gaevernitz 1906, p. 334.
368 Schulze-Gaevernitz 1906, p. 360.

that in the past began in England are today frequently imported into England from abroad.'[369]

In France, with her stagnating population, overaccumulation had to emerge fairly early and France had to develop into a capital-exporting country, a rentier state.

In England, because the rate of accumulation was not sufficiently large as a consequence of the enormous accumulation of capital, technological advances were fettered and leadership in this field passed on to other countries with lower levels of accumulation, to Germany and the United States, where valorisation was still sufficiently large. As the accumulation of capital in these countries grows with time, however, valorisation must run into difficulties there as well, and slow their technological progress.[370] The law of accumula-

369 Schulze-Gaevernitz 1906, pp. 334, 192. At the conference of the Verein für Sozialpolitik in Zürich, in 1928, Sombart argued, 'There is now a tendency for the economic process to slow down. This arises due to diminished capital accumulation, the slowing of technological progress, above all to slower population growth'. 'The old capitalist countries find themselves in a chronic state of commercial glut' (Sombart 1928, pp. 248, 252).

370 Wilhelm Lexis's discussion of the 'future prospects' and 'presumed development' of the capitalist mode of production is most interesting. In it he confines himself to 'following the lines whose starting points and directions can now already be recognised'. Lexis believes that it now has to be assumed that we are confronted by a period of 'relatively slow growth of fixed capital', 'that we are gradually entering a second period of the machine age which, in economic terms, differs from the first in one essential respect. In this … fixed capital … has grown strongly, to a degree that surpasses population growth. Now, however, there is a significant basic level of fixed capital investments which is still being expanded even in the old civilised countries *but a rate which can be expected to decline gradually*'. Lexis realises that such a perspective signifies the end of the capitalist mode of production. 'For the capitalists', he writes, 'the reduced opportunities for profitable new investments in fixed capital … could have invidious consequences'. He therefore regards the export of capital to economically backward countries as the only way out. The owners of capital 'can avoid' these consequences 'for a further period by participating in the investment of capital in young countries that are yet to obtain their economic … infrastructure'. Only in this way can the development of the productive forces be ensured.

> In the interests of European labour, it is to be hoped that this *phase* of the world economy will endure for a long time. For progressive rises in labour productivity are also the main condition for any corresponding expansion in the working class's relative share of income, under the present order of production. *But this period must end, sooner or later*. Technological advances will also slow down in the younger countries. The new countries will gradually raise their economic, technological inventory to such a level that it will certainly still need to be replaced, improved and supplemented *but will no longer require new investments of capital to the previous extent* … The old countries along with their industrial production, however, find themselves increasingly reliant on themselves and in so far as certain overseas products are indispensable acquiring them will become more and more difficult. New inventions which reduce

tion developed here thus explains the phenomenon that was already noted by Adam Smith: that the *tempo of accumulation* is more rapid in the young countries, where capitalist development is only just starting, than in the 'wealthier', i.e. capitalistically more advanced countries, in which, in Schulze-Gaevernitz's expression, a 'capitalist slackening' sets in,[371] which in turn brings with it 'the stoppage of political and social reforms'.[372] In the Zürich lecture mentioned, Sombart refers to a 'general tendency' to a gradual 'decline in the intensity of entrepreneurship' that leads to 'pensioning off' [of older countries], and allows for the possibility that 'such a tendency will make its appearance in German and American capitalism as well … Precisely the United States is well on the way to becoming a rentier state.' Thus Lenin is absolutely right to refer to a 'tendency to stagnation' as inherent in highly developed capitalism.[373] But Lenin links this tendency to the existence of monopolies. That such a tendency is bound up with monopolies cannot be doubted.[374] But this statement is not enough

> costs could, in any case, improve their position but it is open to question whether, given the unfavourable export scenario, production with new methods can be expanded to such a degree that all of the available workers would be able to find employment under previous conditions. (Lexis 1913, p. 228)

Thus Lexis foresees a point in the development of capitalism at which the reserve army expands more and more (Lexis 1913, p. 232). [Grossman's emphasis.] It does not, therefore, sound terribly optimistic when Lexis comforts himself by writing that the perspectives described by him do not immediately threaten capitalism. 'Despite its imperfections, the capitalist mode of production, in its specific essence, will, we predict, still have some time open to it' (Lexis 1913, p. 228).

371 Schulze-Gaevernitz 1906, p. 333.

372 Hobson 1902, p. 51.

373 Lenin 1964b, p. 276.

374 In his Vienna lecture, Professor [Eugen] Schmalenbach has, among other things, also referred to the dangers of a closed economy and given a penetrating description of the dire consequences resulting from the formation of monopolistic cartels and trusts. The worst aspect, he writes, is that there is no longer the 'limited earlier security that effective and capable people will succeed'.

> In the large *monopoly structures* that we see before us today, lucky self-seekers sit more firmly in the saddle than they could have earlier, under the system of free competition. Under the system of free competition they had to earn their places repeatedly. Today that has become much less necessary. Not only individuals but entire families and whole interest groups can survive today, shielded by a monopoly, while previously they would have been ruthlessly and mercilessly cleared away under the system of free competition. Needless to say, these *parasites* effectively distinguish themselves by their congenital disease of arrogance.

These monopolistic organisations, moreover, have 'antiquated and completely uneconomic managerial systems', uselessly inserted trading companies, 'excessive bureaucracy, inordinate sluggishness, and inordinate expenditure on administration costs'. 'Disconto explain the whole phenomenon; no more than Schulze-Gaevernitz's 'processes of intellectual decline'. For it is not simply a matter of phenomena of stagnation. The very same British capitalism that gave rise to 'capitalist slackening' in the field of economics displays an *extremely aggressive character* in other fields and develops an energy that was not present to the same extent in the early stages of capitalist development. And precisely this aggressive character of contemporary capitalism gives it the peculiar stamp that we sum up with the term 'imperialism'. Imperialism is characterised not just by 'stagnation' but at the same time by this aggressive character. *The two* phenomena have to be explained together. And monopoly does not suffice. If 'stagnation' is due to monopoly, then how is the aggressive nature of imperialism to be explained? We regard the tendency to breakdown, i.e. insufficient valorisation due to enormous overaccumulation, as the ultimate cause of this phenomenon. Monopoly itself is simply a means of raising profits, that is improving valorisation, through price increases. It is thus merely a surface appearance whose deeper hidden kernel is the advent of insufficient valorisation, as capital accumulates. And the failure of capital valorisation must necessarily result in the *aggressive character of imperialism*: its drive to restore the valorisation of capital at any cost, to weaken or eliminate the tendency to breakdown. This explains its aggressive policies at home: intensified pressure on the working class to enhance valorisation by reducing wages. It explains the aggressive policies abroad, to convert foreign countries into sources of tribute, to the same end. Here, then, is the hidden root of the capitalist rentier state, of the *parasitic* character of capitalism at the advanced stage of accumulation. Because the valorisation of capital fails at the advanced stage of accumulation *within* a given state, the tribute that flows to them *from abroad* must become increasingly important. Parasitism becomes a method of prolonging capitalism's life.

So far we have only discussed the fettering of the productive forces with regard to the dead factor in production, to capital. But the most important quantitative and qualitative factor in production is living *labour*. What Robert Owen wrote about it in *A New View of Society*, which appeared in 1816, nevertheless still remains true today: 'revenues … are derived … from the labour

omies [which] can continue to exist … for years and decades.' Then Schmalenbach describes the dire mismanagement, which results from the cartel structure itself, in these large cartel organisations, most drastically in the coal and iron industries, the conflict over shares of output, at the expense of the economy as a whole, the maintenance of the worst plants, and so on (*Frankfurter Zeitung* 1928h). [Also Schmalenbach 1928, p. 246. Schmalenbach emphasised 'antiquated and completely uneconomic managerial systems' and 'excessive bureaucracy'.]

of man; and yet' are 'most absurdly … wasted'.[375] Obviously, in the capitalist's conception this factor of production has no significance. In a publication of the Dresdner Bank, *The Economic Resources of the World*,[376] 145 large octavo pages list every conceivable element of production by continent and country: the production of raw materials, finished goods, foreign trade, agriculture, transport etc.; only labour power is not mentioned in as much as a word. Clearly, for the leading bank in Germany it does not count among economic resources. In fact it is also most absurdly wasted. In Germany the percentages of the union members surveyed who were unemployed and on short-time work, in 1921–26, were:

Year	Unemployed[377]	On short-time[378]
1921	2.8	5.4
1922	1.5	2.8
1923	9.6	26.8
1924	13.5	15.3
1925	6.7	8.6
1926	18.0	16.0

To this should be added the unemployment and short-time work of the unorganised. It is hard to form any reliable picture of the number of workdays lost as a result of economic struggles, because of the lack of adequate statistics. Even disregarding volcanic eruptions, like the English coal miners' strike of 1926 when hundreds of millions of days were lost, there is a huge loss of workdays in the course of the cycle. In England, in the two decades between 1904 and 1924 (excluding the War years) this amounted, in thousands, to[379]

375 [Owen 1927, pp. 84, 86. These words are from Owens's original text; in German, Grossman seems to have paraphrased them into a single sentence.]
376 Dresdner Bank 1927.
377 Statistisches Reichsamt 1927, p. 336.
378 Statistisches Reichsamt 1927, p. 337.
379 Woytinsky 1926a, p. 293.

1904	1,484	1913	9,804
1905	2,470	1914	9,878
1906	3,029	1919	34,969
1907	2,162	1920	26,567
1908	10,834	1921	85,872
1909	2,774	1922	19,850
1910	9,895	1923	10,672
1911	10,320	1924	8,320
1912	40,915		

In Germany the number of days lost due to economic conflicts, strikes and lock-outs, in the years after the War was:[380]

1920	17,702,800	1924	36,360,134
1921	26,316,390	1925	17,113,886
1922	28,894,434	1926	1,404,875
1923	14,583,907		

Professor [Anton Leo] Hickmann's well-known statistical atlas states that the total number unemployed in the first quarter of 1922 was five million in Europe and 10 million worldwide. According to [Wladimir] Woytinsky these estimates are too low. He estimates the number of unemployed in Europe in the first quarter of 1922 as 'certainly not less than 8,000,000 and in the world as whole well over 15,000,000'.[381] According to [Karl] Kumpmann, 'the shortfall in goods production is 15 billion gold francs for Europe in 1921 and 37.5 billion gold francs for the world, while the corresponding figures since the armistice are 30 to 40 billion for Europe and over 100 billion for the world'.[382]

It should not be objected that this is an issue of the postwar period. The enforced unemployment of broad masses of people is a phenomenon which regularly occurs in the course of the cycle. In the United States of America today (summer 1928) there are nearly five million unemployed, in the wake of the crisis, as against a 'normal level' of one million. If the average period of unemployment is just four months, the daily wage is $3 and the magnitude of surplus value is $2, then the magnitude of the value lost through unemployment can be calculated in dollars and cents and a monetary expression for the limit on

380 Statistisches Reichsamt 1927, p. 343.
381 Woytinsky 1926a, p. 354.
382 Kumpmann 1925, p. 802.

the free development of productive forces can be found. Marx writes about this limit, which, according to him, 'comes to the surface in crises'.[383]

For Kautsky these facts do not exist. Capitalism, far from fettering the productive forces, is according to Kautsky capable of developing them forever.

Kautsky likes to counterpose the young Marx to the old Marx. But it is much more justifiable to speak of a young and an old Kautsky. The younger Kautsky recognised the fettering influence of capitalism on the development of the productive forces, saw the limits of that development. It is only the older Kautsky who forgets his more correct understanding of yesterday and writes about a boundless unfolding of the productive forces under capitalism.

The opposition between the development of the productive forces and the capitalist mode of production, described here, is an opposition between value and use value, between the tendency to the boundless production of use values and the production of values, fettered by the limits of valorisation. As Marx writes, 'Indirectly … the development of labour productivity contributes to an increase in the existing capital value, since it *increases the mass and diversity of use values* in which the *same exchange value* is represented … The same capital and the same labour produce more things that can be transformed into capital, quite apart from exchange value.'

> [T]hese two aspects involved in the accumulation process cannot just be considered as existing quietly side by side … they contain a contradiction, and this is *announced by the appearance of contradictory tendencies and phenomena* …[384]
>
> … At certain points the conflict of contending agencies breaks through in crises … To express this contradiction in the most general terms, it consists in the fact that the capitalist mode of production tends towards an *absolute development of the productive forces irrespective of the value* and surplus value this contains … while on the other hand its purpose is to maintain the existing capital *value* and to *valorise* it to the utmost extent possible (i.e. an ever accelerated *increase in this value*) …[385]

How are both of these goals attained? Through technological progress, that is, under capitalism through the progressively higher organic composition of capital, which, however, bring about the consequences already known to us:

383 Marx 1989c, p. 157. I shall return to this decisively important problem once more in the 'Concluding Observations'.

384 Marx 1981, pp. 356–7. [Grossman's emphasis.]

385 Marx 1981, pp. 357–8. [Grossman's emphasis.]

'The methods through which it attains this … involve a decline in the profit rate, the devaluation of the existing capital and the development of the productive forces of labour at the cost of the productive forces already produced … The *periodical devaluation* of the existing capital … disturbs the *given* conditions in which the circulation and reproduction process of capital takes place, and is therefore accompanied by sudden stoppages and crises in the *production process*.'[386] Surveying the process as a whole, the following is apparent to us. The accumulation process is a development that moves through conflicts between value and use value. From the use value side, the forces of production, that is the technological capabilities of production, are ruthlessly developed. This accumulation of use values (which is, however, simultaneously an accumulation of values) contributes to the fall in the rate of profit, which means that valorisation of capital advanced becomes impossible at the given rate. Crisis, devaluation of existing capital is therefore the consequence. This, however, also revives accumulation, from its value side. 'The accumulation of capital, from the point of view of *value*, is slowed down by the falling rate of profit, which then serves yet again to accelerate the accumulation of *use value*, while this in turn accelerates the course of accumulation in terms of value.'[387] The entire process moves by fits and starts, through crises and their attendant devaluations of capital, so that the development of the forces of production finds a limit in the possibilities of valorisation.

> The barriers within which the maintenance and *valorisation* of the capital value has necessarily to move – and this in turn depends on the dispossession and impoverishment of the great mass of the producers – therefore come constantly into contradiction with the methods of production that capital must apply … which set its course towards an unlimited *expansion of production*, to production as an end in itself, to an unrestricted development of the social productive powers of labour. The *means* – the unrestricted development of the forces of social production – comes into persistent conflict with the restricted *end*, the valorisation of the existing capital. If the capitalist mode of production is therefore a historical means for developing the material powers of production and for creating a corresponding world market, it is at the same time the constant contradiction between this historical task and the social relations of production corresponding to it.[388]

386 Marx 1981, p. 358. [Grossman's emphasis.]
387 Marx 1981, p. 358. [Grossman's emphasis.]
388 Marx 1981, pp. 358–9. [Grossman's emphasis.]

> At this point the capitalist mode of production falls into a … contradiction.[389] Its historical mission is ruthlessly to expand the productivity of human labour, to drive it onwards in geometrical progression. *It is untrue to its mission* as soon as it starts to *inhibit* the development of productivity, as it does here. It thereby simply shows once more that it is becoming *senile* and has further and further outlived its epoch.[390]

The idea developed here was already expressed in the first volume of *Capital*, where Marx formulates, on the basis of his materialist conception of history, the proposition that every historical mode of production outlives itself over time and must give way to another that is more advanced in terms of the development of the forces of production. The passages from the third volume presented here concretely demonstrate, through analysis of the capitalist process of accumulation, that the capitalist mode of production, after being at first a historically essential condition for the development of the forces of production, in time begins to fetter them. 'The monopoly of capital becomes a *fetter* upon the mode of production which has flourished alongside and under it … [C]apitalist production begets, with the inexorability of a natural process, its own negation.'[391]

Marx's discussion of senility, of capitalism's necessary end, must be especially emphasised here, particularly in view of Sombart's characterisation of

389 We see that the contradictions Marx refers to here have an entirely *concrete* nature; they are contradictions between the unlimited expansion of the productive forces and the limited possibilities for valorisation. These contradictions have nothing to do with Bukharin's abstract terminology of 'contradiction'.

390 Marx 1981, p. 371. [Grossman's emphasis.]

391 Marx 1976b, p. 929. [Grossman's emphasis.] Boudin makes desperate efforts to bring Marx's discussions of the fetters and *constraints*, which occur at a definite stage of development, into accord with his own theory of the need for non-capitalist markets. The impossibility of disposing of the whole surplus product drives capitalism to wastage. 'That a system has become a hindrance, and a fetter to production when it has reached the point when it can only exist … by wasting what it has already produced, goes without saying. Such system cannot therefore last very long' (Boudin 1907, p. 254). Instead of proving that the continued existence of the capitalist system is economically impossible, Boudin delivers a moral judgement about the latter from the standpoint of a shallow rationalism. *Economically* he demonstrates the opposite of what he set out to prove. On the basis of his market theory, waste is not only no economic *fetter* on capitalism, but 'absolutely *necessary for the preservation* of the capitalistic system … hence our continued *prosperity*' (Boudin 1907 p. 252). [Grossman's emphasis.] Yet quite apart from this contradiction, Boudin argues that the impossibility of selling all of the surplus product under capitalism is a *permanent* feature of capitalism, which arises from its very nature, and that was there at its birth, as much as today. Then, however, it would always have been a fetter

Marx's work. He deliberately portrays it as if Marx's genius (which Sombart occasionally bows before) sufficed for the description of the *beginnings* of capitalism, something which, according to Sombart, can be explained in terms of the period when *Capital* was written. 'When Marx conceived his ideas (in the 1840s), capitalism was new terrain, which Marx was the first to discover and explore.' 'But even the objective findings that Marx brought to light were an outcome … of the period in which he drew up his system. At that time capitalism was still chaotic … from which it still could not be said with certainty what would emerge.' One 'could envisage the most splendid things emerging from it'. And that, according to Sombart, is what Marx did! 'From this historical perspective we should view his very occasional lapses of judgement *about the unlimited rise in productivity*, … *about the necessary breakdown* of the economic structure.'[392]

Thus Marx envisaged only the 'most splendid things' in capitalism's future! He therefore asserted that productivity would rise without limit under capitalism! What Marx failed to discover – capitalism's senility – Sombart claimed for himself.

Just as Sombart has created a whole terminology that has found general acceptance – 'early capitalism', 'high capitalism', 'late capitalism'[393] – so *he* was also the first to have described the old age of capitalism, the 'legacy of its economic resilience … the replacement of free competition by the principle of collusion' etc.

> They are all symptoms of old age … the first grey hairs. Whoever has carefully followed its development since the War cannot doubt that capitalism has entered its peaceful age, quite certainly not yet its senility, but rather its "prime of life". Its most energetic age is *past*: its final forty years have begun.[394]

Even if Sombart himself was actually the first to have established all these phenomena empirically, he has still said nothing at all about their causes. Where is the explanation of these phenomena to be found?

---

on production, one that already constantly constrained capitalism when it first arose. Then capitalism's survival to the present would be incomprehensible! From their theoretical perspective, neither Boudin nor Luxemburg can explain why capitalism initially developed the forces of production in a powerful way and only from a certain point in its development became a fetter on *production* (not on sales; it is the productive forces to which Marx refers).

392 Sombart 1927, 1, pp. xix, xx. [Grossman's emphasis.]

393 Sombart 1927, 1, p. xi.

394 Sombart 1927, 1, p. xii. [Grossman's emphasis.]

As has been shown, Marx did provide this explanation. But, even given the merits of Sombart's terminology, the matter simply rests there. As far as the coining of *words* goes, we can grant Sombart a little philological satisfaction; the *concepts* underlying this coining Sombart took from Marx. Just as Marx refers to the senility of capitalism in the passage cited earlier, he refers in another passage to 'the infancy of bourgeois society'.[395] We saw that the St Petersburg reviewer of *Capital* in 1872 already perceived the scientific value of Marx's achievement in Marx's exposition of the *laws* which regulate the emergence, development and death of a given social organism and its replacement by another, higher one. His genius was that he did not confine himself to a purely empirical description of 'the circumstances of the time' but formulated the 'law of motion' of society from established facts and causal connections which he discovered, enabling prediction of its developmental tendencies in the future. We have in fact seen that, although he only experienced the beginnings of high capitalism, Marx, in the 1860s, already foresaw its inevitable end and demonstrated the particular causes that will bring about capitalism's senility. If Sombart now, two generations after Marx, *confirms* capitalism's senility, he thus only acknowledges the accuracy of the laws formulated by Marx.

How little Sombart comprehends the problem at issue here is already apparent in his combination of distinct and contradictory statements in a *single* sentence: Marx is supposed to have assumed the limitless development of productive powers under capitalism and the same Marx is supposed to have asserted the inevitability of capitalism's breakdown. That both assertions cannot stand alongside each other and that they represent a logical contradiction should be clear to anyone who knows that in Marx the breakdown is derived from the impossibility of a boundless unfolding of the productive forces under capitalism, precisely because it finds a barrier in the possibilities for further valorisation. If a limitless unfolding of the productive forces was possible under capitalism then the problem of socialism would not consist of reordering the *production process* but of a 'more just' *distribution* of returns within the existing constitution of production.

395 Marx 1987b, p. 384.

16 Marx's Theory of Insufficient Valorisation Due to Overaccumulation and Luxemburg's Theory of the Impossibility of 'Realising Surplus Value' under Capitalism

The proof of the necessary breakdown of the capitalist system provided here, using Otto Bauer's reproduction schema, implies rejection of Bauer's theory of capitalism's tendency to restore equilibrium, to automatically adjust the scale of production to population growth alone, but also includes a definitive rejection of the theory of Luxemburg and her epigones. Suppose we adopt the standpoint of Luxemburg's theory and, using the assumptions of this theory, complete Bauer's equilibrium schema. In that case, there would be no basis left for Luxemburg's entire critique of this schema. For it is *assumed*, with Luxemburg, that capitalism is *not* the exclusively prevalent mode of production but has to rely on a non-capitalist sector. So, on the periphery of Bauer's schema, there are non-capitalist markets that buy up, at its value, the surplus value which is produced within the schema, hence by capitalist methods, and cannot otherwise be sold at its value, so that (according to Luxemburg's theory) only in this way can it be converted into a usable natural form and employed for accumulation in the capitalist country.

We therefore assume that Bauer's reproduction schema represents accumulation whose elements have already returned from non-capitalist countries *after* being 'realised' there. And what will the result be? *That capitalism's breakdown – even though its surplus value is 'realised' in the non-capitalist sector – must unavoidably come for the reasons mentioned above.*

This only shows that Luxemburg's entire hypothesis is entirely irrelevant to the problem at issue and is therefore redundant, as soon as its assumptions are provisionally accepted. Whether the accumulation apparent in the schema takes place through surplus value 'realised' under pure capitalism or in a non-capitalist sector has no bearing either on the lifespan of capitalism or on the timing and inevitability of its final breakdown. In *both* cases – regardless of whether there is non-capitalist sector or not – the breakdown must necessarily follow at the *same* point in time! It results from the fact of capitalist accumulation on the basis of a progressively higher organic composition of capital, from the fact that c grows faster than v. Here the question of *how* s is 'realised', whether in a capitalist or non-capitalist sector, is completely irrelevant to the inevitability of the breakdown. All that matters is *the magnitude* of the surplus value, s.

One can only suppose that Luxemburg would never have conceived of her theory about the necessity of non-capitalist markets as a condition for the existence of capitalism if she had grasped these implications of Marx's law of value.

For her theory was only the outcome of a dilemma. There can be no doubt that the idea of breakdown flows from a reading of Marx's *Capital*. The first two decades of criticism of Marx were dominated by this idea. Then, around the turn of the century, Tugan-Baranovsky gave us his depiction of a capitalism where unbounded growth is possible, in harmonious equilibrium, free of disruption. He was soon followed by Hilferding and Otto Bauer, and finally Kautsky. So it was natural that Luxemburg defended the fundamental idea of the necessary breakdown of capitalism against the distortions of Marx's epigones. But instead of examining Marx's reproduction schema and especially his theory of accumulation in the framework of his whole system, instead of asking what role the schema plays in the structure of his theory and, finally, instead of analysing the accumulation schema down to its *ultimate* implications, she was involuntarily influenced by those she wanted to combat, i.e. she believed that Marx's schema does actually allow for limitless accumulation:[396] 'So it goes on in a circle *ad infinitum* – according to Tugan-Baranovsky's theory. *That the Marxian schema, considered in isolation, does indeed allow such an interpretation*, is demonstrated by the mere circumstance that what Marx actually sets out to do, as he states repeatedly and emphatically, is to present the accumulation process of total social capital in a society consisting only of capitalists and workers.'[397]

Luxemburg was of the opinion that Marx 'did not go any further into the question of accumulation than to devise a few schemas and suggest an analysis. This is where my critique begins …'[398]

It is scarcely possible to imagine a worse distortion of Marx's methodological thought. We have shown that, precisely according to Marx's law of accumulation, accumulation cannot carry on without limits, 'so *ad infinitum*, in circles'.

396 'Since capitalist production is itself the exclusive purchaser of its surplus product, *no restrictions* upon the accumulation of capital can be identified' (Luxemburg 2015a, p. 236). [Grossman's emphasis.]

397 Luxemburg 2015a, p. 236. [Grossman's emphasis.]

398 Luxemburg 2015b, p. 349. Luxemburg's assertion that Marx never went beyond drafting a few schemas and the start of his analysis is completely arbitrary. In his preface to the second volume of *Capital* Engels pointed out that in Marx's discussion of the reproduction process, '[t]he logical sequence is frequently interrupted, and the treatment in places *punctuated* and especially at the end quite incomplete. *And yet what Marx intended to say is said there, in one way or another*' (Engels in Marx 1978, p. 86). [Grossman's emphasis.] For the rest, Marx already formulated his general law of capitalist accumulation in the first volume of *Capital*, anticipating the results of his analysis of capital accumulation; so this analysis cannot have been just 'beginning'. In fact, we know (again from Engels's preface to the second volume) that this analysis was written long before the appearance of the first volume, namely in the period between 1861 and 1863.

But because Luxemburg thought Marx's reproduction schemas actually do allow for limitless accumulation *ad infinitum* and that Tugan-Baranovsky and Hilferding and later Otto Bauer *correctly* drew this inference from the schema, she abandoned the schema in order to rescue the idea of breakdown that flows from the first volume of *Capital*. For '[i]t is obvious that if it is assumed that the *accumulation* of capital has *no restrictions*, then the capacity of capital to endure *ad infinitum* has also been proved … If the capitalist mode of production is able to ensure unconfined expansion of the productive forces and continuous economic progress, then *it cannot be overcome*.'[399] Marx emphasised the historical, transitory nature of capitalism. It was therefore impossible for him to assume the possibility of unlimited accumulation. So, with her own *ad hoc* construct of the necessity of non-capitalist markets, Luxemburg thought she was killing two birds with one stone: refuting the equilibrium dreams of the neo-harmonists, by showing there is an inexorable economic end point and limit to capitalism, and explaining imperialism at the same time. Only she forgot that this rescue through evasions, based on a *supplementary hypothesis* constructed *ad hoc* was imported into Marx's theory from *outside* as an annex to the main structure, whose inadequacy and dilapidation it supposedly demonstrated.

Capitalism is dominated by the ruthless and unlimited hunt for surplus value. According to Luxemburg's interpretation of the system, it seems that this system, thirsting for surplus value, in truth suffers from an *excess* of surplus value, that it contains an unsaleable remainder of surplus value, that it possesses *too much* surplus value! Such a theory is illogical and afflicted by an internal contradiction, when faced with the most crucial and peculiar function of capital, the function of valorisation.

Matters are entirely different in our conception! The mechanism of capitalism suffers not from having too much surplus value but from having too little. *Valorisation* of capital is its most important function and the system's demise occurs because *this* function cannot be fulfilled. The logical unity and consistency of Marx's theory find their most powerful expression in this explanation. If the logical unity of Marx's system of thought is to be maintained, the problem is to prove the necessity of breakdown, not for external reasons but *in terms of Marx's theory itself, that is on the basis of the law of value*, without the aid of further supplementary, needlessly complicating hypotheses! *Simplex sigillum veri*.[400] The *simplicity of its basic principle* has always been seen as the hallmark

399 Luxemburg 2015a, p. 33. [Grossman's emphasis.]
400 ['*Simplex sigillum veri*' means 'simplicity is the sign of truth'.]

of a good theory. While for *all* other theories of the business cycle, the difficulty is, in Eugen Altschul's correct characterisation, 'not so much explaining the upswing as establishing the causes of the *downturn*, which occurs at more or less regular intervals';[401] precisely this difficulty does not exist for Marx's crisis theory. It is able to explain downturns as well as their necessary periodic recurrence without the aid of any further special cause, strictly in terms of the course of capital accumulation itself! This is where the peculiar character of the *logical structure* of Marx's theory of breakdown and its essential difference from all other theories of the business cycle is apparent. These are theories of equilibrium, they have a static character. They are in principle incapable of deriving the general crisis, i.e. discrepancy between the supply and demand for commodities, from the system itself, because in equilibrium theory prices represent an automatic mechanism for restoring their congruity. If these theories try to account for one of those *empirically* established moments of disruption, an actually observed tendency for equilibrium to be disrupted, then, as Adolfe Löwe and Hayek correctly note,[402] they would inevitably suffer from the fundamental contradiction that the line of argument of equilibrium theories themselves, when consistently applied, can only prove that such disturbances of equilibrium can be brought about 'from the outside', i.e. by changing the economic data. In this system, the economy can only respond in *one* way, by adjustment, i.e. *establishing a new equilibrium*.

There is no such defect in Marx's theory of crises, something that Löwe and Hayek have failed to notice in their critique of all previous theories of the business cycle. Marx's line of argument does also start from the assumption of equilibrium. All other theories are *static* and depict a 'normal course' in their accounts, which according to the assumptions of these theories really does prevail, signifying *a real tendency for equilibrium to be restored* in the economy.[403] In Marx's line of argument, however, the 'normal course', equilibrium, is only a provisional methodological fiction with whose help it is demonstrated that, in the long run, the maintenance of equilibrium is impossible under the capitalist mode of production, which is essentially *dynamic*, not static. We therefore met all the requirements for the logical unity of any theory, when we derived

401 *Frankfurter Zeitung* 1928l.

402 Löwe 1926; Hayek 2002.

403 About this, Löwe (1926, p. 173) writes: 'All systems since the Physiocrats have placed the concept of equilibrium at their centres. From the trivial notion of the balance between supply and demand to the differential equations of the mathematical school, all price theory is based on the *assumption of equilibrium tendencies*'. [Löwe only emphasised 'equilibrium'.]

the possibility and necessity of the economy's movements which lead not to the system's equilibrium but to its periodic disruption and finally destruction, purely deductively from the assumptions made, i.e. from the *internal* operation of capitalist accumulation itself, 'in accord with the logic of the system as a whole'.[404] The capitalist mode of production is not governed by a tendency for the system to come to static rest, but tends rather to eternal rest, to the economic death of the system.

This also demonstrates the essential difference between the classical economists' conception and that of Marx. Adam Smith already discerned a danger to the capitalist mode of production in the falling rate of profit, because capital's profit is the motor of production. But Smith sees profits disappearing because of growing *competition* among capitals. For his part, Ricardo attempted to explain the law of the falling rate of profit in terms of laws of nature, via the *declining* productivity of the soil and the consequent rise in wages.[405]

By contrast, Marx derives the breakdown of the capitalist economic order entirely independently of competition, in that he accepts a *state of equilibrium* as the starting point of his analysis. Because valorisation fails at a certain level of capital accumulation, there must be struggle over markets and spheres for investment. Competition is a *result* of insufficient valorisation, not its cause.

Marx likewise rejects Ricardo's conception based on laws of nature. The breakdown of capitalism is not a consequence of the declining productive powers of the soil but occurs despite progressively *rising* productivity and, indeed, from causes that are not to be found in constraints imposed by nature but in shortcomings of social organisation, namely in the fact that the capitalist mechanism is regulated by profits but profits, at a certain level of accumulation, are insufficient to valorise the amassed capital.

The law of breakdown developed here *is therefore, in principle, of general significance. It is the fundamental law that commands and supports the entire structure of Marx's thought*. Because the most important problem for 'comparative statics', as Franz Oppenheimer acutely stated, lies in

> observing … the specific movement of average prices in an economy, that is *growth* both in the number of people and in the degree of cooperation, so as *to examine the tendency of the movement*, i.e. to establish whether and how the shares of labour, capital and land in the static price of the total product change. That is the largest and most important prob-

404 Löwe 1926, p. 170.
405 Ricardo 1912, chapter six [pp. 64–76].

> lem, with which Ricardo and [Henry Charles] Carey, and Marx *above all engaged*. All prognoses about social development depend on it.[406]

Marx, in fact, pursues this goal when he writes in the preface to *Capital*, 'It is the ultimate aim of this work *to reveal the economic law of motion of modern society*'.[407] For Marx, what is involved here are the 'natural laws of capitalist production'. 'It is a question of these laws themselves, of these *tendencies winning their way through and working themselves out with iron necessity*.'[408] The breakdown tendency, the proof of which is provided here, has such an absolutely necessary character, stemming from the essence of the capitalist mode of production.

406 Oppenheimer 1922, p. 25. [Oppenheimer only emphasised 'specific movement of average prices' and 'growing'. Editor's interpolation.]

407 Marx 1976b, p. 92. [Grossman's emphasis.]

408 Marx 1976b, p. 91. [Grossman's emphasis.]

CHAPTER 3

Modifying Countertendencies

Verification of the Abstract Theoretical Analysis with Reference to the Concrete Appearances of Capitalist Reality

Just as any abstract, deductively elaborated theory never coincides directly with appearances, the theory of breakdown and accumulation presented here does not directly coincide with capitalism's everyday appearances. The conditions of 'pure' capitalism, which have been the object of our analysis so far, and those of 'empirical' capitalism, with which we will now deal, are far from identical, because theoretical deduction works with simplifications, i.e. many real factors of the world of appearances are consciously excluded from the analysis.[1] *Every* theory is burdened with such provisional sources of error. They do not reduce the value and importance of the results of our theoretical analysis at all, namely the *determination of the direction in which the factor of the progressive accumulation of capital works*, even if these results bear a provisional character.

Marx was fully aware of the abstract, provisional nature of his law of accumulation and breakdown. Immediately after describing the 'absolute, general law of capitalist accumulation' in the famous chapter of the first volume of *Capital* dealing with 'The Historical Tendency of Capitalist Accumulation', he states: 'Like all other laws, it is *modified in its working by many circumstances*, the analysis of which does not concern us here'.[2] And, indeed, in another passage where he describes the process of capital accumulation, he writes: 'This process would entail the rapid *breakdown* of capitalist production, if *counteracting*

1 Thus far it has been assumed that:
  1. the capitalist system exists in isolation, so that there is no foreign trade
  2. there are only two classes, capitalists and workers, and no middle classes between them: doctors, teachers, artists, government officials, military personnel, etc.
  3. likewise there are no landowners, hence no ground rent
  4. commodities exchange within the system without the intervention of merchants
  5. the rate of surplus value is constant and always corresponds to the magnitude of wages
  6. there are only two spheres of production
  7. the rate of population growth is constant
  8. wages are constant in terms of value
  9. capital turns over once a year, in all branches of production, etc.

2 Marx 1976b, p. 798. [Grossman's emphasis.]

 | DOI:10 1163/9789004449978 006

tendencies were not constantly at work alongside this centripetal force, in the direction of decentralization'.[3] In fact, the analysis of these 'modifying circumstances' and 'counteracting tendencies' was provided in various passages in the third volume of *Capital*, as well as in *Theories of Surplus Value*.

This situation gives rise to our task – once we have shown that the law of accumulation in its *pure form* operates as a tendency – of subsequently examining the concrete circumstances, not previously considered, under which the accumulation of capital actually takes place and inquiring into the extent to which they modify the realisation of the pure law's tendencies. It must therefore be asked whether and in which direction our 'pure' system's developmental tendencies are modified, once we successively introduce foreign trade, the class which lives off ground rent, merchants, the middle classes; once we vary the rate of surplus value, the level of wages etc. Only by taking these subsequent corrections into account does the abstract analysis approach the concrete world of appearances, step by step, and is the *verification* of the law of breakdown undertaken, i.e. is the extent to which the results of our abstract theoretical analysis agree with the appearances of concrete reality examined.

If the economic developments of the past century, the massive expansion of labour's productive forces and the enormous accumulation of capital, along with its progressively higher organic composition,[4] are considered then the

---

3 Marx 1981, p. 355. [Grossman's emphasis.]

4 Unfortunately, we do not possess any reliable statistics about capital accumulation and the development of productive forces in the leading capitalist states. The most detailed material comes from the statistics of the United States of America. The population there rose from 38.55 million in 1870 to 106.41 million in 1920, that is, by 172 per cent. In the same half-century, the output of various minerals increased as follows:

Hard coal	1,577%	Lead	2,284%
Iron ore	1,759%	Copper	4,448%
Iron	1,710%	Zinc	6,092%
Steel	50,294%	Crude oil	7,078%

Capital accumulation in US industry occurred at a frantic pace and grew by more than 2,600 per cent between 1870 and 1920 alone. According to census data, the capital stock in millions of dollars was:

1849	533	1889	6,525
1879	2,790	1869	1,695
1859	1,010	1899	9,814

(Bureau of the Census, p. 33.)

In the 15 years from 1904 to 1919, capital quadrupled:

question raised by the law of capital accumulation's developmental tendencies, just described, is not whether capitalism will ever break down but the opposite, *why it has not already broken down before now*. That is the problem that actually interested Marx. Everything that Marx writes about the fall in the rate of profit is literally true of the historical tendency of capital accumulation, because both phenomena stand in the closest relation to each other: counteracting influences, which intersect with and slow the breakdown tendency, must be in play.

> We have shown in general, therefore, how the same causes that bring about a fall in the general rate of profit provoke *countereffects* that inhibit this fall, delay it and in part even paralyse it. These do not annul the law, but they *weaken its effect*. If this were not the case, it would not be the fall in the general rate of profit that was incomprehensible, but *rather the relative slowness of this fall*. The law operates therefore simply as a tendency, whose effect is decisive only under certain particular circumstances and over long periods.[5]

Actually, Marx enumerates a series of factors that work in the direction just identified[6] and we have already seen above that Ricardo and John Stuart Mill cited some of these 'countertendencies' as moments that moderate the crisis.

Once such 'counteracting influences' start to operate, the valorisation of capital is restored and the accumulation of capital can resume anew and indeed on an expanded basis; 'the breakdown tendency is thwarted' and is now expressed in the form of a passing *crisis*. *The crisis is thus a tendency towards breakdown which has been interrupted and has not fully unfolded.*

	1904	1909	1914	1919
Number of wage workers	5,468,383	6,615,046	7,036,247	9,096,372
Capital ('000 dollars)	12,675,581	18,428,270	22,790,980	44,466,594
Capital per worker (dollars)	2,310	2,780	3,230	4,888

(Bureau of the Census, p. 32; cf. Woytinsky 1926b, pp. 9 and 14.)

5 Marx 1981, p. 346. [Grossman's emphasis.]

6 This fact alone is enough to demonstrate the true value of the following statement, one that stems from sheer ignorance of Marx's methodological procedure: 'If, like Marx, capitalism in its purity is dealt with', then 'every crisis of an economic or political nature must be *overestimated* … counteracting tendencies that stem from imperialism have no place in Marx's system' (Sternberg 1971, p. 244). [Grossman's emphasis.]

Let us again recall the graphical illustration of the cyclical accumulation process (Figure 2, page 153 above).

A consequence of the nature of the accumulation process and the theory of accumulation outlined here is a difference in principle between the two phases of the cycle, in relation to their duration and character. We have seen that only the accumulation process is underpinned by any lawful regularity, so that only the length of the expansion phases (O–z_1, o_1–z_2, o_2–z_3 etc.) and the timing of the turn to crisis can, in theory, be determined exactly. By contrast, a consequence of the nature of the business cycle is that no such calculation is possible for the length of crises or downturn phases (z_1–o_1, z_2–o_2, z_3–o_3 etc.). The breakdown tendency sets in at points z_1, z_2, z_3 etc.: the breakdown of a given price system, hence also system of valorisation, built on a specific technological basis. *Valorisation disappears*. 'In times of crisis … the rate of profit as good as disappears, and with it the demand for industrial capital.'[7] Inability to sell commodities, overproduction, is only a *consequence* of insufficient valorisation that occurs with overaccumulation. The crisis is not caused by disproportion between expanding production and insufficient purchasing power, that is lack of consumers. In our schema, purchasing power is as present at the outbreak of the crisis as it was previously, during the whole of the upswing. Marx also started from the assumption that it is present and nothing in the course of our analysis has forced us to alter that assumption. The crisis occurs because no use is made of the purchasing power that exists, the purchasing power is not effective; because it *does not pay* to expand production, as expanded reproduction would yield only as much surplus value as production did on the previous scale. So, on the one hand, purchasing power remains unutilised and, on the other, the elements of production lie unsold. Nor, first of all, do prices need to fall. It is only the *expansion* of production that has become unprofitable. Reproduction on the previous scale is thus unaffected at first. With each cycle of production this changes. Even with reproduction at its *previous* level, the part of surplus value produced every year that is destined for expansion of production remains unsold. Consequently, *stocks* of unsold commodities pile up, the cost of storage increases, and firms' resources are increasingly immobilised, because there is no return flow [of cash to purchase elements of production which have worn-out or been used up] from the sale of commodities. Entrepreneurs have to sell at any price to maintain firms on their previous scale. This imposes price reductions and the *contraction of firms*. 'In the slack phase, production falls below the level it

7 Marx 1981, p. 645.

attained in the *previous* cycle and for which the *technical basis* is now laid.'[8] Production contracts or comes to a complete standstill. Many firms go bankrupt and are *devalued*. Gigantic amounts of capital are wiped out. Unemployment grows.

But the ailing state of the economic organism can lead to two outcomes: either the breakdown tendency asserts itself unhindered and the ailing economic organism dies; or restorative countermeasures are taken and the sickness is checked and transformed into recovery. How can the crisis be overcome? How does an upswing start anew? The most facile answer is Sombart's. If any phenomenon cannot be explained in economic terms, then it is put down to any *qualitas occulta*, e.g. to mental processes: 'We have to seek the deepest explanation of the expansionary phase of the boom in some mental structure or some mental process of the economic subject, that is the capitalist entrepreneur'.[9]

> The mental process that impels the expansionary phase is … the entrepreneurial drive … This entrepreneurial drive, which always appears as the desire for gain, is expressed by industrial and commercial entrepreneurs as well as credit providers, the banks, who encourage each other. People get tired of quiet times. Moods of optimism re-emerge. People are finally willing to take risks[10]

Now we finally know how the crisis can be overcome!

But even the statement that in a crisis we are dealing with an ailment[11] is of little use if there is no clear conception of the ailment's *causes*. The remedy for overcoming the ailment must be most closely connected with the diagnosis of its causes! Conceptions of how the crisis is to be overcome, of remedies, will vary according to whether the cause of crises is regarded as the low purchasing power, the 'underconsumption' of the masses, 'disproportionality' between individual branches of production or a lack of capital. If the causes of crisis are regarded as the immaturity of central banking or the deficiencies of information services, that is a deficient overview of the economic situation, or a grow-

8 Marx 1981, pp. 620–1. [Grossman's emphasis.]

9 Sombart 1927, 2, p. 568.

10 Sombart 1927, 2, p. 569.

11 'Crisis', writes Spiethoff, 'can perhaps be defined as the span of time during which, to the accompaniment of exceptional phenomena, the transformation of a morbid economic situation into a normal one is decided'. 'Crisis is the consequence of an antecedent economic ailment and must have its causes there' (Spiethoff 2002, p. 48).

ing division of labour (Kautsky), then crises will be overcome and new ones prevented by putting efforts into these areas. The facts, however, tell us something entirely different. Crises *are* overcome without the underconsumption of the masses disappearing, without the division of labour declining and even when the division of labour increases; they are overcome without any improvements in existing information services or in central banking. Indeed, there are cases in which capital imported from outside provides the impulse to an upswing, like, for example, the massive flow of American capital into Germany in 1926 and 1927. But in numerous cases – and this is the rule – crises are overcome without new capital being imported into the country. So it is apparent that none of the factors usually cited to explain the boom suffice if they also have to explain how depressions are overcome. The remedies proposed have no connection with the earlier diagnosis of the sickness's causes. Thus we encounter throughout a logical dualism in the explanation of a coherent complex of phenomena that must be unsatisfactory.

In contrast to these theories, our theory of crises shows that the measures taken in real life to overcome the crisis totally correspond with the causes of the malady as we described them. This theory allows us to explain clearly *both* phases of the cycle: both the turn from expansion to crisis as well as how the crisis is later overcome.

From our earlier conclusion that the breakdown tendency, crisis, is a consequence of *insufficient valorisation*, it is clear in advance that crises can only be overcome *because the valorisation of capital is restored*. That, however, cannot come about of itself, through the elapse of time, but presupposes a series of organisational measures. Crises are only overcome through this structural reorganisation of the economy.

The capitalist mechanism is not left to itself. Living forces are active within it: on one side, the working class, on the other, the class of entrepreneurs. The latter is directly interested in preserving the existing economic order and strives in every conceivable way to find means by which the economy can be 'stimulated', i.e. set in motion again, which means nothing other than that *profitability, the basis of valorisation, is re-established*. Production is resumed 'only if *profits* are restored, by such means, to a satisfactory level for a substantial number of the larger entrepreneurs'.[12]

The circumstances that weaken the breakdown tendency, i.e. allow crises to be overcome, are manifold in nature but, taken as a whole, their effects can be traced back to either the value expression of the constant capital hav-

12 Lexis 1894, p. 299. [Grossman's emphasis.]

ing become smaller or surplus value having become larger, so that the rate of profit, that is *the valorisation of capital advanced, rises and improves*. They lie in the spheres of both production and of circulation, both within the capitalist mechanism and in its relations to the world outside, in foreign trade. Entrepreneurs persist in their efforts until they succeed in restoring profitability, either through the internal reorganisation of the capitalist mechanism (e.g. by reducing costs of production, savings on wastage, labour power, requirements for cash), or by revamping their trade relations with the world market for the better (international cartels, securing cheaper raw materials etc.). Tentative efforts to 'rationalise' in all spheres of economic life are the consequence. Many measures fail, as it is often impossible for capital-poor producers to carry out the required reorganisation: they are eliminated from economic life. In the end, however, the most appropriate means of raising profitability are found and gradually these improvements and measures are pervasively adopted. This trajectory of the economic reorganisation and restructuring process means that the duration of restructuring is a matter of chance and cannot therefore be calculated.

In what follows we will not exhaustively enumerate and describe the various 'countertendencies' that prevent the full operation of the breakdown tendency. We will, rather, confine ourselves to describing the most important of them and to showing how their influence transforms the breakdown tendency into a temporary phase of crisis and how the accumulation process does not proceed in a straight line but in periodic cycles, constant ups and downs. At the same time, however, this means that, as a consequence of the gradual weakening of these countertendencies, the tendency of historical development is for conflicts within world capitalism to become sharper and sharper and for the breakdown tendency to increasingly approach the limit of absolute breakdown. Only in this way is the true methodological idea behind Marx's procedure of stepwise approximation to reality properly elucidated and does this reality itself, drawn out from schematic simplifications, arise before our eyes in its full, rich diversity and complexity.

Before we begin the discussion of these 'countertendencies', we have to provide a general characterisation of them and ask what function they fulfil within the capitalist system. With this question we arrive at the *problem of imperialism*.

So far we have conducted our theoretical analysis within an isolated capitalism and demonstrated how, under such an assumption, the process of capital accumulation, beyond a certain level of accumulation following an initial upswing, must necessarily come to a halt, i.e. to its *economic death*. At low levels of capital accumulation surmounting overaccumulation is relatively easy. All means which serve to overcome the crisis and which we discuss below can be easily applied. It is in the nature of these remedies, however, that their application must encounter growing difficulties with the progress and expanded scale of accumulation. Consequently, the threat of the breakdown tendency asserting itself absolutely – despite its temporary suspension – becomes ever greater, ever more acute as the scale of capital accumulation increases. And it is precisely in this tendency that the deepest roots of imperialism lie. The intensity of the leading capitalist powers' imperialist efforts rises in parallel with the rising tendency to breakdown. Both phenomena, the growing breakdown tendency and the strengthening of imperialism, are simply two sides of the same complex of facts.

Yet bourgeois economists have done their best to deny this specific complex of capitalist phenomena. There is no imperialism that is only characteristic of capitalism. 'The word imperialism is not scientific', writes [Othmar] Spann, 'it is only a party-political concept.' 'It is assumed that "imperialism" is a scientific concept, with which certain recent phenomena (the "capitalist-imperialist era") can be independently recognised and judged. This assumption is false …' It is flatly denied that there are any specifically capitalist phenomena that need to be explained and which might be described as imperialist endeavours. On the contrary, Spann affirms 'that "Imperialism", of whatever sort, *is not confined to the capitalist period*'. There were similar political phenomena even in the economy of the social estates during the Middle Ages, and they are necessarily bound up with communism too. All of these phenomena, according to Spann, are 'ultimately' 'always reducible to the question: is *struggle* in social life between individuals and, further, between states, between cultures and between national economies inherently inevitable or not?' So it is not a matter of struggles and conflicts that have their roots in capitalism, but of struggles in general. Yet Spann has the feeling that he has not fled far enough from real phenomena, that, despite all the obfuscation, this reality of imperialism, with its ever increasing international antagonisms, may still be visible. This reality must therefore be dissolved into abstractions that are alien to reality and equally valid for all times and places. 'Yet even struggle … still does not finally prove to be simple, but … imperialism [proves to be] a matter of the essence of totalities – i.e. the problem of individualism versus universalism! – that is, of final, fundamental phenomena and fundamental questions.'[13]

But, if imperialism is characterised only as the effort to expand the extent of one's own economy and power, the essential features of *modern* imperialism, that distinguish it from similar drives for power in earlier ages, are overlooked.

13 Spann 1923b, pp. 384–5. [Spann only emphasised the entire first sentence.]

The expansionist policies of the large landowners, the feudal aristocracy of the Middle Ages and later in the period of the development of the manorial system, were also dictated by a drive to extend their own sphere of economic and political control. Large landowners, who cultivate the land not with their own hands but with forced or wage labour, can never have enough of them, because with the extension of their property their incomes also grow. That is the cause of the early capitalist enclosures in England and of the *glaebae adscriptio*[14] of the peasantry in large parts of Europe east of the Elbe. But the drive for power and the hunt for expanded incomes is not identical with modern imperialism.

It is just as unsatisfactory to say that the essence of imperialism rests on the *economic compulsion* to expand and to occupy new territories *in the interest of the self-preservation* of the expansionist power. For this conceptualisation would also apply to the expansionist efforts of various nomadic and pastoral peoples, as well as to the great historical movements of peoples that historians call the barbarian migrations.[15] all of which resulted from economic compulsion in the interests of self-preservation and are described as struggles for land, which is the essential condition of existence. Such a conceptualisation would obliterate the features characteristic of modern imperialism that arise from the specifically capitalist character of production.

What are these features? Are the roots of imperialism reached when it is attempted to grasp the specific 'problem of the *latest* epoch', in the way Bukharin does by trying 'to find the basis for imperialism in the hunt for larger monopoly profits and in the necessary movement of finance capital in that direction'?[16] 'Capital', writes Bukharin, 'could very easily exist without "third persons"'. Then why does it penetrate into all corners of the world? Bukharin writes, '[O]nce "third persons" are there, capital strives necessarily to eat them up, as such a meal brings in a surplus profit'.[17] For Bukharin, the expansion of capital is black coffee after dinner, so to speak. For capital it is certainly more pleasant to have 10 instead of eight. But why does capital have, of 'necessity', to strive for extra profits? Bukharin has not explained that to us. Nothing much is achieved with a mere assertion. Reference to the hunt for monopoly profits is also unsatisfactory. It only displaces the problem. Now it is necessary to explain why the hunt for monopoly profits has become *vital* for modern capitalism. Moreover, it should not be forgotten that 'it was not free competition but mono-

14 ['*Glaebae adscriptio*' means 'attachment to the soil', the reference is to the imposition of serfdom in eastern Europe from the fifteenth century.]

15 [The mass migrations of tribes during late antiquity.]

16 Bukharin 1972, p. 268.

17 Bukharin 1972, p. 262. [Bukharin emphasised 'necessarily'.]

poly that stood by the cradle of industrial capitalism in England'.[18] The system of monopolies had gained such a large sphere of influence in seventeenth-century England 'that national monopolies had arisen in almost all branches of industry'.[19] The prices of coal, soap, salt, copper wire, glass etc. rose considerably under the sway of monopolies and protective tariffs.[20] And even 'finance capital', the financial administration of industrial organisations by banks, was not infrequent at the time.[21] And the monopolies at the end of the eighteenth century were even more extensive, e.g. the coal cartel of 1771–1832;[22] and the monopoly association in copper mining, which raised the price of copper from 84 to 120 shillings per hundred-weight, in the years 1790–99[23] and drove copper exports at dumping prices. The hunt for surplus value has been the characteristic feature of capitalism since its birth and therefore cannot count as an explanation of its latest phase. Only the theory of breakdown developed here leads us to the real roots of imperialism and explains its historical necessity. The modern imperialism of capitalist states is the necessary effort to *overcome the breakdown tendency, the failure of valorisation*, which sets in at a specific level of capital accumulation, *by securing the flow of additional surplus value from outside*, through economic expansion, whose latest phase is the incorporation of foreign territories into those states.

To conceive of imperialism, as Kautsky does, merely as the effort to conquer *agrarian*, non-capitalist territories in Luxemburg's sense, is therefore to absolutely misunderstand the nature of capitalism and capital accumulation. Kautsky hopes that imperialism will be overcome, 'progressively constrained', by the industrialisation of these territories. Therefore, for him, 'Imperialism, the conquest of agricultural regions by industrial states, is only an *episode*' in the history of capitalism. 'Imperialism does not by any means constitute an economically necessary condition of all capitalist accumulation.'[24] Later, when discussing external trade, we will demonstrate that the character of the exploited country, whether the additional surplus value comes from an agrarian or an industrial country, is a matter of total indifference to imperialist endeavours and that the industrialisation of agrarian countries by no means signifies the containment or the end of imperialism. On the contrary. If imper-

18 Levy 1927, p. 36.
19 Levy 1927, p. 54.
20 Levy 1927, p. 40.
21 Levy 1927, p. 51.
22 Levy 1927, p. 90.
23 Levy 1927, p. 131.
24 Kautsky 1988, p. 423.

ialism is anchored in the tendency to breakdown that sets in with the advance of capital accumulation then it is clear that the tendency to breakdown and hence also imperialist tendencies must emerge ever more strongly, the more accumulation advances.

1 The Domestic Market. Restoring Profitability through Internal Structural Changes in the Mechanism of Capitalist Countries

a *Raising the Rate of Profit by Developing the Productive Forces and Its Impact on the Reduction of the Cost of Constant Capital*

In Chapter 2, we indicated the methodological considerations that prompted Marx to analyse the problem of accumulation and crisis on the assumption of constant prices. Only on this assumption was it possible to construct an exact proof that the cyclical movements of expansion and recession are independent of fluctuations in the prices of commodities and of labour power and are, rather, functions of capital accumulation. Here we will demonstrate further that the opposite assumption of the bourgeois economists who take price changes as the starting point of their analysis causes confusion instead of clarifying the problem.

We saw earlier that Lederer in his analysis of changes in the business cycle starts from rising prices as the decisively important element. 'If we look at … boom periods, we find that *all prices rise*.'[25] According to Lederer, the *expansion of the scale of production* that is characteristic of booms is simply the result of price rises. '[*M*]*odifications in production only follow … after changes in prices*.' Lederer's whole subsequent analysis is conditioned by this starting point. In other words, he asks how a general rise in prices is possible. If there are no changes on the *monetary side* or, which amounts to the same thing, if all purchases are funded out of savings, stemming from the economic circuit itself, then 'in the economy as a whole, no more money has been spent than has been received'. On this assumption, according to Lederer, no general rise in prices can occur. 'In other words, if the proceeds from the sale of commodities are the only sums available as purchasing power on the demand side then even a faster turnover etc. cannot cause a general movement in prices.' It follows that general rises in prices can only result from changes on the commodity (supply) side because, according to Lederer, 'total prices can only change if production is contracted or expanded'. 'But', Lederer continues, '*such modific-*

25 Lederer 1925, p. 387. [Lederer only emphasised '*all*'.]

ations in production only result, in turn, after changes in prices.' So Lederer sees a *circulus vitiosus*[26] here that can only actually be broken if '*new* purchasing power appears at some point in the circulation process'. This new purchasing power, created by additional credit, then causes 'a simultaneously growing demand in all spheres and thus a general rise in prices'.[27] Upswings occur precisely when demand and furthermore prices rise thanks to the injection of additional purchasing power. So Lederer comes to the conclusion that, 'If these considerations and all the points of friction, which always exist in any economy are considered entirely abstractly … if all aspects of the situation that favour dynamism are ignored, then the corollary must be accepted *that credit alone creates cycles or makes them possible*'. True, population growth can also provide the impulse to expand production. 'But obviously these effects operate *very slowly*. The expansion of production can be *substantially accelerated* if the extension takes place by means of credit and indeed subseqent additional credit, that is the creation of new purchasing power, *before* savings, actual price increases etc. make it possible to expand production.'[28]

This additional purchasing power must be *strictly* distinguished from savings that stem from the economic circuit itself. In other words, the latter cannot create any new demand, as those savings have already been invested earlier, during the depression, and have thus already generated demand. 'Since, however, *all* savings were invested, even in the depression, the boom cannot result from them … Therefore a boom cannot be financed from *past* savings but only from *new savings* or additional credit.'[29] The latter, therefore, assumes decisive significance for Lederer's explanation of the upswing. 'By additional credit we mean the infusion of purchasing power that is *newly created*, that is not the result of past production.'[30] 'On closer inspection it is found that the significance of this "additional" credit for modern booms must be particularly great. For … *only with additional credit*, that is newly created purchasing power, is a very substantial expansion of the productive process possible. Only through it *is a general increase in prices initiated*.'[31]

This argument is not convincing. Disregarding the methodological flaws of its starting point, to which we have already referred, Lederer's exposition is not only logically contradictory; it also contradicts the actual course of the boom.

26 ['*Circulus vitiosus*' means 'vicious circle'.]
27 Lederer 1925, p. 388. [Grossman's emphasis.]
28 Lederer 1925, p. 391. [Lederer only emphasised the second 'expansion'.]
29 Lederer 1925, pp. 377–8. [Grossman's emphasis.]
30 Lederer 1925, p. 379. [Grossman's emphasis.]
31 Lederer 1925, p. 387. [Grossman's emphasis.]

The starting point of his analysis is the assertion of a '*general* rise in prices'. But (if we disregard the case of monetary devaluation), a *general* rise in prices is impossible, in an economic sense. If the prices of all commodities rise to the same degree – which is conceivable when money is devalued – then there is only a rise in prices in a purely arithmetic sense. Economically nothing has changed in the exchange relations among commodities and incomes, except the fact that calculations are made with larger numbers. On the other hand, if the prices of commodities do not rise equally then those commodities whose price rises have lagged behind others have actually become *cheaper*, in an economic sense. Let us take two series of price relations: a) before the price rise and b) after the price rise. The prices per commodity unit are:

a) 8 clocks = 2 tables = 1 hat
b) 12 clocks = 4 tables = 3 hats

The price of a clock has gone up by 50 per cent, that of a table has doubled, and that of a hat has trebled. In case a) four tables or eight hats can be bought with the value of *one* clock. In case b), after a 'general' increase in prices, only three tables or four hats can be bought with the value of *one* clock. Clocks have become *cheaper* in relation to tables and even more so in relation to hats. If wage rises, as Lederer himself asserts, lag behind the general rise in prices of all other commodities then the commodity labour power has become *cheaper*, in an economic sense. There can be no general price rise, and with this assertion the whole basis of Lederer's deductions collapses. But these also contradict the facts.

According to Lederer, the expansion of production during the upswing only occurs as a result of price rises. In fact, the most important renovations and expansions of the productive apparatus occur in periods of depression,[32] if *commodity prices are low*. It is only the demand connected with this expansion of production that drives up the level of prices, once demand is stronger than

32 'The periods for which capital is invested certainly differ greatly, and do not coincide in time. But *a crisis is always the starting-point of a large volume of new investment*. It is also, therefore, if we consider the society as a whole, more or less a new material basis for the next turnover cycle' (Marx 1978, p. 264). [Grossman's emphasis.] Following the most recent experience in the United States, where since 1925 there has been an upswing along with *declining* prices, Lederer, in his latest work, tries to overcome these difficulties, to the extent of treating the boom as only a consequence of price rises but adding the cautious qualification that 'if the *variant of booms that occur with falling prices*, which are connected with great, generalised reductions in costs, are disregarded' (Lederer 1928, p. 2). [Grossman's emphasis.] Why, however, should they be disregarded? Because they

supply. In principle, however, price increases are not at all necessary to overcome crises. In any case, they are a consequence rather than a cause of the upswing. *Production can and in fact does expand without price increases, that is when prices are low*. This is the most important thing for understanding the problem.

How does expansion of production come about in reality? Introducing 'additional credit' as a *deus ex machina* cannot explain the process. According to Lederer, price rises and the expansion of production that flows from them are the result of demand created by additional credit. Thus prices are still depressed at the time when credit is issued. From Lederer's standpoint the question suggests itself: who will borrow in order to expand production when prices are low? Lederer is running around in circles here. From his account it follows that credit is taken up at a time when prices are low. The fact that production expands during the recession when prices are low cannot be avoided. This is where we have to start in any further analysis, if the process is to be understood in its 'pure form'.

We have considered the reproduction and accumulation process during the entire boom period as always in a *state of equilibrium*, i.e. assumed that every commodity finds a buyer. Nevertheless, at a certain stage of accumulation there is an overproduction *of capital* and this as a consequence of *insufficient valorisation*. Overproduction does not mean that there is a lack of purchasing power for the acquisition of commodities but rather that it does not pay to buy commodities to expand production any further, since the expansion of production has become *unprofitable*. 'In times of crisis … the rate of profit as good as disappears, and with it the demand for industrial capital' (see page 266 above). As a result of unprofitability, accumulation, expansion of production, is interrupted and production continues on the *previous* scale. Prices must fall. Falling prices are the *consequence* of stagnation, not its *cause*. And because commodities cannot be sold, i.e. there exists a general overproduction, competition sets in as soon as the crisis starts. In other words, overproduction, the impossibility of selling commodities due to the overaccumulation of capital, was already apparent at the original, normal level of prices. But what lies beyond the reach of all entrepreneurs together is something each individual entrepreneur seeks to secure at the expense of the others. This proves scientific-

are inconvenient for Lederer? Now booms with falling prices are simply 'a special variant'. Previously, however, it was argued that changes in production can *only* come about as a result of price rises.

ally that competition is inevitable under capitalism. For we started with the most favourable assumption for capital: a state of equilibrium in which supply matches demand. It is nevertheless apparent that at a certain stage of capital accumulation's development competition must necessarily emerge. While, in our previous analysis, we dealt with the capitalist class as a whole, when dealing with crises we are forced to consider the competition among individual capitalists.

Let us go back to the question posed earlier: how are crises overcome, how does the renewed expansion of production (accumulation) come about? The simple answer is: *through the reorganisation and rationalisation of the production process, thanks to which profitability is restored even at the now lower level of prices*. Figure 4, below, illustrates the process schematically.

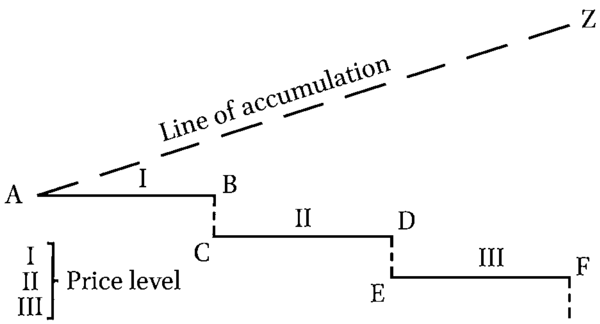

FIGURE 4

The crisis, the lack of profitability, begins with constant prices at price level I. The fall in prices B–C results from the crisis, until prices stabilise at the new, lower price level II (line C–D). For entrepreneurs in aggregate further accumulation was pointless on the previous basis. Let us assume that there are four enterprises in a branch of industry:

50 *c*	:	50 *v*
40 *c*	:	60 *v*
35 *c*	:	65 *v*
25 *c*	:	75 *v*
150 *c*	:	250 *v*

With 150 *c*, the absolute limit of accumulation is reached.

The crisis forces entrepreneurs to reorganise, i.e. to 'rationalise', their enterprises. For example, the two largest enterprises merge so that the organic composition of the merged enterprise grows, let us say in a ratio of 7 *c* : 3 *v*. The new plant, with 90 *c*, thus uses only 38 *v*. Labour power to the value of 72 *v* is set free; a reserve army emerges as a result of rationalisation. Once the merger has been completed, we have only three enterprises as a result of the concentration process:

90 *c*	:	38 *v*
35 *c*	:	65 *v*
25 *c*	:	75 *v*
150 *c*	:	178 *v*

Alongside them is a reserve army with a value of 72 *v*. The merged enterprise's higher organic composition means that its profitability is restored, even at the lower price level II. First, because the higher organic composition of capital means that the productivity of labour rises and thus unit costs fall. Secondly, because the higher productivity of labour means a simultaneous increase in the rate of surplus value. To the extent that the remaining enterprises also rationalise their operations, the total attainable *mass* of surplus value in the economy as a whole grows in parallel, as a consequence of the *rise in the rate of surplus value*, quite apart from the fact that each year a new generation of workers appears on the labour market, so that the mass of socially available surplus value likewise increases absolutely and thus the maximum possible limit of accumulation is extended *beyond the previous level* of 150 *c*.

The result of our analysis is as follows: during the crisis there was 'overproduction'. How was the turn to the upswing brought about? Was production restricted? On the contrary, *it was expanded even further*! And yet the crisis was overcome.[33] This is the best proof that it stems neither from insufficient of purchasing power, a lack of consumers, nor from disproportion between spheres of production. Just as it was brought about by the lack of sufficient valorisation, it now disappears because of *improved profitability*, even though prices have fallen.

33 Nothing better characterises the *qui pro quo* in Marxist literature than the attempt to portray Marx's theory of crises as a theory of underconsumption. Expansion of production, the most important means of surmounting the crisis, is made out to be a *cause* of the crisis (Nachimson 1922, p. 28). ['*Qui pro quo*' means 'mistaking this for that'. The original text had '*quid pro quo*', 'this in exchange for that'.] Crises arise from the underconsumption of the masses and disproportion between individual branches of production. The two moments had been identified before Marx, but Marx's achievement is supposed to be that he 'united these two moments … and firmly integrated them' (Nachimson 1922, p. 29). In that case, however, the problem of explaining the *periodicity* of crises remains. To do that, a special, third explanatory factor, fixed capital, is adduced. Thus, the illness occurs periodically but the causes of the illness are not the causes of its periodic appearance!

The empirical evidence for the conception developed here confirms it word for word. To take only one example from the very many available: in the German shipping industry the overloading of the market with tonnage in the depression years of 1892–94 inflicted heavy losses on the great shipping lines. The profits of the Hamburg-America Line, German-East Africa Line, Hamburg-Calcutta Line, German-Australian Steamship Company etc. sank to zero in all three years.[34] There was thus an overproduction of tonnage, and the result was ruinously low freight charges. How was this severe crisis overcome? Robert Schachner writes:

> The years of low freight charges triggered significant technological change in the shipping business. There were efforts to reduce operating costs and German shipping lines followed the *restructuring of fleets* undertaken in England, where the *unprofitability* of the previous productive resources was first recognised.
>
> By virtue of their more efficient operation, *ships of the largest dimensions* could *still earn profits* on routes with larger quantities of cargo, where ships of previously viable sizes operated at a loss.[35]

In 1894 and 1895 'all the big companies deployed large steamers, benefitting from low construction costs'. As a consequence of this 'revolution in shipping' the statistics of the international merchant fleet show increases in the size of ships. In 1893 the average steamer was 1,418 gross registered tons, in 1894 1,457, in 1895 1,499 and in 1896 1,532. A number of the smaller shipping lines, unable to afford the costs of construction, could no longer compete on the freight market with these new giant steamers and had to sell their steamers at great losses. The position of the big shipping lines was different, despite intense competition with England. In its 1895 Annual Report, the Hamburg-America Line mentions the distribution of dividends with satisfaction and then states: 'We have to give thanks for this satisfactory result less to any general improvement in the business climate than to the circumstance that, due to their substantial freight capacity and practical equipment [mechanisms which save the use of coal etc. are meant], our new steamers *can operate profitably even with low freight charges*'.[36] 'Freight charges only experienced a [temporary] rise in the autumn of 1896, otherwise they remained at the low level of previous years or

34 Schachner 1903, p. 4.
35 Schachner 1903, pp. 4–5. [Grossman's emphasis.]
36 Schachner 1903, p. 5. [Grossman's emphasis.]

even, in part, declined further.'[37] Thus the crisis, the overproduction of tonnage was overcome by expanding the tonnage even further, despite the decline in prices![38]

The same process was repeated when, after the favourable conditions of 1897–1900, a new crisis started in 1901. Again there was an attempt to moderate the impact of the depression by 'cheapening shipping, through further extension of large enterprises'.[39] The same story was repeated one more time after the World War. Despite the international merchant fleet's huge wartime losses, stated to be 12.5 million gross registered tons for the allied and neutral countries, world shipping suffered from an over-supply after the War. On 30 June 'According to *Lloyd's Register*, the international merchant fleet comprised of'[40]

1914	49.1 million gross registered tons
1926	64.8 million gross registered tons

That is, world tonnage grew by 32 per cent, compared with 1914. Even deducting four million tons, to allow for unusable American merchant ships, four million tons for vessels that are over 25 years old and the enlargement of the tanker fleet, and another four million for special services, there still remains an excess of 3.7 million tons (eight per cent) compared with 1914. To this the greater speed [of vessels] must be added, because that has the same effect as an expansion of shipping capacity. As world trade after the War barely recovered to its pre-war level, it is not surprising that the world freight market found itself in a state of deep depression, all the more because overhead and other costs were at the same time 60 to 70 per cent higher than in 1913. Freight charges sank to the border of unprofitability. And how was the crisis overcome? Despite the huge oversupply of tonnage, the most modern ships were brought into service in international shipping, both by shipping lines and as tramp freighters. 'As far as shipping lines are concerned, it is a matter of building the most modern and

37 Schachner 1903, p. 7.

38 'The result, then, is the following: in spite of the "super-production" of tonnage new ships have been built. The apparatus of production, instead of becoming restricted, has been enlarged. And the crisis, nevertheless, has passed! … The crisis, then, is not a restriction of the real apparatus of production, but a breakdown of the accepted system of prices and values, and its reorganisation on a new level' (Grossman 2019b, p. 47). [By 'super-production', 'overproduction' is clearly meant.]

39 Schachner 1903, p. 96.

40 [Priester 1926, p. 1545.]

largest vessels of their class.'[41] The average *size of vessels* increased.[42] While it was 1,857 gross registered tons for steamers and diesel vessels in 1914, the corresponding figure was 2,136 in 1925. The freight capacity per ship grew to an even greater extent. While a modern 8,000 ton steamer with a 10 knot speed today consumes only 30 tons of coal a day, before the War it needed 35–36 tons. But the largest technological change, which is also of extraordinary importance for the question of profitability, is the introduction of new methods of propulsion, particularly the use of diesel engines by the merchant fleet.

How rapidly introduction of diesel engines has already proceeded is apparent in the numbers: in 1914 this kind of ship made up just 3.1 per cent of total world tonnage, as against 8.0 per cent by the end of June 1921, 15.3 per cent at end June 1923 and 37.6 per cent at end December 1924.[43] By the middle of 1925, according to *Lloyd's Register of Shipping*, oil-fired steamers accounted for a total of 17.8 million gross registered tons worldwide, turbine ships for 9.1 million and diesel-powered ships for 2.4 million. The following figures show the capacities of different kinds of ships of the same size. For ships of about 10,200 tons, there are:[44]

	Freight capacity	**Energy used for a 16-day voyage**
	Tons	**Tons**
Coal steamers	7,880	856
Oil-fired steamers	8,555	600
Turbine ships	8,743	472
Diesel-powered ships	9,357	194

Both diesel-powered ships and the introduction of fuel oil have led to savings on cargo space, reduction in fuel, faster dock operations with oil refuelling, finally savings in labour. Since 1920, the number of workers in the English merchant fleet has declined, despite a reduction in the working day. In 1920 there

41 Priester 1926, p. 1545.

42 [Unless otherwise indicated, the following discussion of shipping draws on] Helander 1926.

43 Dehning 1925, p. 100.

44 [Helander, p. 85. Helander does not specify that the table relates only to ships of about 10,200 tons.]

were 2.58 workers per 100 gross registered tons; in 1921, 2.55; 1922, 2.47; 1923, 2.41. The true significance of the English merchant fleet is only evident when its quality is considered in the proper light, particularly the tonnage of the larger, faster ships capable of handling the great volumes of international trade. While the size of English tonnage has only grown a little since 1914 and almost 10 million gross registered tons or 64.2 per cent of the total increase in the world's 15.5 million tons between 1914 and 1925 was due to the United States, England improved the quality of its tonnage extraordinarily and possessed more of the high-quality, better tonnage than any other country in the world in 1925. [Hans] Priester is therefore correct in writing that

> It is precisely the shipping crisis and the resulting sharp competitive struggle that have forced the shipping lines … to rationalise their fleets even more than during the shipping boom. Only the shipping lines that bring the best and most modern ships into service can successfully hold their own … The severe natural selection that now follows justifies the hope for cost reductions, so that freight charges not substantially above the *low level* of 1925–6 will be regarded as normal.[45]

The same applies to the construction of new, purely freight liners. While in the last decade before the War ships with a speed of 11 to 11.5 nautical miles [per hour] were considered perfectly adequate, after the War the threshold was vessels with a speed of up to 13 knots.[46] Now North German Lloyd is building freighters with a speed of 15 knots for service in the Far East.

Judging by this massive new construction, it might be assumed that 'world shipping needs greater tonnage', while in fact, as has been demonstrated, there is huge overproduction of shipping capacity.

Yet with the technological perfection of fleets, profitability was restored, despite lower freight charges, and the crisis overcome in that way.

It is still fresh in memory and requires no further proof that the last great depression, following the German stabilisation of 1924–26, was also essentially overcome by the same methods of rationalisation: through the process of company mergers and concentration and by raising productivity through improvements in the technical apparatus, i.e. raising productive capacity.[47] The *profit-*

---

45 Priester 1926, p. 1546. [Grossman's emphasis.]

46 [A knot is a nautical mile per hour.]

47 We want to cite a single example:

> On 1 April 1928 a new central coking plant was commissioned for the production of coke, tar, ammonia, benzene and town gas at the 'Emil' pit of the Köln-Neuessener

ability of production was restored and thus the crisis was overcome precisely by raising productivity, by expanding production.

If we disregard various frictions and countertendencies, and consider the process in its 'pure' form, over a longer period of several cycles, then it is apparent that the *tendency* is for prices *to fall* from one crisis to the next (in Figure 4, from price level I to price level II, then III etc.), while the scale of production undergoes *continuous expansion*. In empirical reality prices rise for shorter or longer periods, because the process does not occur in this pure form, it is influenced by various subsidiary factors (keeping prices artificially high through cartels, raising the price of agricultural produce etc.).

Crisis in a given branch of production is never overcome, however, solely through improvements in the technical apparatus of that sector alone. Entrepreneurs profit as much from technical and organisational changes in other spheres of production as they do from their own, whether because these cheapen important elements of their reproduction process and thus reduce their own outlays of capital or because the turnover times of their own capitals are shortened, by improving transportation or the mechanism of monetary circulation, which likewise raise the rate of surplus value. The more rationalisation spreads and takes hold of new spheres of production, the more powerful is the upswing, because improvements in one sphere also raise the mass of surplus value for other spheres of production too.

b *Reducing the Costs of Variable Capital by Developing Productivity*

i) Starting from a dynamic equilibrium, the previous analysis assumed a rate of surplus value of 100 per cent that remained constant throughout the entire course of the accumulation process. This assumption, however, contradicts reality and has a purely fictitious, that is provisional character; it therefore requires a subsequent correction.[48] In other words, commod-

---

Bergwerksverein in Alt-Essen. It drew on the latest experience and scientific knowledge. The furnace plant comprises of three batteries of 39 coke-ovens each. The 2000-ton capacity coal-storage tower is 47 meters tall and equipped with a coal mixer. Annual coke production is 600,000 tonnes. The 117 ovens daily produce about 1700 tonnes of coke, 80 tonnes of tar, 27 tonnes of ammonium sulphate, 20 tonnes of benzene and 400,000 cubic metres of surplus gas. The plant is equipped with the most modern machinery that makes *fully automated operation* possible, without any manual intervention. The transport of coal is also mechanised. *Only five workers per shift* are required to handle the entire coking process, from filling the ovens with coal to the loading of the slaked coke into wagons. (*Deutsche Bergwerkszeitung* 1928)

48 It is, again, symptomatic of the absolute misunderstanding of Marx's methodological procedure that Bauer indeed sees the purely provisional, fictitious, and simplifying assump-

ities become cheaper in the course of history, as a consequence of the development of the productive forces. Insofar as these include commodities that enter into *workers' consumption*, the elements of variable capital are cheapened, so that the value of labour power falls – even if it is paid for at its full value – and surplus value and the rate of surplus value both rise. 'The increasing productivity of labour is accompanied by a cheapening of the worker … and it is therefore accompanied by a *higher rate of surplus value, even when real wages are rising*. The latter never rise in proportion to the productivity of labour.'[49] This is precisely why the level of productivity of social labour is an 'important factor in the accumulation of capital'.[50] 'The tendential fall in the rate of profit is linked with a tendential rise in the rate of surplus value, i.e. in the level of exploitation of labour.'[51]

A further factor which enhances the rate of surplus value is the *rising intensity of labour* in the course of the development of the productive forces.[52] So we have here a factor, the 'increasing level of exploitation of labour' arising from the course of capitalist production, that weakens the breakdown tendency.

ii) The 'reduction of wages *below* their value' operates in the same direction.[53] Obviously this can only be of temporary duration if the efficiency of labour is not to be diminished.

In our entire previous analysis we assumed, in consonance with our hypothetical equilibrium state, that the commodity labour power is also always fully employed, i.e. that there is no reserve army and consequently that, like all other commodities, labour power is sold at its value. We then, however, showed that even under this assumption a reserve army must necessarily emerge at a certain level of capital accumulation, as a consequence of insufficient valorisation. From this point on, the mass of the unemployed will exert downward pressure on the level of wages so that wages must fall *below* the value of labour power, which means nothing other than that the rate of surplus value will rise. Here, therefore, is a further source of increased valorisation, thus overcoming the

tion which Marx makes, that there is a constant rate of surplus value of 100 per cent, and that it is fundamental to his schematic analysis of the reproduction process, but subsequently fails to correct this fiction.

49 Marx 1976b, p. 753. [Grossman's emphasis.]

50 Marx 1976b. p. 752.

51 Marx 1981, p. 347.

52 Marx 1981, p. 339 et seq.

53 Marx 1981, p. 342. [Grossman's emphasis.]

breakdown tendency. The depression of wages below the value of labour power creates *new sources of accumulation*. '[I]t transforms the worker's necessary fund for consumption, within certain limits, into a *fund for the accumulation* of capital.'[54] Only when there is an overview of this set of relationships can we gauge the complete superficiality of those trade union 'theoreticians' who propose *increases in wages* as a means for overcoming crises, by expanding domestic 'demand'.[55] As if [satisfying] demand rather than the valorisation of capital is an end in itself for the capitalist class! And the same holds for Sternberg. For him, low wages in England during the first half of the nineteenth century are a reason 'why the crises of this period convulsed English capitalism more profoundly than those of the late nineteenth century',[56] although low wages, that is a higher rate of surplus value, are a circumstance which *moderate crises*!

c *Reduction of Turnover Time and Its Impact on the Rate of Surplus Value and Rate of Profit*

In Marx's reproduction schema, a production period lasts a whole year: at the end of the production period, products are either consumed individually or used to expand production in the next production period. The working period is identical with the production period. Thus there is no circulation period in the schema, rather working periods follow one immediately after another. Finally, the production periods in all spheres of production have the same length and it is assumed that there is a *single* turnover of capital each year. It is obvious that none of these assumptions corresponds with reality; they have a fictitious character and have merely been made provisionally to simplify the analysis. Working periods and production times are not identical.[57] As well as production time, circulation time is required. Finally, turnover time is quite different in different branches of production and conditioned by 'the material character of the production process'.[58] The provisional, fictitious assumptions

54 Marx 1976b, p. 748. [Grossman's emphasis.] Cf. Marx 1981, p. 342.

55 Thus Olk, in his essay 'Rationalisation and the Labour Market', wants to overcome crises through workers having a 'larger share in the product of labour' while prices remain moderate, which allows the workers' additional purchasing power to increase the demand for commodities! (Olk 1926, p. 63; also see Tarnow 1928, pp. 57, 71; Massar 1927) [Olk emphasised his phrase.]

56 Sternberg 1971, p. 407.

57 Marx 1978, pp. 316–17.

58 Marx 1978, p. 433.

must, therefore, subsequently be corrected if the results are to correspond with real phenomena.[59]

'Variation in the turnover time is significant in and of itself', Marx writes, 'only in so far as it affects the mass of surplus labour that the same capital can appropriate and realise in a given time.'[60] The impact of turnover on the production of surplus value, hence also of profit, can be summarised by saying that, as a consequence of the time needed for the turnover, the whole capital cannot simultaneously be employed in production, that is productively, creating surplus value. That, therefore, *a part of the capital always lies idle*, whether in the form of money capital, commodity capital or productive capital (the stock of raw materials). The capital *active in production*, that is in the creation and appropriation of surplus value, is always reduced by this portion and the surplus value produced is invariably reduced in the same proportion. '*The shorter the turnover time*, the smaller is this idle portion of capital compared with the whole; *the greater* therefore is the *surplus value* appropriated, other conditions being equal.'[61]

The shortening of turnover time means, however, the shortening of both its components, production time and circulation time. 'The main means whereby *production time* is reduced is an increase in the productivity of labour.'[62] This is where all advances in industrial technology are relevant. If constant capital is not substantially expanded by this progress, the *rate of profit rises*.

> And this is decidedly the case with many of the most recent advances in the metallurgical and chemical industries. The newly discovered methods of iron and steel preparation associated with Bessemer, Siemens, Gilchrist-Thomas and others shorten what were previously very protracted processes to a minimum. The preparation of alizarin dye from coal-tar gives the same result in a few weeks, and using apparatus that is already in use for coal-tar dyes, as previously took several years.[63]

'The main means of *cutting circulation time* has been improved communications. And the last fifty years have brought a *revolution* in this respect that is

59 'We shall also assume that capitals in different spheres of production annually realise the same amount of surplus value in proportion to the size of their variable components; and we shall ignore for the time being the differences that may be produced here by *variations in the turnover times*. This point will be dealt with later' (Marx 1981, p. 254).

60 Marx 1981, p. 251.

61 Marx 1981, p. 163. [Grossman's emphasis.]

62 Marx 1981, p. 163. [Grossman's emphasis.]

63 Marx 1981, p. 164. [The chapter in which this quotation appears was written by Engels.]

comparable only to the industrial revolution of the second half of the last century.' 'It was the Suez Canal that really opened the Far East and Australia to the steamer' and multiply reduced the circulation time of commercial consignments to the Far East. The same is true of the Panama Canal. The progress in ship building, already mentioned, is also relevant here. 'The turnover time of world trade as a whole has been reduced to the same extent, and the efficacy of the capital involved in it has been increased two or three times and more. It is evident that this *cannot but have had its effect on the profit rate*.'[64]

The rationalisation of the German railways with the introduction of the automatic air brake (the Kunze-Knorr brake) made possible total savings of around 100 million marks a year, through savings in train crewing and reduced use of locomotives and locomotive staff (a reduction of white-collar staff by 26,000 persons). 'Add to this that the brake made it possible to speed up goods trains … in a fundamental way and to adapt the whole freight train schedule to that of passenger trains and thus limit the often quite long delays experienced by goods trains to the time necessary to service the trains.'[65] '[T]rain formation was speeded up and made cheaper by the mechanisation of shunting technology.'[66] In short, there is reference to a revolution in the railway industry. 'Similar successes were achieved by the electrification of numerous lines. Of the roughly 53,000 kilometres of rail network 1,140 have been electrified and another 220' will follow in the next few years.[67]

Next to improvements in transport come savings achieved by reducing expenses on *commodity capital*. Maintaining the normal course of the reproduction process's continuity requires a proportional division of capital into productive, money and commodity capital if its continuity is to be preserved. Before commodities that emerge from the production process are sold, they pause within the sphere of production in the form of a *commodity stock*. The storage of commodity stocks entails the costs of preserving the product. Producers therefore seek to limit their inventories to minimums that correspond to average demand. On the other hand, these minimums also depend on the periods of renewal required for the reproduction of commodities.[68] With improvements in transport, storage costs can be reduced as a proportion of total sales.[69]

64 Marx 1981, p. 164. [Grossman's emphasis. The chapter in which this quotation appears was written by Engels.]
65 Vogt 1929, p. 183.
66 Vogt 1929, p. 214.
67 Vogt 1929, p. 183.
68 Marx 1978, p. 224.
69 Marx 1978, p. 220.

Similarly, the volume of storage costs is reduced, '[t]he more these stocks are socially concentrated',[70] that is as concentration advances within the production process.

Average storage time varies considerably within individual branches of production, as does their dependence on fluctuations in the business cycle. The storage time of foodstuffs is the least exposed to such fluctuations.[71] But regardless of these fluctuations, there is a tendency for storage times to be compressed, i.e. for a faster annual turnover of capital. Here, too, efforts to reorganise and introduce technological improvements are initiated *during depressions*. These reduce storage costs and consequently increase the rate of profit on capital advanced. Before the War the storage time for the commodity stocks of the co-operatives in the Zentralverband deutscher Konsumvereine in the period from 1904 to 1913 fell as follows: from 64 to 55 days in Bavaria, 87 to 72 days in Württemberg, and 73 to 45 days in Southwest Germany. In the period from 1902 to 1913, the time in storage of the Zentralverband's stocks fell from 62 to 50 days, in Thüringen from 64 to 57, in Northwest Germany from 50 to 39 etc. Over the same period the frequency of turnovers rose nationally from 5.9 to 7.3, in Thüringen from 5.7 to 6.4, in Northwest Germany from 7.3 to 9.4 etc.[72]

It is obvious that this too is a means of overcoming the crisis. 'According to the varying speed with which capital sheds its commodity form and assumes its money form, i.e. according to the briskness of the sale, the *same* capital value will serve to a very unequal degree in the formation of products and value, and the scale of the reproduction will expand or contract.'[73]

d The 'Additional Money' Required for Expansion of Production

Many theorists argue that expansion of the scale of production during the upswing is not possible without an 'additional' sum of money. As, however, the available money capital has already been invested during the depression, in their view, this additional sum of money needed to expand production can only be created by way of credit. Booms are only created or made possible by 'additional credit'; only it can bring about a general price rise.

We showed earlier that expansion of production is possible and actually occurs when prices are constant or have even fallen, that consequently additional money created by way of credit does *not* play the role ascribed to it. The capitalist mechanism in general and cyclical fluctuations in particular are

70 Marx 1978, p. 222.
71 On the storage problem see *Vierteljahrshefte zur Konjunkturforschung* 1926c, p. 45.
72 *Vierteljahrshefte zur Konjunkturforschung* 1926c, p. 43.
73 Marx 1978, p. 124. [Grossman's emphasis.]

governed by factors other than those asserted by proponents of credit theories. On the other hand, however – assuming a *given* velocity of circulation of money – *additional* money is needed for the expansion of production but for quite different reasons to those mentioned above. From Marx's account of the reproduction process, we know that both individual and total social capital must split into three parts if the process of reproduction is to proceed continuously, i.e. without interruption. Apart from productive and commodity capital one part has to stay in the sphere of circulation in the form of money capital. The size of this money capital does vary over the course of capitalist production's history; it declines relatively as a proportion of the total volume of sales, even if it grows absolutely. At any given point in time, however, the size of the money capital required is given and can be calculated according to the law of circulation. If production is expanded, then, *ceteris paribus*, the mass of money capital must also be enlarged. Where does the 'additional' money required for the expansion of the reproduction process come from?

Now, in chapter 15 of the second volume, when dealing with the 'Effect of Circulation Time on the Magnitude of the Capital Advanced', Marx showed how money capital is necessarily set free periodically by the turnover of capital. While one part of capital is tied up in production during the working period, another part is active in circulation. If the length of the working period is equal to the circulation period then the money flowing back out of circulation would be able to be fully employed in the subsequent, new working period, just as the money flowing back out of the production process would find full employment during the circulation period. 'In these cases, *no* part of the capital successively advanced is set free.'[74] It is different in cases where the working period and the circulation period are not equal. In these cases, 'a part of the overall fluid capital is always periodically set free at the close of each working period [beginning with the second turnover]'.[75] Since equal working periods and circulation periods can only be the exception under capitalism, it follows that 'as far as the total social capital is concerned, considering the fluid part of this, *the setting-free of capital is the rule*, while the simple mutual replacement of parts of capital functioning successively in the production process must form the exception'.[76] A very significant part of the circulating social capital, which turns over several times a year, will thus *periodically* exist in the form of capital set free in the course of the annual turnover cycle. 'The magnitude of this capital set free will

74 Marx 1978, p. 355. [Grossman's emphasis.]

75 Marx 1978, p. 355. [The words in square brackets are present in Marx's original but not Marx 1978; they are from Marx 1997, p. 279.]

76 Marx 1978, p. 355. [Grossman's emphasis.]

grow with … the scale of production, and thus with the development of capitalist production.' The most significant part of the capital set free will always possess the form of money capital.[77]

Thus Marx shows how on the basis of capitalism vast sums of money capital are set free '*simply by the mechanism of the turnover movement*' as a consequence of the inequality of working and circulation periods.[78]

About these explanations, Engels remarked that Marx had, in his view, 'ascribe[d] an undeserved significance to what in my opinion is in fact a matter of little importance. I refer to what he calls the "setting-free" of money capital'. 'In his turnover calculations Marx became confused, with the result that, apart from being incomplete, they contain many errors and contradictions.'[79] This judgement of Engels's appears thoroughly mistaken to us. Marx did not overestimate the significance of the 'setting free' of money capital, rather Engels decidedly underestimated and even misunderstood it, and saw mistakes where there is a really profound solution to a problem, which fruitlessly exercised bourgeois economics for many decades.

Through his analysis Marx, however, did not only show that masses of money capital are periodically set free through the very mechanism of the turnover movement. At the same time, he also indicated that due to the reduction in turnover times as well as technological improvements in both the spheres of production and circulation – and these, as we have shown, are implemented chiefly during periods of depression – a part 'of the total capital advanced becomes superfluous'. 'While production *is continued on the same scale and with conditions such as prices, etc. remaining otherwise the same*,[80] the value of the capital advanced declines.' '[A] greater quantity of disposable money capital is thereby brought onto the market.' '[T]he sums that have become superfluous for the turnover mechanism will eventually be definitively thrown out onto the money market.'[81] It follows that after every slump new disposable capital stands available. '[C]apitalists who operate with borrowed capital will exert

77 Marx 1978, pp. 356.
78 Marx 1978, p. 357. [Grossman's emphasis.]
79 Marx 1978, p. 359. [Editor's interpolation.]
80 Marx's conception, discussed here, must be emphasised even more because Hilferding provides a false explanation of the fact that money capital is set free in depressions. While Marx strongly emphasises that money capital is set free even when the scale of reproduction remains the same, for Hilferding 'money capital [is] set free by the *contraction* of production, which was previously used to effect turnovers but has been rendered superfluous by the *decrease* in production' (Hilferding 1981, p. 284). [Grossman's emphasis. Editor's interpolation.]
81 Marx 1978, p. 358.

less demand on the money market, which relieves it as much as does increased supply.' Or '*production will be expanded*'.[82] On the other hand, the setting free of a part of the money capital also affects the *valorisation* of the total capital advanced,[83] in other words, it raises the rate of profit, as the same surplus value is now measured against a reduced total capital. The setting free of a part of the money capital is thus a means of overcoming the crisis.

So Marx shows that even when starting from the assumption of equilibrium, where demand equals supply, nevertheless 'a surfeit of money capital can arise … in the sense that a definite part of the capital advanced is *superfluous* for the overall process of social reproduction … and is therefore precipitated out in the form of money capital; it is thus a surplus which has arisen with the scale of production and prices remaining the same, simply by a contraction in the turnover period. The mass of money in circulation, whether this is larger or smaller, does not have the slightest influence on this.'[84]

In this way – by abbreviating both production and circulation periods – an additional mass of money capital is obtained. It is available 'as the prime mover for each business when it first begins', for the expansion of reproduction at the start of every upswing period.[85] Marx has this function in mind, when he states that the money capital set free by reducing turnover time 'must play a significant role, as soon as the credit system has developed, and *must also form one of the foundations for this*'.[86]

e *The Opposition between Use Value and Exchange Value, and Rising Productivity (Cheapening Elements of Production and Expansion of the Mass of Use Values)*

The previous Marxist literature repeatedly emphasised that, as capitalist production and capital accumulation advances, with growing labour productivity and the transition to a higher organic composition of capital, the *value of the mass* of constant capital grows both absolutely and in relation to the variable capital. This phenomenon, however, constitutes only *one* side of the accumulation process, namely in so far as it is viewed only from the value side.[87] But it cannot be repeated enough that the reproduction process is not only a valor-

82 Marx 1978, p. 358. [Grossman's emphasis.] About this Marx, in another passage, writes: 'It was shown in the previous Part how a reduction in the turnover period … enables more productive capital to be set in motion with the same money capital' (Marx 1978, p. 432).

83 Marx 1978, pp. 345.

84 Marx 1978, p. 358. [Grossman's emphasis.]

85 Marx 1978, p. 431.

86 Marx 1978, p. 357. [Grossman's emphasis.]

87 The purely value perspective, taken over from bourgeois economics, is now so deeply

isation process but also a labour process, it produces not only values but also use values. Considered from the aspect of use value, a rise in productivity works not just in the direction of devaluing existing capital but also towards a quantitative rise in the mass of useful things.

'It depends on the productivity of labour *how much use value* is produced in a given time.'[88] Marx emphasises the great significance of rising productivity for the accumulation of capital: 'For two things are dependent on this. Firstly, the *mass of use values* in which the average profit is expressed; and this is important for two reasons, as it serves both as the *accumulation fund* for new capital and as the *revenue fund* for consumption.'[89] The expansion of the mass of use values, to the extent that it serves as the workers' revenue fund and helps raise the

entrenched in the consciousness of Marx's epigones of all shades, from reformists to Communists, that Marx's most fundamental concepts are distorted and corrupted. This is true of his concept of the organic composition of capital. Marx distinguishes a *technical* and a *value* composition and finally a third conceptual category, the *organic* composition, by which term he understands the 'correlation' between the first two, namely, 'the *value* composition of capital, in so far as it is determined by its *technical* composition *and mirrors the changes in the latter*' (Marx 1976b, p. 762). [Grossman's emphasis.] The organic composition formulated in this way is 'the most important factor' in the investigation of capitalist accumulation. Not a trace of all this survives among Marx's epigones. 'By organic composition of capital', Kautsky writes, 'Marx, as is well known [!], means the ratio of … the variable to the constant capital which compose it' (see Kautsky's footnote 1 in Marx 1910a, pp. 16–17). And so too Jenö Varga. 'By organic composition of capital Marx means the ratio between constant and variable capital, as conditioned by the prevailing technology' (Varga 1926b, p. 433). 'The ratio between c and v (c/v) we call the organic composition' (Lederer 1922, p. 100). That is, repeatedly singling out the value side alone! 'The ratio of c to v is called the "organic composition"; the higher c is, the "higher the organic composition"' (Auerbach 1922, p. 23). Hilferding also states that 'In the various spheres of production the organic composition of capital, the ratio between c (constant capital, expended on the means of production) and v (variable capital, expended in paying the wage of labour), varies' (Hilferding 1949, p. 149). When he writes this, Hilferding forgets that the organic composition does not coincide with the value composition, that despite differences in value composition, the technical composition can be the same, just as different technical compositions can be expressed in an identical value composition. We find the same erroneous conception in Ladislaus von Bortkiewicz who does write about the 'organic composition' but actually the ratio of c to v or the value composition is the basis of his explanations (Bortkiewicz 1949, p. 200). If the organic composition is viewed solely as the ratio of c to v, as by theoreticians mentioned above, then it has to be asked: how does the 'organic' composition in this sense differ from the value composition? Why, then, did Marx distinguish between the two concepts so sharply?

88 Marx 1981, p. 958. [Grossman's emphasis.]

89 Marx 1981, p. 299. [Grossman's emphasis.]

rate of surplus value, has already been discussed (see page 283 above). Here the effects of the rising mass of use values will be considered from the standpoint of the accumulation fund.

Marx sets out from the empirical fact that 'as the social productivity of labour develops, *so the mass of use values produced grows still more, and the means of production form a portion of these*. The additional labour, moreover, which has to be appropriated in order for this additional wealth to be transformed back into capital *does not depend on the value* but on the *mass* of these means of production (including means of subsistence), as the worker is *not* concerned in the labour process with the *value* of the means of production but rather with their *use value*.'[90]

If, e.g. in the *textile industry* there is a rise in productivity and a single worker, with a wage of 1000 *v*, instead of two spindles and raw materials worth 4000 *c* now sets in motion four spindles then – assuming the rate of surplus value is 100 per cent – the rate of profit will fall from 20 per cent (4000 *c* + 1000 *v* + 1000 *s*) to around 11 per cent (8000 *c* + 1000 *v* + 1000 *s*). (For the sake of simplicity, we disregard the fact that, as a consequence of rising productivity, the rate of surplus value increases and exceeds 100 per cent, that the rate of profit is, therefore, not 11 per cent but higher.)

If, however, productivity rises in other industries which precede the textile industry and supply it with its elements of production then the rate of profit must *rise* because of the cheapening of these elements. 'Viewed abstractly, the rate of profit might remain the same despite a *fall in the price* of the individual commodity as a result of increased productivity, and hence despite a simultaneous increase in the number of these cheaper commodities … *The rate of profit could even rise*, if a rise in the rate of surplus value was coupled with a significant reduction in the value of the elements of constant capital, and fixed capital in particular.'[91] If the factors that bring about the tendency for the rate of profit to fall indeed gain the upper hand 'in the long run',[92] because productivity does eventually rise in *all* branches, then the tendency for the rate of profit to fall can still be contained for a while in an individual branch of industry. This is a consequence of the uneven development of productivity in different branches of a specific industry and indeed as a result of the cheapening of the elements of constant and variable capital. Each technological revolution, rationalisation etc. in industries producing their inputs creates fresh air in certain branches of

90 Marx 1981, p. 324. [Grossman's emphasis.]
91 Marx 1981, pp. 336–7. [Grossman's emphasis.]
92 Marx writes: 'In practice, however, the rate of profit will fall in the long run' (Marx 1981, p. 337).

production, improves their profitability. '[I]t *increases* the part of the annual product that is transformed back into capital by raising the rate of profit.'[93]

The same mechanism is also apparent when the process of reproduction is considered socially, that is in its totality. 'Viewing the total capital as a whole', Marx states, 'the *value* of the constant capital does not increase in the same proportion as its *material volume*.' By way of illustration it is stated that, 'For example, the *quantity* of cotton that a single European spinning operative works up in a modern factory has grown to a most colossal extent in comparison with that which a European spinner used to process with the spinning wheel. But *the value* of the cotton processed has not grown in the same proportion as its mass.' 'In certain cases, the *mass* of the constant capital elements may increase while their total value remains the same or even falls.'[94] In this fact, Marx sees one of the factors that counteract the fall in the rate of profit, that is the tendency to breakdown. For in the first place, if the value of the elements of constant capital increased in the same proportion as their mass then the rate of profit and the valorisation of the total capital would be *still smaller*. Secondly, however, indirectly the increase in use values also has great significance for the valorisation process. This is because 'indirectly … the development of labour productivity contributes to an increase in the existing capital value, since it *increases the mass and diversity of use values* in which *the same exchange value is represented, and which form the material substratum, the objective elements of this capital, the substantial objects* of which constant capital consists directly and variable capital at least indirectly'.[95] With more elements of production, even if their value remains the same, the technical scale of production can be raised. Then *more workers* can also be employed in the production process, with the *same* magnitude of capital value, and they will then produce more value in the next cycle of production. 'The *same* capital and the *same* labour produce *more things* that can be transformed into capital, quite apart from exchange value. *These things can serve to absorb additional labour* and thus additional surplus labour also, and can in this way form additional capital.'[96] Marx then

93 Marx 1981, p. 356. [Grossman's emphasis.]

94 Marx 1981, p. 343. [Grossman's emphasis.]

95 Marx 1981, pp. 356–7. [Grossman's emphasis.] About this Ricardo had already noted: 'In different stages of society, the accumulation of capital … is more or less rapid, and must in all cases depend on the productive powers of labour' (Ricardo 1912, p. 55).

96 Marx 1981, p. 357. [Grossman's emphasis.] If the *value* of various ores etc. rises as a result of worsening conditions of production in the mining industry and the *quantity* of products obtained becomes smaller in the process, so that a diminished number of machines, instruments, etc. are available due to the shortage of raw materials, then obviously only a smaller number of workers will likewise be able to function in the production process.

explains how by cheapening of the elements of production, that is the creation of more use values through the same value, a greater number of workers can be employed in the process. 'In itself an increase in the quantity of use values constitutes an increase in material wealth. Two coats will clothe two men, one coat will only clothe one man, etc. Nevertheless, an increase in the amount of material wealth may correspond to a simultaneous fall in the magnitude of its value.'[97] And Marx writes that 'The mass of labour that capital can command does not depend on its value but rather on the *mass* of raw and ancillary materials, of machinery and elements of fixed capital, and of means of subsistence, out of which it is composed, whatever their value may be. *Since the mass of labour applied* thus *grows*, and the mass of surplus labour with it, the value of the capital reproduced and the surplus value newly added to it grow as well.'[98]

> [W]hat is important for the direct exploitation of labour itself is by *no means the value* of the means of exploitation applied, whether that of the fixed capital or that of the raw and ancillary materials. In so far as they serve to absorb labour … the *exchange value* of these machines, buildings, raw materials, etc. is *completely irrelevant*. The only thing that matters here is on the one hand the *quantity* of these means of exploitation technically required for combination with a certain quantity of labour, and on the other hand their *appropriateness* to their purpose, i.e. not only good machines are required, but also good raw and ancillary material.[99]

With the development of the forces of production and increase in the *mass* of use values, the *mass* of means of production (and means of subsistence) that can function as 'absorbers of labour' expands *more rapidly than the value* of the accumulated capital increases.[100] *These can therefore employ living labour*

97 Marx 1976b, pp. 136–7.

98 Marx 1981, p. 357. [Grossman's emphasis.]

99 Marx 1981, p. 176.

100 It follows from this, according to Marx, that in the course of capital accumulation 'this diminution in the variable part of capital as compared with the constant part, or, in other words, this change in the composition of the *value* of the capital, provides *only an approximate indication* of the change in the composition of its *material* constituents' (Marx 1976b, p. 774). [Grossman's emphasis.] Marx illustrates this phenomenon with the example of the spinning industry, in which, as a consequence of increases in productivity by several hundredfold since the beginning of the eighteenth century, the *material mass* of the elements of production increased by a similar amount, whereas, viewed in terms of *value*, constant capital grew much more slowly.

> The reason is simple: with the increasing productivity of labour, the *mass* of the means of production consumed by labour *increases*, but their *value* in comparison with their

and therefore also exact additional surplus labour to a greater degree than if this depended on the accumulation of value alone. 'The increase in the productive forces of labour … increases in the first instance only the *quantity* of products and not their value … However, it also forms extra *material* for capital, and thus provides the basis for an increased capital accumulation.'[101] 'Increased productivity can increase only the *material* substance of capital, and cannot raise its value; but it still forms additional material for valorisation.'[102] With the growing productivity of labour and cheapening of labour power,

> [t]he same value in *variable* capital therefore sets in motion more labour power and, consequently, more labour. The same value of *constant* capital is embodied in *more means of production*, i.e. in more instruments of labour, materials of labour and auxiliary materials. It therefore *supplies both more product-creating agencies and more value creating agencies, in other words, absorbers of labour*. Therefore, even if the value of the additional capital remains the same or diminishes, *accelerated accumulation* still takes place. Not only does the scale of reproduction *materially* extend, but the production of *surplus value increases more rapidly than the value of the additional capital*.[103]

This tendency for the mass of use values to grow runs in parallel with the opposite tendency for constant capital to grow compared with variable capital, that is for the number of workers to decline. '[T]hese two aspects involved in the accumulation process cannot just be considered as existing quietly *side by side* … they contain a contradiction, and this is *announced by the appearance of contradictory tendencies and phenomena*. The contending agencies function simultaneously in opposition to one another.'[104] In other words, 'The accumulation of capital, from the point of view of value, is slowed down by the falling rate of

> mass *diminishes*. Their value therefore rises absolutely, but *not in proportion* to the increase in their mass. The increase of the difference between constant and variable capital is therefore much less than that of the difference between the *mass* of the means of production into which the constant capital, and the *mass* of the labour power into which the variable capital, is converted. The former difference increases with the latter, but in a smaller degree. (Marx 1976b, p. 774) [Grossman's emphasis.]

101 Marx 1978, p. 432. [Grossman's emphasis.]
102 Marx 1978, p. 179. [Grossman's emphasis.]
103 Marx 1976b, p. 753. [Grossman's emphasis.]
104 Marx 1981, p. 357. [Grossman's emphasis.]

profit, which then serves yet again to accelerate the accumulation of *use value*, while this in turn accelerates the course of accumulation in terms of *value*'.[105]

In Table 2 (on page 136) we saw that, assuming population growth is five per cent a year and constant capital increases by 10 per cent a year, the capitalist mechanism described must collapse in year 35. As has been demonstrated here, however, the mass of capital grows more rapidly in use values than in value terms; as we know, further, that the employment of living labour depends not on the value but on the mass of the elements of production, it follows that to employ a *given* working population (represented by the variable capital of any given year) a *smaller capital* would actually suffice than shown in the table. A larger capital would produce more value and surplus value than is shown in the table. Rising productivity and the expansion of use values bound up with it has the effect that the accumulation of values occurs as if it was at a level much closer to the beginning, i.e. at a much lower level. This is a process of economic rejuvenation. The life span of accumulation is thus prolonged. 'A point is reached in the course of accumulation at which the development of the productivity of social labour becomes *the most powerful lever of accumulation*.'[106] *That means, however, that the breakdown tendency is weakened*. The breakdown will not occur in year 35, as shown in the table (that is when only its value aspect alone is considered) but at a *later* point, perhaps in year 40 or 45. 'We see here once again how the same factors that produce the tendency for the rate of profit to fall also moderate the realisation of this tendency.'[107]

It is apparent here, once again, how inadequate it is to examine the value side of the process of reproduction alone. We see what an important function use value has in this process. Marx always dealt with the capitalist mechanism from both sides: value as well as use value.

f *The Emergence of New Spheres of Production with Lower Organic Compositions of Capital*

Bourgeois critics of Marx have loved to point out that according to his prognosis capitalist competition does not only wipe out independent craftspeople, casting them into the ranks of the proletariat, but 'the same competition rages like a plague among the capitalists themselves, eliminates them on a massive scale *until eventually only a tiny number of "capitalist magnates" remains*'.[108] Sternberg repeats the same point, attempting to substantiate it by referring to Marx's

105 Marx 1981, p. 358. [Grossman's emphasis.]
106 Marx 1976b, p. 772. [Grossman's emphasis.]
107 Marx 1981, p. 343.
108 See Oppenheimer 1927, p. 499. [Grossman's emphasis.]

reproduction schema.[109] After that, there is nothing easier than to assert that Marx's prognosis does not accord with the actual tendencies of development. Again, this overlooks the essential aspect of Marx's methodological procedure. Purely for the sake of simplification, Marx's schema includes just *two* spheres of production within which capitals more and more succumb to concentration. On this assumption the number of capitalists actually becomes ever smaller. But the assumption that there are only two spheres of production is a fiction and therefore has a purely provisional, preliminary character. It must be subject to subsequent correction and brought into alignment with empirical reality. In fact, Marx shows that capital *always* penetrates into *new* spheres. 'At the same time offshoots split off from the original capitals and start to function as new and independent capitals … With the accumulation of capital, therefore, the number of capitalists *grows* to a greater or lesser extent.'[110] And in another passage Marx presents the same idea: 'with the development of the productive forces, *the number of spheres of production is also steadily increasing*, thus creating possibilities for capital investment which previously did not exist at all. Production … in the course of development … is … *diversified*'.[111]

The process of fragmentation, in which '[a]part from other causes, the division of property within capitalist families plays a great part', works in the opposite direction to the concentration of capital. In this way, 'accumulation and … the increase of each functioning capital is thwarted by the formation of new capitals and the subdivision of old'.[112] The relative smallness of these capitals does not allow their owners to simply rely on interest from loans. To be able to live, they strive to obtain profits by establishing enterprises and paying themselves a special wage for their managerial services. Because the minimum amount of capital required for business in sectors with a higher organic composition of capital is very high and is rising continuously, the newly emerged spin-offs of capital are insufficient for [investment] in them, so '[t]he smaller capitals … crowd into spheres of production which large-scale industry has taken control of only sporadically or incompletely'.[113] And hence, in spheres with a lower organic composition, where a relatively large amount of living labour is employed, there is also much surplus value and profit to be gained. 'If a new branch of production comes into being in which a disproportionate amount of living labour is employed in relation to accumulated labour, in

109 See Grossman 2019e, p. 132.
110 Marx 1976b, p. 776. [Grossman's emphasis.]
111 Marx 1989c, p. 168. [Marx only emphasised 'diversified'.]
112 Marx 1976b, p. 776.
113 Marx 1976b, p. 777.

which therefore the composition of capital is far below the average composition which determines the average profit', then a larger mass of surplus value will be produced in this branch. 'Competition can level this out, only *through the raising of the general level* [*of the rate of profit*], because capital on the whole realises … a greater quantity of unpaid surplus labour.'[114] It is immediately obvious that the breakdown tendency must thus be weakened. On the one hand, the lower organic composition of capital raises the rate of profit, on the other hand, the formation of new spheres of production makes it possible to invest the accumulated capital productively, 'whether for *newly created spheres* of production or for the *old ones which are expanded* and operated on a larger scale'.[115] 'New ramifications of more or less unproductive branches of labour are continually being formed.'[116] Insofar as people are 'set free' by the invention of new and more productive machinery or ways of using natural resources, the capital that is likewise set free or newly accumulated capital can find investment and be absorbed in the old capitalist countries without having to be exported. Thus a *periodic movement* results: self-expanding capital searches for new opportunities for investment and pushes the rate of interest down; new inventions etc. create new opportunities for investment, the sudden development of new spheres of production, the absorption of the excess capital, then gradually a new aggregation of ever larger amounts of excess capital etc. Marx cites the following from a pamphlet published in 1845:

> In England there takes place a steady accumulation of additional wealth … Unless, therefore, concurrently with this ceaseless influx of surplus capital, there is a gradual and sufficient extension of the field for its employment, we must be subject to periodical accumulations of money seeking investment … As soon as in 1816 … a sum of at least seven-and-twenty million per annum was … driven to seek other channels of investment. What was more, various return payments of capital were made … [I]nterest has declined to rates which are all but nominal … [All] evidences that another heavy accumulation of unemployed wealth exists at this hour in England …[117]

It follows that great significance attaches to 'new offshoots of capital that organize themselves independently. And if capital formation were to fall

114 Marx 1989c, p. 70. [Marx emphasised '*general level*' and 'unpaid surplus labour'.]
115 Marx 1989c, p. 180. [Grossman's emphasis.]
116 Marx 1989c, p. 186.
117 Marx 1981, pp. 543–4, citing Anonymous 1845, pp. 32–4, 36.

exclusively into the hands of a few existing big capitals, for whom the mass of profit outweighs the rate, *the animating fire of production would be totally extinguished. It would die out*.'[118]

Developments in England are very characteristic in this regard. The magazine *The Nation and Athenaeum*, published by Professor [John Maynard] Keynes,[119] carried an article inspired by its publisher in which 'the tendencies of Britain's economic development are discussed [and] the author comes to the following conclusion':[120]

> We shall become, we believe, less and less an *exporting*, foreign investing people, less and less a people engaged in a few large staple industries, more and more a people engaged in the huge mass of new miscellaneous occupations, working for the *home market*, which are springing up before our eyes. And, in particular, we are convinced that the metallurgical group of industries – coal, iron and steel … – will gradually cease to play so predominant a part in our national life … The future is not with South Wales, the Tyne, and the Clyde.[121]

The conclusions of this account are wrong to the extent that no capitalist country can exist without exports. Even if production were intended exclusively for the domestic market, large quantities of raw and auxiliary materials would have to be imported from abroad and exports would be absolutely necessary to pay for them. Younger industries emerge *alongside* old heavy industry, without being able to entirely replace it. The remark of an American, that in England the 'decline of the old industrial sectors and the rise of new ones'[122] particularly struck him, is only partially valid. But the fact remains that *new* industries have sprung up in the South of England, the Midlands and around *London*, while the traditional industrial centres of the North, Scotland and Wales suffer from chronic crises. A 'second industrial revolution' has even been spoken of. As is apparent in a report of the Chief Inspector of Factories, these are industries with consistently lower organic compositions of capital. For example, in the neighbourhood of London, as well as some car chassis factor-

118 Marx 1981, p. 368. [Grossman's emphasis.]
119 [Keynes headed a group which purchased *The Nation and the Athenaeum* in 1923 and frequently contributed to it.]
120 Lewin 1927, p. 172. [The following discussion paraphrases Lewin 1927, pp. 172–4 extensively.]
121 Lewin 1927, p. 172 [quoting *Nation and the Athenaeum* 1926, p. 342. Grossman's emphasis.]
122 [Lewin 1927, p. 172.]

ies, factories producing artificial limbs, electrical fittings, ice, mixed pickles, bedsteads, quilts, capsules for pharmacies, and pencils emerged. Among the few newer industries with a higher organic composition of capital are the artificial silk industry and the automobile industry, of which there are currently 14,600. Yet over half of them are repair shops scattered across the country.[123] Statistical tables published in 1926 by the Ministry of Labour cast a bright light on the tendencies of English industrial development.[124] We reproduce two [on the next page], excluding details that are not essential and regrouping certain categories for the sake of clarity.

The cotton industry, which is listed in Group B, actually belongs in Group A. It is also suffering from a deep crisis. The owners of many enterprises, which really should have closed, entered into short-time agreements, to avoid shutting them down, so that their factories only operate three or four days a week. That is the only explanation for the increase in the size of the labour force by 8,190 workers. Overall, the number of workers in the young industries increased by 643,090 in the space of three years. Earlier England could afford the luxury of importing the products of these branches of industry from Germany, France, Japan and other countries. Now it has to manufacture these trifles itself. The development of these new branches of industry moderates the effects of the general economic depression but it cannot compensate for the catastrophic consequences of the decline of the old branches of industry, which once formed the basis of England's dominance. It should be noted that all the new branches of industry only employ about 700,000 workers, while the majority of English workers are employed in the old industries: coal, textiles, shipbuilding etc.

g *The Struggle over the Abolition of Ground Rent. Bourgeois Land Reform from Quesnay to Henry George and Adolf Damaschke*

In the reproduction schema that underpinned our previous analysis, capitalists and workers were the only classes. Landowners were not represented in it. The underlying assumption is therefore not a reflection of empirical reality and bears a purely *fictitious* character. From the standpoint of Marx's methodological procedure, that is perfectly intelligible and justified. To grasp the essence of *capitalism*, the analysis must initially be restricted to 'pure'

123 [Lewin 1927 pp. 172–3, citing *Annual Report of the Chief Inspector of Factories and Workshops* 1926, pp. 4, 5.]

124 [Lewin 1927, pp. 173–4 citing] *Ministry of Labour Gazette* 1926, p. 417. 'In Britain employment insurance is mandatory, so that the number of insured workers is same as the number of workers in employment'.

Group A. Industrial sectors in which the number of insured workers has declined

Sector	Number of insured workers July 1923	Number of insured workers July 1926	Decline
Coal mining	1,256,000	1,227,870	28,130
Woollen and worsted	271,000	254,750	16,250
Bread, biscuit, cake etc. making	157,700	145,830	11,870
General Engineering	669,000	615,920	53,080
Marine engineering	66,300	58,370	7,930
Shipbuilding and repair	270,200	224,120	46,080
Iron and steel	242,000	218,340	23,660
Construction and repair of carriages, carts etc	27,700	21,700	6,000
National government	179,600	151,470	28,130
Railway service (non-permanent workers)	191,100	160,650	30,450
Total	3,330,600	3,079,020	251,580

Group B. Industrial sectors in which the number of insured workers has increased

Sector	Number of insured workers July 1923	Number of insured workers July 1926	Increase
Artificial stone and concrete manufacture	10,660	16,460	5,800
Silk and artificial silk	37,800	51,220	13,420
Brick, tile etc. making	61,300	82,910	21,610
Construction and public works	837,600	965,190	127,590
Musical instrument making	19,600	24,550	4,950
Electrical cable, wire and electric lamp manufacture	72,200	87,910	15,710
Distributive trades	1,250,000	1,510,850	260,850
Trams, buses, taxis, trucks	255,400	290,440	35,040
Construction and repair of motor vehicles, cycles and aircraft	192,700	224,040	31,340
Furniture making, upholstery etc.	93,500	107,810	14,310
Laundries, dyeing and dry cleaning	106,600	122,230	15,630
Miscellaneous engineering	166,000	186,420	20,420
Printing, publishing and bookbinding	229,000	252,550	23,550
Professional services	107,100	116,220	9,120
Local government	244,000	261,250	17,250
Gas, water, electricity	174,200	185,380	11,180
Stove, grate, pipe etc and general iron founding	85,200	90,490	5,290
Manufacture of tin plates	29,950	31,790	1,840
Cotton	571,000	579,190	8,190
Total	4,543,810	5,186,900	643,090

capitalism, without the obscuring remnants of extraneous formations, that is it has to consider only those two classes which *conceptually* constitute 'the *framework* of modern society'.[125] Capitalist agriculture is completely subordinated to capital and constitutes merely a branch of industry. It thus 'produces wheat etc. just as the manufacturer produces yarn or machines'.[126] In agriculture the rural proletariat does not confront the large landowner but the capitalist, the entrepreneur. Only farmers play an *active role in the production process*, while large landowners stand outside production, represent only a *category of property* and depend on receiving rent.[127] Insofar as it is a matter of grasping the essence of the *capitalist* mode of production, it was necessary first 'to consider it in pure form and free from all adulterations and blurring *admixtures*'. Subsequently, however, 'it is just as important for understanding the *practical effects* of landed property … to know the elements from which these obscurities in the theory arise'.[128] If ground rent and landed property are initially disregarded in the reproduction schema, this fictitious assumption can only have a provisional character. Subsequently it is appropriate to consider the elements that were disregarded and to ask whether and in which direction the results established so far are modified by the correction required.

Modern, purely capitalist ground rent is simply an excess of value over price of production (cost of production plus average profit). It is not included in the equalised profits but signifies a levy imposed by landed property on the profits on capital.[129] For the landowner it 'represents nothing but a certain *monetary tax* that his monopoly permits him to extract from the industrial capitalist, the farmer'.[130] When Marx demonstrates the equalisation of surplus value to average profit, he states: 'This appropriation and distribution of surplus value by capital, however, *meets with a barrier in landed property*. Just as the functioning capitalist pumps out surplus labour from the worker, and thus surplus value … in the form of profit, so the landowner pumps out a part of this surplus value … in turn from the capitalist in the form of rent.'[131]

In this way, rent serves to *push down the level of the average rate of profit*. That this necessarily *accelerates* the *breakdown tendency* is immediately appar-

125 Marx 1981, p. 756. [Grossman's emphasis.]
126 [Marx 1981, p. 751.]
127 'Landed property has nothing to do with the actual production process. Its role is limited to transferring a part of the surplus value produced from capital's pocket into its own' (Marx 1981, p. 960).
128 Marx 1981, p. 762. [Grossman's emphasis.]
129 Marx 1981, p. 896.
130 Marx 1981, p. 755. [Grossman's emphasis.]
131 Marx 1981, p. 959. [Grossman's emphasis.]

ent. Here lies the reason for the hostile orientation of the representatives of capitalism since [François] Quesnay to ground rent. For, 'landed property is distinguished from the other forms of property by the fact that at a certain level of development it appears *superfluous and harmful even from the standpoint of the capitalist mode of production*'.[132] The hostility to ground rent typical of capitalist circles was already evident in Quesnay's theory of taxation. He argued that a part of the ground rent should be confiscated by the state in the form of the *impôt unique*[133] and the third estate, i.e. capitalist production, should thus be freed from all taxes and all state intervention. Ricardo's writings were likewise 'directed against the interests of the landlords and their retainers', even if still in the form of a 'definition of value … somewhat abstract in its presentation'.[134] Ricardo's disciples, such as James Mill 'advance … the Ricardian view'. Mill 'draws the practical conclusions from the theory – that of rent for example – more ruthlessly *against the institution* of landed property which he would like to see … transformed into state property'.[135] Finally, [Antoine-Elisée] Cherbuliez 'proceeds to … the real conclusion of the Ricardian theory'. In other words, he claims the 'landowners are idlers who are maintained at the public expense without any kind of benefit to industry or to the general welfare of society'. He asks, 'Why do people not take a step further and abolish private ownership of land?' Cherbuliez stands for the complete nationalisation of the land. 'Finally, industry, liberated, released from all fetters, would take an unprecedented leap forward.'[136]

John Stuart Mill essentially takes the same position too. 'The essential principle of property being to assure to all persons what they have produced by their labour … this principle cannot apply to what is not the produce of labour, the raw material of the earth.' To encourage cultivation, '[t]he use of the land in agriculture must indeed, for the time being, be of necessity exclusive … or *the state* might be the universal landlord, and the cultivators tenants under it, either on lease or at will'. Private property in the soil can only be economically justified when the owner of land 'is its improver'. Matters are quite different with pure ground rent, where the landlord plays no role in the production process and merely represents a category of ownership. 'Whenever, in any country, the proprietor, generally speaking, ceases to be the improver, political economy

132 Marx 1981, p. 760. [Grossman's emphasis.]

133 ['*Impôt unique*' means 'single tax'.]

134 Marx 1989c, p. 209 [Grossman's emphasis.]

135 Marx 1989c, p. 275. [Grossman's emphasis. Editor's ellipsis.]

136 Marx 1991a, p. 319. [The first quotation is from Marx, those that follow are from Marx quoting and abbreviating Cherbuliez 1841, pp. 129, 130. Marx emphasised 'abolish private ownership of land' and 'would take an unprecedented leap forward'.]

has nothing to say in defence of landed property, as there established. In no sound theory of private property was it ever contemplated that the proprietor of land should be merely a sinecurist quartered on it.'[137] Thus Marx writes about the various writers mentioned, 'We understand such economists as [James] Mill, Cherbuliez, [Richard] Hilditch and others demanding that rent should be handed over to the state to serve in place of taxes. That is a frank expression of the hatred the industrial capitalist bears towards the landed proprietor, who seems to him a useless thing, an excrescence upon the general body of bourgeois production.'[138]

From the same source sprang the bourgeois land reform movements of the second half of the nineteenth century, from Henry George to Adolf Damaschke.[139]

Only at a fairly advanced stage of capitalist development does industry begin to penetrate the countryside with its products (machinery, artificial fertiliser etc.) and does the organic composition of the capital invested in agrarian capital increase and gradually begin to equal that in industry.[140] This happens all the more so, since in the late phase of capital accumulation capital that has overaccumulated in industry and seeks investment outlets within an isolated economy, *can only find a field for investment in the intensification of agriculture*. This is when 'productivity advances in both, although at an uneven pace. But when industry reaches a certain level, the *disproportion must diminish*, in other words, productivity in agriculture must increase relatively more rapidly than it does in industry'.[141] As the composition of capital in agriculture comes closer to the level in industry, rent, insofar as it is *absolute rent*, also *disappears* and is now only possible as differential rent or as monopoly-price rent.[142] Accord-

137 Mill 1890, pp. 162–3, 164. [Grossman's emphasis.]

138 Marx 1976a, p. 203. [Editor's interpolations.]

139 Damaschke 1917. But even outside the specific land reform movement, campaigns hostile to ground rent are not seldom encountered. So the Protestant clergyman Todt, founder of the Zentralverein für Sozialreform auf religiöser und konstitutionell-monarchischer Grundlage, campaigned for a nationalisation of housing (see Todt 1877).

140 The actual employment of capital, e.g. in American agriculture, in other words, shows that in the US in the year 1920 over 13 times more machines were in use than 50 years earlier. In terms of value the increase was not as great. The total value of machinery per worker was \$36 in 1870, \$68 in 1900 and \$176 in 1920 (calculated in 1913 dollars). Average farm workers today therefore use five times as much capital just in machinery than they did 50 years ago (Tolley 1925, p. 18).

141 Marx 1989b, p. 341. [Grossman's emphasis.]

142 This ground rent 'can disappear completely as soon as the value of the agricultural produce becomes = the cost price, in other words when the agricultural capital has the *same composition* as the non-agricultural capital' (Marx 1989c, p. 30). [Marx only emphasised

ingly, in this late phase of capital accumulation, the effect that ground rent has in sharpening the breakdown tendency is somewhat moderated.

Let us now consider four different branches of production in industry, with different organic compositions of capital (I to IV), and in agriculture two cases: a) where prices coincide with values, so that products are sold *at* their value; and b) where prices rise above value, that is are *monopoly prices*. We examine the emergence of rent in each of these two cases from the perspective of differences in the organic composition of agrarian capital.

From Table 11 [facing] it is apparent that in agriculture absolute ground rent (*AR*) only exists when the organic composition of capital is *lower* than the average composition in industry. This is case 1a. It exists even though agricultural products are sold at their values. Marx characterises absolute rent *as arising*

'value of the agricultural produce' and 'cost price'.] And elsewhere Marx writes: 'If the average composition of agricultural capital were the same as that of the average social capital, or even higher than this, the result would be the disappearance of *absolute* rent … namely a rent that is different both from differential rent and from rent depending on an actual monopoly price' (Marx 1981, p. 899). [Grossman's emphasis.] It is to these arguments that Jenö Varga links his critique of Marx's notion of absolute rent (Varga 1924, pp. 15 et seq.). Marx is supposed to have advanced two different and contradictory theories of absolute ground rent in the third volume of *Capital* and in *Theories of Surplus Value*, and vacillated between them, as well as mixing them up repeatedly. Varga designates as 'incorrect' Marx's deduction of absolute ground rent from the fact that in agriculture the value of the product is higher than its price of production, that is from the fact of the lower organic composition of agricultural capital. Varga does this because, 'even in cases where the organic composition of capital in agriculture is as high as or even higher than in industry', absolute rent need not disappear. How is that possible? Varga's 'discovery' is surprising: 'The landowner always has the possibility of preventing the cultivation of land whose produce is needed in the market until the *price* rises *above value*' (Varga 1924, p. 15). [Varga also emphasised 'until the' and 'rises'.] Thus, according to Varga, absolute rent has nothing to do with the organic composition of agricultural capital but arises, rather, from the landowner's monopoly power to raise the prices of agricultural produce above their value, by preventing cultivation of land. By arguing this way on page 15, Varga has forgotten what he still knew on page 10, namely, that Marx's analysis sets out from the assumption that all commodities – that is including agricultural products – are sold *at* their value (Varga 1924, p. 11). There Varga states: 'In that case the question arises: how is a pure rental income possible *within the Marxist theory of value*?' (Varga 1924, p. 11). Varga's whole argument breaks down on this assumption, because it is precisely the rise of price *above* value that is precluded from the start, according to this assumption. On this assumption, absolute rent *must* disappear as soon as the organic composition of capital in agriculture is the same as in industry. The supposed contradiction between Marx's 'correct' and 'incorrect' theories of rent arises solely from Varga's lack of clarity about the real assumptions in Marx's analysis and his confusion of absolute rent with rent based on monopoly price. If the price of agricultural products rises *above* their value, then we are dealing not with absolute rent but with monopoly-price rent.

from the surplus value that is produced within agriculture itself. It disappears when the composition of capital in agriculture is the same as the average composition in industry, as in case 2a.

TABLE 11

Industry

	c	*v*	*s*	*Total value*	*Price*	*Difference*	*Average profit*
I	80	20	20	120	150	+30	50
II	60	40	40	140	150	+10	50
III	40	60	60	160	150	−10	50
IV	20	80	80	180	150	−30	50
	200	200	200	600	600	0	50

Agriculture

	c	*v*	*s*	*Total value*	*Price*	*Surplus value*[143]	*Average profit*[144]	*AR*	*MR*
1a	10	90	90	190	190	90	50	40	
1b	10	90	90	190	210	110	50	40	20
2a	50	50	50	150	150	50	50	0	
2b	50	50	50	150	210	110	50	0	60

In both cases monopoly rents (*MR*) only arise when products are sold at prices *above* their values: cases 1b and 2b. They do not come from the surplus value generated in agriculture itself but come about by way of the *transfer* of the surplus value produced in industry to the landlord. This is the case Ricardo has in mind when he writes of ground rent: 'I always consider it as the result of a partial *monopoly*, never really regulating price, but rather *as the effect of it*'.[145] Agreeing with Sismondi, Ricardo calls rent 'a value purely nominal, and the mere result of that *augmentation of price* which a seller obtains in consequence

143 [I.e. surplus value appropriated in agriculture.]
144 [Across all industries.]
145 Ricardo 1912, p. 189. [Grossman's emphasis.]

of a peculiar privilege'. It is, according to Ricardo, 'a value purely nominal, and as forming no addition to the national wealth, but merely as a transfer of value, advantageous only to the landlords and proportionally injurious to the consumer', indeed to *industrial* consumers.[146]

h *The Struggle to Eliminate Commercial Profit. The Economic Function of the New 'Middle Class'*

The impact of commercial profit on the breakdown tendency is similar to that of ground rent. We saw earlier that the systematic analysis of the reproduction process was conducted on the assumption that transactions occur without the mediation of the merchant and commercial capital. The further consequence was that 'merchant's capital … does *not* enter into the formation of the general rate of profit'.[147] Obviously such a fictitious assumption can only have a preliminary character and must subsequently be corrected in accordance with reality. For, '[i]n connection with commercial capital … we are *dealing with a capital that takes a share in profit without participating in production*. It is now necessary, therefore, to supplement the earlier presentation'.[148] Merchant's capital does, in fact, figure in the equalisation of surplus value into the average rate of profit and commercial profit is 'a deduction from the profit of industrial capital'. It follows that 'The bigger commercial capital is in comparison with industrial capital, *the smaller the rate of industrial profit*'.[149] From the argument presented earlier it is immediately clear that this fact must intensify and accelerate the breakdown tendency. Consequently the theoretical struggle against commerce already arose with the Physiocrats, who expressed the standpoint of the productive, i.e. surplus value producing, classes. 'The merchant', writes Quesnay, 'tries to buy at the lowest possible price and to sell at the highest possible price, so as *to make his gain* as high as possible *at the expense of the nation*: his individual interest and that of the nation are opposed.'[150]

This struggle against commerce has continued into the most recent period and *is especially evident in periods of crisis, as a means of improving reduced valorisation*. In a report on his visit to America, Professor [Julius] Hirsch states that developments there are pushing towards the elimination of commerce and manifest a powerful drive to rationalise. The *elimination of wholesalers* by rural grain, fruit and milk co-operatives has assumed large proportions. The sales of

146 Ricardo 1912, p. 392. [Grossman's emphasis.]
147 Marx 1981, p. 397. [Grossman's emphasis.]
148 Marx 1981, pp. 397–8. [Grossman's emphasis.]
149 Marx 1981, p. 400. [Grossman's emphasis.]
150 Quesnay 1962, p. 164. [Grossman's emphasis.]

farm co-operatives have reached almost $ 2.5 billion (20 per cent of the value of farm products, to the extent that they come onto the market). The development of massive branch operations and warehouses likewise means the narrowing of the scope of certain areas of wholesale activity.[151] The co-operatives of North American cotton farmers are also trying to eliminate intermediaries, delivering to spinning mills straight from the fields.[152] This is even more pronounced in the domain of modern industrial trusts.

Modern cartels and trusts do seek to increase the profitability of enterprises, among other means, by 'cheapening their sales and purchase organisation, through centralisation and the elimination of intermediaries'.[153] So it was already stated, in the proceedings of the German cartel enquiry, e.g. about the paper syndicate, 'that the syndicate sought to deal directly with the largest customers by eliminating intermediaries'.[154] This is understandable when the 'extraordinarily large share that commercial expenses have in the total price' is considered.[155] The US Department of Agriculture reports that the costs of *production* of rolled oats (in agricultural, also in transport and storage costs) come to 30.52 per cent whereas *distribution* costs amount to 69.48 per cent. Of the latter, wholesaling alone accounts for 7.99 per cent, plus a profit margin of 0.74 per cent, together 8.73 per cent; retail costs come to 15.68 per cent, plus a profit of 5.40 per cent, together 21.08 per cent; and advertising 8.64 per cent. Even if commerce's 8.13 per cent in transport costs are counted as a necessary productive expenditure, there still remains 61.35 per cent in *commercial costs*! In men's clothing, manufacturing is 55 per cent of total costs, commercial costs are 45 per cent; in shoes, the ratio is 64 per cent to 36 per cent.[156]

In Germany, commercial costs differ across individual stages of the commercial chain. So, for example, in the colonial goods trade, they are 15–20 per cent on top of the cost price, on the way from wholesale trade to the retail (level I); 20–30 per cent from the retailer to the consumer (level II). In the cloth trade the figures are I: 20–30 per cent; II: 30–50 per cent. In cigars, I: 5–10 per cent; II: 50–50 per cent. In footware, I: 25 per cent or more; II: 70–100 per cent. In fashion goods, I: 20–33⅓ per cent; II 100–135 per cent. In flour and grain, I: 6–10

151 *Vossische Zeitung* 1928. [As cited by Grossman but the information is not in the morning or evening editions of the newspaper.] See Reichwein 1928, p. 135.

152 Reichwein 1928, p. 265.

153 Kestner 1912, p. 8.

154 Kestner 1912, p. 238.

155 Hirsch 1925, p. 208.

156 [Hirsch 1925, p. 208. Grossman miscalculated retail costs and profit as 21.8 per cent, and commercial costs minus commercial transport as 60.84 per cent.]

per cent; II: 20 per cent. In potatoes, I: 15 per cent; II: 20 per cent.[157] Combinations, Hilferding writes, bring about the elimination of commerce. This is one of the bases of combined enterprises' superiority.[158] Hence also the tendency to vertical integration.

With the advance of concentration in the iron and steel industry the importance of commerce has declined. The tendency to eliminate commercial intermediaries is particularly marked, precisely in this sector. The American steel trust is a combination of iron and coal mining, of iron and steel production, so that that no profit is diverted to commercial intermediaries at any stage of production, realising Rockefeller's motto, 'Pay a profit to nobody'.[159]

Vertical integration in the US iron and steel industry, and the elimination of commercial intermediaries together mean that the latter are only left with sales to small customers. The result has been the so-called 'factoral system' which did save commercial intermediaries but left them as almost in the position of agents of the industrial trusts. This system, which has since become widespread, consists in traders agreeing to a fixed maximum profit margin, determined by the trust, and not to deal in commodities from certain competing enterprises but to make purchases exclusively from the trust. Linked to this is the industrial trust's limitation of the number of intermediaries with whom it has direct dealings. According to Vogelstein,

> The development of large scale industrial concerns, monopolisation, has dethroned the princely merchant and transformed him into an agent or employee of the monopolies … *The world of monopolies decommercialises itself* … By transferring sales business to the syndicate … through price fixing … the industrial concern reduces purely commercial activity to a minimum and transfers this to a few people in the cartel's head office and eventually to a few affiliated trading concerns.[160]
>
> Where it is a matter of long term monopolistic control of typical commodities … the monopoly … has either no interest or a quite negative interest in the existence of independent wholesaling … The merchant is … absorbed into the cartel bureaucracy … Soon he is deprived of the chance to sell to big customers and is only left with small scale business: sales to smaller factories, local resellers and end consumers.[161]

157 [Hirsch 1925, p. 209.]
158 Hilferding 1981, p. 196.
159 [Originally quoted by Tarbell 1904, p. 147.]
160 Vogelstein 1923, p. 440. [Grossman's emphasis.]
161 Vogelstein 1923, p. 436.

By establishing central sales offices, fixing sales targets, and eliminating competition, advertising and the drive to secure customers and retain them ceases either totally or in part. 'Here it is a matter of monopoly making the … [further] possibility of raising profits, through *cost savings, in this case savings in commercial expenses*, practicable.'[162]

The extent and importance of this tendency for large associations and concerns to eliminate independent wholesalers and set up their own export organisations can be illustrated by the example of the Belgian-Luxembourg export company 'Columete'. It is a sales organisation run by Arbed (Aciéries Réunis de Burbach-Eich-Dudelange) and Red Earth (Terres Rouges). In 1922 it had branches and agencies in Paris, London, Brussels, Rotterdam, Basel, Madrid, Rome, Cologne, Antwerp, Stockholm, Oslo, Copenhagen, Vienna, Stuttgart, Bucharest, Sofia, Belgrade, Casablanca, Santiago, Rio de Janeiro, Buenos Aires, Java, Shanghai, Hong Kong, Tientsin, Sydney, Tokyo; in short, it is spread over the whole world.[163] In copper 'commerce' continues to exist in form, it is true, 'but … *de facto* no longer as an … independent function, rather as one tightly connected with the producers'. The electrical engineering and dye industries also have sales organisations abroad.[164] According to [Eduard] Rosenbaum's calculations, of Germany's total imports in 1926 some 48.3 per cent was imported directly, i.e. without the mediation of any trading concerns. Fifty per cent of raw materials for textiles was directly imported and as much as 90 per cent of ores and partly refined metals.[165]

The elimination of commercial profit with the aim of raising the average rate of profit on industrial capital is *imposed by the tendency for the valorisation* of this capital *to decline* in the course of capital accumulation. Thus as the level of capital accumulation there is a growing tendency to eliminate commercial capital and to fight it.

The tendency to eliminate commercial profit is not, however, tantamount to the disappearance of the merchant's activity! Within the capitalist mode of production this is indispensable, because the commercial agent fulfils the *necessary functions* of industrial capital within the sphere of circulation, notably, 'its function in the realisation of values',[166] and in this regard merely represents the industrial capitalist.[167] '*Circulation is just as necessary* for commodity produc-

162 Vogelstein 1923, p. 425. [Grossman's emphasis.]
163 Gebhard 1927, p. 1564; *Frankfurter Zeitung* 1928 f.
164 Rosenbaum 1928, pp. 127, 137–8.
165 Rosenbaum 1928, pp. 130, 146.
166 Marx 1981, p. 407.
167 Marx 1981, p. 386.

tion as is production itself, and thus agents of circulation are just as necessary as agents of production. The reproduction process includes both functions of capital, and thus also the *need for these functions to be represented*, either by the capitalist himself, or by salaried workers, his agents.'[168]

Despite the tendency for commercial profit to be eliminated, the commercial function grows more and more in significance, as the capitalist mode of production develops, regardless of whether it is represented by individual merchants or by commercial organisations, large retail co-operatives, industrial concerns and trusts. 'Commodity trade is presupposed, as a function of merchant's capital, and this *develops ever further* with the development of capitalist production.'[169] Under craft production goods were produced for the craftperson's own consumption or for customers, without the product being traded. 'The extent to which production goes into trade and *passes through the hands of merchants* depends on the mode of production, *reaching a maximum* with the full development of capitalist production, where the product is produced simply as a commodity …'[170] 'With the development of the capitalist mode of production all production becomes commodity production, and hence the whole of the product comes into the hands of agents of circulation …'[171] The share of commerce in the overall occupational structure must, consequently, grow. The numbers of commercial businesses as well as of commercial employees grow. 'The more the scale of production grows, *the greater are industrial capital's commercial operations*.'[172] This makes the *employment of commercial wage-workers necessary*. A new 'middle class', a vast new intermediate layer of commercial agents, commercial employees, correspondents, accountants, cashiers etc., emerges.

The question now arises, how does the existence of this new middle class affect the course of the capitalist reproduction process? Is it, in fact, able to

168 Marx 1978, p. 205. [Grossman's emphasis.] Marx emphasises this repeatedly and, for example, in another passage writes: 'Here we thus have palpable evidence that the operations of the merchant are nothing more than those operations that *must always be performed* to transform the producer's commodity capital into money … If selling were the exclusive business of a mere agent of the producer, instead of being performed by an independent merchant, and purchase likewise, this connection would not be obscured for one moment' (Marx 1981, p. 382). [Grossman's emphasis.] This must therefore be particularly stressed because Bukharin defends the strange view that '[t]he organization of production and distribution in point of fact [!] *eliminates* commerce in general and commercial speculation in particular' (Bukharin 1979, p. 75). [Grossman's emphasis.]

169 Marx 1978, p. 191. [Grossman's emphasis.]

170 Marx 1981, pp. 442–3. [Grossman's emphasis.]

171 Marx 1981, p. 425.

172 Marx 1981, p. 413. [Grossman's emphasis.]

moderate capitalist crises and weaken the breakdown tendency, as Bernstein maintained, and all reformists and critics of Marx have subsequently repeated?

Marx demonstrates the essentially distinct character of these 'middle strata', which emerge on the basis of capitalist production.

> The expenditure on this, even though incurred in the form of wages, is distinct from the variable capital laid out on the purchase of productive labour. It increases the outlays of the industrial capitalist, the mass of capital he has to advance, *without directly increasing the surplus value*. For this is an outlay for labour employed simply in *realising values already created*. Just like other outlays of the same kind, this *too reduces the rate of profit*, because the capital advanced grows, but not the surplus value.[173]

On the contrary. Because variable capital is advanced to these commercial workers, 'a part of the social product is transferred to' them,[174] i.e. the accumulated sum available for hiring additional productive workers, a_v, is reduced. Marx writes, 'A part of the variable capital must be deployed in acquiring these labour powers that function only in circulation. This capital advance creates neither products nor value. It proportionately reduces the scale on which the capital advanced functions productively' and 'means a deduction from the product'.[175]

The existence of these middle strata, which arise from capitalist production itself, worsens the rate of valorisation of the total social capital and thus intensifies the breakdown tendency, regardless of whether these middle strata initially consolidate the rule of capital politically. If these middle strata expand in size, the breakdown tendency has to grow more acute as well. So long as the mass of surplus value grows absolutely this is not apparent. It becomes more starkly obvious from the moment valorisation becomes insufficient as accumulation advances.

i *The Economic Function of 'Third Persons' Not Involved in Material Production, Such as Public Officials, Military Personnel, Free Professionals etc. The Impact of 'Derivative' Incomes on the Reproduction Process*

The term 'third persons' is used by Marx in a *double* sense. Sometimes Marx uses the term to mean independent producers (independent peasants and

173 Marx 1981, p. 413. [Grossman's emphasis.]
174 Marx 1978, p. 210.
175 Marx 1978, p. 211.

artisans) who are remnants of earlier modes of production that have no intrinsic connection with the capitalist mode and so can and must be excluded, at the outset and decisively, from any analysis of the inner nature of capitalism. We shall demonstrate later, in the section on foreign trade (page 372 below), how far these elements located outside capitalist production can and do affect capitalism through foreign trade relations (modification of the law of value when applied to the world market). Secondly, however, Marx means by the term 'third persons' those circles who, in his dramatic language, are typified as 'king, priest, professor, prostitute, mercenary'.[176] To these circles belong state and municipal officials, soldiers, recipients of pensions,[177] lawyers, doctors, teachers, artists and other representatives of the free professions, who certainly exist on the basis of capitalist production but do not participate in material production either directly or indirectly (as intellectuals) and are therefore unproductive from the standpoint of material production. They do not increase the mass of material products; on the contrary, they reduce this mass by their consumption, even if they perform sometimes valuable and necessary labour in return. Their revenues are not 'incomes got without labour', obtained by virtue of their control of *capital*. Rather, 'the recipients of these … revenues … draw them by way of their social functions … and they can therefore view these functions of theirs as the original source of their revenue'.[178]

But however important these services may otherwise be, they are not embodied in products, commodities. To the extent that these persons need to consume, they have to depend on those who take part in material production. From the standpoint of material production, their incomes are not independent but derivative. Thus Marx writes,

> All members of society who do not figure directly in the reproduction process, whether as workers or not, can receive their share of the annual commodity product – i.e. their means of consumption – in the first instance only *from the hands of those classes to whom this product firstly accrues* – productive workers, industrial capitalists and landlords. To this extent, their revenues are *materially derived* from wages (the wages of the productive workers), profit, and ground rent, and hence appear, in contrast to these original revenues, as derivative.[179]

176 Marx 1978, p. 448.

177 ['Pensioners' here means recipients of regular, substantial, public or private grants of income, rather than payments from retirement schemes.]

178 Marx 1978, pp. 448–9.

179 Marx 1978, p. 448. [Grossman's emphasis.] Similarly, somewhat earlier: 'All that exist now

We know that Marx also excludes this group of 'third persons' from his analysis of 'pure' capitalism and confines it to the two fundamentally important classes of workers and capitalists, that is the classes which define the capital relationship. It is intrinsic to the nature of Marx's method of successive approximation that the exclusion of the above-mentioned group of third persons could only have a provisional, preliminary character and that the elements that were initially disregarded must be considered subsequently. For, 'the actual composition of society by no means consists only of two classes, workers and industrial capitalists, and where therefore *consumers and producers* are not identical categories'. In other words, 'the first category, that of the consumers (whose revenues are in part not primary but secondary, derived from profit and wages), *is much broader* than the second category [that of producers], and therefore the *way in which they spend their revenue*, and the very *size* of the revenue give rise to very considerable modifications in the economy and particularly in the circulation and reproduction process of capital'.[180]

So what significance does the existence of these persons have for the process of reproduction and accumulation, especially for the problem of breakdown?

In the first place, there must be clarity about the fundamental difference between the problem at hand and the group of 'third persons' first identified. According to Luxemburg, the surplus value produced under pure capitalism cannot be sold, to the extent that it is not used for the personal consumption of the entrepreneurs. And this remainder of surplus value, unsaleable in the capitalist country, can only be accumulated if *new consumers* are found in non-capitalist countries. In reality, there can be no talk of finding new consumers for the so-called residue of surplus value. To consume means to destroy use values. There is not talk of this, however, in the transaction that Luxemburg describes. Yet the commodities in question are definitely not one-sidedely transferred to non-capitalist countries (e.g. as gifts) but sold on the basis of the law of value. The commodities identified do not finally disappear from the circulation of the capitalist country. They simply change their useful form: instead of commodity a) of a given value, we now have another commodity b) of the same value and different in its useful form. The transaction described has not brought

are two starting points, the capitalist and the worker. All third parties either must receive money from these two classes for the *performance of services*, or, in so far as they receive money without providing services in return, they are co-proprietors of surplus value in the forms of rent, interest, etc' (Marx 1978, p. 408). [Grossman's emphasis.]

180 Marx 1989c, p. 124. [Grossman's emphasis.] And similarly, in another passage: 'In the real world the matter appears more intricate, since the partners who share the loot – the surplus value of the capitalist – figure *independently* of him as *consumers*' (Marx 1978, p. 487). [Grossman's emphasis.]

us a hair's breadth closer to solving the problem. The definitive consumption of these commodities does not take place in the non-capitalist countries but within capitalism itself.[181] Precisely this group of 'third persons', i.e. 'consumers' in non-capitalist countries, are thus completely irrelevant to the problem we are discussing here.

Matters are quite different for the second category of 'third persons'. Their material incomes are derivative, i.e. they draw them from the capitalists, who do participate in material production and to whom the product first accrues. We are dealing here, therefore, with a class of persons who, from the standpoint of material production, are *consumers* without at the same time being *producers*. Because of their existence the number of consumers is much greater than that of producers. Their consumption (insofar as this does not happen at the expense of the working class, in other words, is not drawn from wages *v*) *diminishes* surplus value, that is the source available for accumulation. Of course, these persons perform *services* in return for the commodities acquired by them. But the non-material character of those services makes it impossible to use them for the accumulation of capital. The character of commodities *as things* is a necessary precondition for their accumulation. Only to the extent that value is embodied in objects can it enter the circuit of commodities *C–M–C*, can it represent an accumulation of capital.[182]

Now, because the services of third persons identified are of a non-material nature, they do not contribute to the accumulation of capital. On the contrary, their consumption *reduces the accumulation fund*. The larger this class, the greater the deduction from the accumulation fund. So the tempo of accumulation slows down.

Schulze-Gaevernitz writes of the growth of these strata in England at the start of the twentieth century:

> Even in terms of numbers, the rentier class steps firmly into the foreground. The number of pensioners in Great Britain is estimated to be around a million [in a total population of 32.5 million in 1901] … Among

181 Even Lederer points out that the definitive consumption of the exported commodities takes place – by way of detours through exchange – in the capitalist countries themselves (Lederer 1925, p. 359).

182 Marx writes: 'The commodity *as such* is exchange value' (Marx 1987b, p. 308). [Marx emphasised 'is'.] But this exchange value has been embodied in objects and only then is it a matter of commodites. 'Value exists only in use values, *in things*' (Marx 1976b, p. 310). [Grossman's emphasis.] 'There are however particular branches of industry in which the product of the production process *is not a new objective product, a commodity*' (Marx 1978, p. 134). [Grossman's emphasis.]

> direct pensioners not only their family members should be counted but also a numerous and growing train of domestic servants … Particularly characteristic of widespread luxury is the large number of male servants … If the various professions that work to sustain the lifestyle and luxury of these people are included, it can be argued that the pensioner class and its dependents already constitute a major and growing fraction of the nation today.[183]

But this category includes more than just pensioners. Of 31.11 million economically active persons in Germany, according to the 1925 census of occupations and factory establishments, there were 1.97 million in services (administration, education, army, church, healthcare, law, theatre and music) and 1.39 million in domestic service, a total in services of 3.37 million economically active persons, who played no role in material production and whose consumption reduces the potential source of accumulation.

However the services of these 'third persons' is now assessed, one thing appears clear: wherever this class is numerous, a large part of the social product is transferred to it, consequently the coefficient of accumulation is reduced and the tendency to breakdown intensifies. The Institut für Konjunkturforschung estimated that in Germany the 'net value' of such services in 1925 was six billion marks, amounting to 11 per cent of the estimated total national income of 54 billion marks.[184] In England, where such persons are numerous, the tempo of accumulation must be slower than in younger capitalist countries such as, for example, America, where the tempo can be much faster because the number of such persons is relatively small, and only grows relatively, i.e. in relation to the total number of economically active people, with and as a consequence of the development of capital accumulation.

The breakdown tendency can be weakened by reducing the number of these persons. In practice, however, there are rather narrow limits on this reduction. For the high standards of living and luxury, to which the possessing classes are accustomed, depend precisely on the existence of these persons. Reducing the number of 'third persons' would thus be tantamount, for those classes, to a fall in their living standards.[185]

---

183 Schulze-Gaevernitz 1906, p. 323.

184 *Vierteljahrshefte zur Konjunkturforschung* 1927c, p. 20.

185 Luxemburg and her adherents repeatedly ask what happens to the capitalists' growing surplus value? Where does it find definitive consumers, as the small numbers of entrepreneurs cannot possibly consume the whole surplus value on their own? At the same time, however, these writers point out that the number of people actively engaged in

j *Extending the Scope of Production with the Same Technology* (*Simple Accumulation*)

Like Otto Bauer, we have assumed that, in the reproduction schema, changes and indeed *improvements in technology* occur every year, so that with annual population growth of five per cent constant capital increases by 10 per cent. This assumption is purely fictitious if it implies a claim to general validity. Observation of empirical reality shows that production is not always extended on the basis of a higher organic composition of capital. A section of the capitalist class extends production on the basis of the *existing* technology for longer or shorter periods of time, i.e. we are dealing with simple accumulation where the *c* part of capital grows at the *same* rate, *pari passu*, as population. The growth of capital here exerts a strictly proportional attraction on workers. In the course of the capitalist mode of production's history, the technical foundations of capital are of course constantly improved, and the organic composition of capital is subject to continuous variation. 'This constant variation is however equally *constantly interrupted by periods of rest, during which there is a merely quantitative extension of factories on the existing technical basis*.'[186] In the course of capital accumulation these periods of rest, with unchanged technology, become ever shorter. 'The *intermediate pauses* in which accumulation works as simple extension of production on a *given* technical basis are shortened.'[187] However, to the extent that these periods of rest occur – in contrast with the fictitious trajectory laid out in the reproduction schema with continuous, general improvements in technology – they mean that the breakdown tendency, which results

---

commerce has grown at a faster pace than population growth. They forget that circulation functions are unproductive, that this mass of commercial employees create no value but consume value. And the same is also true of 'third persons'. *Only the growth of surplus value* permits and makes possible the growth of all these unproductive classes. After Marx has analysed the process that would play out in a society consisting only of capitalists and workers, he writes: 'But as things actually are, the replacement of the capitals invested in production depends to a large extent on the consumption capacity of the non-productive classes' (Marx 1981, p. 615).

186 Marx 1976b, p. 578. [Grossman's emphasis.]

187 Marx 1976b, p. 782. [Grossman's emphasis.] In the essay cited earlier 'Antikritik der Marxschen Bevölkerungstheorie', Yasuma Takata does assert that, rather than becoming shorter, the intermediate pauses grow longer, because the encroachment of monopoly organisation, domination by trusts and cartels eliminate the compulsion for technology to change continuously. [Grossman did not refer above to Takata's article, nor has it been possible to identify it.] Only, Takata forgets that on the basis of capitalism complete monopolies are impossible, because in the background of every monopolistic organisation there lurks the latent competition of outsiders or of a possible substitute product; moreover that technology is not conditioned by the proportions of a national monopolistic organisation but by considerations of competiveness on the world market.

from the schematic course of the reproduction process, is *weakened*. That is, absolute overaccumulation is displaced to a more distant future than would be the case according the schema. Thus Marx expressly states: 'This constant enlargement of the capital, and therefore also an expansion in production on the basis of the *old methods* which goes smoothly forward while new methods are already introduced alongside, is a further reason *why the rate of profit does not decline in the same measure* as the total social capital grows'.[188] We will see in the next chapter that conflicts on the world market become ever fiercer and that precisely *technological leadership* is the only means of retaining dominance on international markets. The sharper those struggles become, the greater is the compulsion to change technology and the shorter the 'intermediate pauses' with static technology. It follows that this moderating factor gradually declines in significance.

k *The Influence of Periodic Devaluation of the Existing Capital on the Accumulation Process. Crises and Wars as Factors That Weaken the Breakdown Tendency*

We have seen that the assumption of *constant value* is one of many underlying Marx's reproduction schema. Accordingly, Bauer makes the constancy of values a basic part of his reproduction schema and this in two senses. First, the value of the constant capital used up in the process of production is entirely transferred to the product and retained there without undergoing any changes. Secondly, the values created in the production process during a year are entirely preserved without any changes in magnitude, to the extent that they have not been destroyed in consumption, and are accumulated in the production process of the following year. The values existing at the start of the production process and those newly created during it are entirely preserved in Bauer's schema, even though the capitalist mechanism illustrated in the schema features the use of progressively better technology from year to year! Bauer does not notice that he has fallen into a manifest contradiction. Improved technology means that the same product is produced in a shorter time, i.e. with the expenditure of less labour. It follows that the value of the product must fall. But not just the product's value. This decline in value retroactively affects all those commodities that were produced earlier, with a greater expenditure of labour, and are now on the market: *they are devalued*.[189] There is no trace of this typ-

188 Marx 1981, p. 372. [Grossman's emphasis.]

189 'If, as a result of a new invention, machinery of a particular kind can be produced with a lessened expenditure of labour, *the old machinery undergoes a certain amount of depreciation*, and therefore transfers proportionately less value to the product' (Marx 1976b,

ical feature of capitalist production in Bauer's reproduction schema. Indeed, Bauer too writes about devaluations. But these, according to him, only happen when there is overproduction, beyond the limits prescribed by his schema. If the scope of production remains within these limits, i.e. in equilibrium, no devaluations occur: once created, values are preserved for all time. Not so with Marx! Devaluation is a necessary feature of the capitalist mechanism even in its ideal-typical normal course, i.e. even when we imagine it to be in a state of equilibrium. This is a necessary consequence of continual improvements in technology, of the fact that labour time serves as the measure of exchange value. 'Every new invention that enables the production in one hour of that which has hitherto been produced in two hours', Marx already writes in 1847,

> depreciates all similar products on the market … Labour time serving as the measure of marketable value becomes in this way the *law of the continual depreciation of labour*. We will say more. There will be depreciation not only of the commodities brought into the market, but also of the *instruments of production and of whole plants*.[190]

It follows from these circumstances that the assumption of constant values underlying Marx's schema has and can only have a purely preliminary, provisional character; that devaluations of the existing values must subsequently be considered, in accord with concrete reality. And, of course, this raises the question of how far such a correction modifies the pure law of accumulation and breakdown derived from the reproduction schema.

Only the fact of the complete misunderstanding of Marx's methodological thought, which underlies the reproduction schema, the procedure of coming closer to concrete reality in steps, explains why this problem has not been seen before. It is true that the simplifying assumption of constant values was noticed. The subsequent correction that corresponds with it was forgotten by Bauer as well as Tugan-Baranowsky. Their schematic constructions, ostensibly

---

p. 318). [Grossman's emphasis.] 'A commodity represents, say, 6 working hours. If an invention is made by which it can be produced in 3 hours, *the value, even of the commodity already produced, falls by half*' (Marx 1976b, p. 677). [Grossman's emphasis.]

190 Marx 1976a, p. 135. [Marx only emphasised the first use of '*depreciation*'.] In another passage, where Marx describes accumulation as a normal and necessary feature of capitalism, he writes: 'This is the law governing capitalist production, arising from *the constant revolutions in methods of production themselves*, from the devaluation of the existing capital which is *always* associated with this' (Marx 1981, p. 353). [Grossman's emphasis.] 'A rise in productivity (which … *always* goes hand in hand with devaluation of the existing capital …)' (Marx 1981, p. 356). [Grossman's emphasis.]

based on Marx's reproduction schema, are thus unrealistic fictions incapable of reflecting or explaining the actual course of the capitalist reproduction process. For, the devaluation of the existing capital goes hand in hand with the fall in the rate of profit and is simply another expression for it.[191] The fall in the rate of profit 'accelerates the concentration of capital, and its centralisation, by dispossessing the smaller capitalists'.[192] If the phenomenon of the devaluation of existing capitals is ignored, as Bauer and Tugan-Baranowsky do in their schematic presentations, then it becomes impossible to explain such basic and characteristic features of the capitalist mechanism as the concentration and centralisation of capital. In fact even this important process is passed over in silence in Bauer's and Tugan-Baranowsky's schematic presentations.

So how does the devaluation of old capital impact the course of the reproduction process?

It is not our task to deal with all aspects of its consequences and we confine ourselves here to the discussion of those effects that have a direct connection with the *problem of accumulation*. We have seen how the accumulation process encounters its final limit in insufficient valorisation. The continued existence of the capitalist mechanism is then only secured if it succeeds in restoring and securing valorisation, profitability. How can this be achieved? Only if a) relative surplus value increases or b) the value of the constant capital is reduced, in other words if 'it cheapens either the commodities that go into the reproduction of *labour power* or the elements of *constant capital*. Both of these, however, involve a devaluation of the existing capital'.[193] This devaluation, however, does not occur as a result of overproduction but in the normal course of capitalist accumulation, as an effect of continuous (in the schema, annual) improvements in technology, through the introduction of new inventions and methods of production. The occurrence of periodic improvements in technology corresponds to '[t]he periodical devaluation of the existing capital, which is a means, *immanent* to the capitalist mode of production, for delaying the fall in the profit rate and accelerating the accumulation of capital value by the *formation of new capital*'.[194]

How does the effect of the devaluation of capital become apparent? To understand this, it should not be forgotten that the concept of the organic composition of capital is intimately linked with the devaluation of the existing

191 Marx 1981, p. 357.
192 Marx 1981, p. 349.
193 Marx 1981, p. 356. [Grossman's emphasis.]
194 Marx 1981, p. 358. [Grossman's emphasis.]

capital. In other words, the consequence of devaluation is reflected in the fact that the *same quantity* of means of production represents a *smaller value*. There is an analogy here with the 'opposition between use value and exchange value following on from an expansion of productivity' discussed earlier (page 292 above), namely a cheapening of the elements of production, i.e. a more rapid growth in the mass of use values than the mass of value. With this difference, however, that in the case discussed above the elements of production *already* come into the world cheaper, while in the current case the elements of production produced at a given value are only *subsequently* devalued. The technical composition of capital $MP : L$ remains unchanged while its value composition $c : v$ falls. The same quantity of labour is needed both before and after to set the same *mass* of means of production in motion and produce the same quantity of surplus value. As, however, the value of the constant capital, *c*, has fallen, the same quantity of surplus value is spread over a smaller capital.[195] This increases the rate of valorisation and postpones the breakdown to a more distant future. According to our table, the breakdown occurs in year 36 of capital accumulation. The effect of periodic devaluations is that the capital amassed represents a smaller sum of value than would have to be the case in the table and in year 36 only reaches the magnitude it would have reached in, for example, year 20.

It is therefore apparent that however much the *individual* capitalist may be hit by the devaluation of the existing capital that occurs with crises, for the *capitalist class*, the capitalist system, they are a safety valve, a means of prolonging the life of the system and moderating the danger of the whole mechanism exploding. The individual is sacrificed in the interests of the species. 'Simultaneously with the fall in the profit rate … [there comes] a devaluation of the existing capital, *which puts a stop to this fall and gives an accelerating impulse to the accumulation of capital value*.'[196]

∴

195 Secondly, however, the destruction of capital through crises means the *depreciation of masses of value* … It does not cause the destruction of any use values. What one loses, the other gains … The old capitalists go bankrupt … although the buyer of these commodities, because he has acquired them at half their cost price of production … can profit. A large part of the nominal capital of society, that is, of the *exchange value* of the existing capital, is once for all destroyed, although this very destruction, *since it does not affect the use value, may greatly expedite the new reproduction*. This is also the period during which money interest enriches itself at the cost of industrial interest. (Marx 1989c, p. 127)

[Marx only emphasised 'destruction of capital', 'values' and 'exchange value'.]

196 Marx 1981, p. 357. [Grossman's emphasis. Translator's interpolation.]

Devaluation refers to the *sale of commodities* at ruinous prices. This is in contrast to the devaluation of *securities*, shares whose devaluation leaves the national economy neither richer nor poorer. The latter devaluation is, furthermore, of a temporary nature and *à la longue* the value of securities even rises because, with the fall in the rate of profit, the market price of this paper *rises continuously*. Thus ever larger masses of capital must be valorised.[197]

The forms in which devaluation of accumulated capital occurs within a given economy are quite diverse. 1) Marx deals initially with the normal case, the periodic devaluation that is a consequence of technological improvements, where there is a reduction in the value of the old capital, while the mass of the means of production remains the same. 2) The tendency to breakdown is affected in the same way if wars, revolutions, long-term use without simultaneous reproduction etc. use up or destroy the apparatus of reproduction, i.e. not only are values used up or destroyed but also use values. For a given economy the effect of capital devaluation is the same as if the accumulation of capital was at a lower level of development. It gives the accumulation of capital greater room for expansion. The true function of wartime devastation in the capitalist mechanism is only explicable from our theoretical perspective. Far from being a hindrance to the development of capitalism or a circumstance that accelerates the collapse of capitalism, as Kautsky and numerous other Marxist theorists have asserted and expect, destruction and devaluation through war are rather a means of weakening the threat of breakdown, of creating a breathing space for the accumulation of capital. For example, it cost Britain £23.5 million to suppress the Indian uprising of 1857–58 as against £77.6 million for the Crimean War, a total of £101 million or over two billion reichmarks. Every such loss of capital relieves an overly tense situation and creates space for a new upswing. This was the effect, above all, of the colossal losses of capital and devaluations that accompanied the World War.

According to Woytinsky, the material losses due to the World War can be estimated to have been $260 billion in direct expenses and $90 billion in indirect losses, a total of $350 billion. 'In the course of the War's four years, about 35 per cent of the wealth of humanity was destroyed and squandered.' This huge deficit was, in part, offset by the annual excess of production over consumption. In 1914–19 this excess may have been $200–250 billion, so that the net decrease in the world's wealth during this period was $100–150 billion. Yet the distribution of this decline is very uneven among countries: Europe was impoverished, while the United States of America and Japan experienced more rapid

197 ['*À la longue*' means 'in the long term'.]

enrichment during the War than in peacetime. Britain's assets fell from $80 to $67.5 billion in 1914–19, Germany's from $95 to $60 billion, France's from $65 to $45 billion, Italy's from $25 to $20 billion, and Belgium's from $15 million to $12.5 million.[198] As the population of these countries has grown over this period, despite the losses inflicted by the War, a larger basis for valorisation is available, confronting a reduced capital, thus creating new space for accumulation. Translated into the reproduction schema, the effect of war losses is as if a capitalism that had already reached year 30 was set back to a less advanced level of capital accumulation (despite higher levels of technological development), for example, back to year 20.

All unilateral transfers of value work in the same way for the recipient nations. Germany's reparations payments certainly makes the crisis there worse but they have had the opposite effect on the allied powers.

Kautsky believed that 'the catastrophe [of the World War must] bring about the breakdown capitalism'. Because this did not occur and capitalism 'survived the ordeal of the War', he denies the possibility and necessity of its breakdown, a belief that is also wrong.[199] From Marx's theory of accumulation expounded here it follows that war and the devaluation of capital bound up with it *weaken* the breakdown tendency and must have provided and did provide a new impetus to capital accumulation. Just as false, however, is Luxemburg's conception that, 'From a purely economic standpoint, militarism constitutes a preeminent means for the realisation of surplus value – *i.e. as a sphere of accumulation*'.[200]

It is well known that, from the standpoint of the individual capital, the matter can be described in this way: supplying the military has always offered opportunities for rapid enrichment. From the standpoint of the total capital, however, militarism is a sphere of unproductive consumption. Values are pulverised here instead of being 'saved', i.e. profitably invested as capital. Far from being a 'sphere of accumulation', on the contrary, militarism *slows* it down. A large part of the income of the working class which might have ended up as surplus value in the hands of the capitalist class is confiscated by the state by way of indirect taxation and (to a great extent) is disbursed for unproductive purposes. [Paul] Mombert identifies the 'rising share of taxes and other charges for public purposes in national income' as one of the causes of *slower* capital formation

198 Woytinsky 1925, pp. 197–8.

199 Kautsky 1927, pp. 558–9; Kautsky 1988, p. 424. Sombart refers to the boom periods after the French Revolution, the Napoleonic Wars, the July Revolution in France, the unrest of 1848 and the Franco-Prussian War (Sombart 1909, pp. 80–91).

200 Luxemburg 2015a, p. 331. [Grossman's emphasis.]

in Germany; namely that the burden of customs duties and taxes, imposed by the Empire, federal states and cities, doubled in the period from June 1895 to 1911/12.[201] And [Karl] Helfferich, in his report to the Bankers' Conference, likewise regards the increase in government issued securities over five years, from 1.7 billion, in 1896, to six billion marks, in 1900, as an obstacle to capital formation. He believes 'it would be more rational to rein in such expenditures which – at least to a substantial degree – have an *unproductive* character, than to restrict capital investments that help create new values for us'.[202]

l *The Rise of Share Capital*

Among the factors that counteract the breakdown tendency Marx includes the circumstance that a progressively larger portion of social capital assumes the form of share capital. And this is because

> these capitals, although invested in large productive enterprises, simply yield an interest, great or small, after all costs are deducted – so-called 'dividends'. This is the case with railways, for example. *These do not therefore enter into the equalization of the general rate of profit*, since they yield a profit rate less than the average. *If they did go in, the average rate would fall much lower* … since it is precisely in these undertakings that the proportion of constant capital to variable is at its greatest.[203]

In our reproduction schema, where the whole capitalist class is regarded as a unit, we have already deducted the a_c and a_v parts, which are needed for accumulation, from the social surplus value and placed the whole of the remainder, the k part, at the disposal of the capitalists for their personal consumption. Now let us suppose there are owners of capital (holding shares, bonds, debentures etc.) who do not retain the whole k for their personal consumption but

201 Mombert 1916, p. 389.

202 Helfferich 1912, p. 75. [Grossman's emphasis.]

203 Marx 1981, pp. 347–8. [Grossman's emphasis.] Marx makes a similar statement in another passage: 'Very large undertakings, on the other hand, where the proportion of constant capital is extraordinarily high, such as railways, do not yield the average profit rate, but only a portion of this, an interest. If this were not so the general rate of profit would fall still lower' (Marx 1981, p. 372). And again Marx returns to this 'economically important' fact: 'Since profit here simply assumes the form of interest, enterprises that merely yield an interest are possible, and this is one of the reasons that hold up the fall in the general rate of profit, since these enterprises, where the constant capital stands in such a tremendous ratio to the variable, do not necessarily go into the equalization of the general rate of profit' (Marx 1981, p. 568).

a fixed, as a rule, *smaller* amount; then the amounts remaining for accumulation would be *larger* than a_c plus a_v. In this way they can construct a reserve fund for the purpose of accumulation, which makes it possible for accumulation to last *longer* than described in the schema's normal case. The limitation of large layers of capitalists to receiving only normal interest or 'dividends' is thus a basis for weakening the breakdown tendency. This is also a deeper reason for the phenomenon of the recent strong growth of industrial companies' debentures in Germany, that were previously relatively rare, following the example of Britain where this development occurred much earlier.[204]

m Expanding the Demographic Base by Accelerating the Rate of Population Growth and Immigration. Capital Accumulation and the Problem of Population. The Fear of Underpopulation

Otto Bauer maintained that crises only arise when there is a temporary discrepancy between the size of the productive apparatus and population growth. The crisis is simply an automatic process that adjusts the scale of production to the size of the population, by means of which the crisis is overcome. This harmonist view, which is absolutely incompatible with the essence of Marx's theory, was already brilliantly refuted by Luxemburg. She demonstrated that, in the final decades before the War, the pace of capital accumulation was on multiple occasions faster, sometimes frantically so, than the actual slow pace of population growth in various countries.[205] Bauer's assertion that 'There exists, in the capitalist mode of production, *a tendency for the adjustment of capital-accumulation to the growth of population*' is thus in conflict with the facts.[206] As we saw earlier, during the half-century from 1870 to 1920, the population of the United States of America rose from 38.55 million to 106.41 million, i.e. by 276 per cent,[207] while capital accumulation, in the same period, grew from $1,695 million to $44,467 million, that is by more than 2,600 per cent!

But Luxemburg's critique – valid against Bauer – suffers from the basic flaw that it treats the population only as consumers, as purchasers of commodities produced by capitalists,[208] and therefore regards population as a fetter on the accumulation of capital, because it is not able to provide a sufficient market

204 Weber 1915, p. 218.
205 Luxemburg 2015b, pp. 407 et seq.
206 Bauer 2012b, p. 739.
207 [Grossman did not calculate the percentage correctly and wrote 172 per cent.]
208 'It is clear without any need for further discussion that for capitalist accumulation the yearly additional growth of "the whole human race" can *only* be meaningful to the extent that this "humanity" becomes the buyer and consumer of capitalist commodities' (Luxemburg 2015b, p. 409). [Grossman's emphasis.]

for those commodities. In contrast, we represent a conception, diametrically opposed to both Bauer's and Luxemburg's. Against Bauer, and using his own reproduction schema, it was demonstrated that there can be no talk of a tendency for capital accumulation to adapt to the growth of population, rather that beyond a certain point an overaccumulation of capital necessarily results from the very essence of capital accumulation – despite population growth – because accumulation proceeds and must proceed more rapidly than the population grows, so that the basis for valorisation becomes ever smaller in relation to rapidly expanding capital and finally fails completely. The consequence is as follows.

If the base for valorisation, the number of workers employed, succeeds in growing then the mass of surplus value that can be obtained will be larger, so the breakdown tendency will slow down, because the source of surplus value has now grown larger. Hence capital's tendency *to employ as many workers as possible* is easier to understand. This is absolutely not in contradiction with the other tendency to employ 'as little as possible labour in general in relation to the *capital advanced*'.[209] For, '[t]he *mass* of surplus value that a capital of given size produces is the product of two factors, the rate of surplus value and the number of workers employed at this rate'.[210] It follows that '[a]ssuming the necessary means of production, i.e. a sufficient accumulation of capital, the creation of surplus value faces *no other barrier than the working population*, if the rate of surplus value ... is given'.[211] Thus population constitutes a barrier to accumulation but not in Luxemburg's sense, i.e. that the number of consumers, purchasers, limits accumulation but rather that population defines the *limit to valorisation*. If the demographic base grows, the interval prior to absolute overaccumulation is longer, the breakdown is postponed to a more distant future. This is what Marx means when he writes: 'If accumulation is to be a steady, continuous process, then this *absolute growth in population* – although it may be decreasing in relation to the capital employed – is a necessary condition. *An increasing population appears to be the basis of accumulation as a continuous process*'.[212] The tendency to employ as many productive workers as possible is already included in the concept of capitalist production as a production of

209 Marx 1981, p. 340. [Grossman's emphasis.]

210 Marx 1981, p. 341. [Grossman's emphasis.]

211 Marx 1981, p. 351. [Grossman's emphasis.]

212 Marx 1989c p. 110. [Marx only emphasised '*increasing population*'.] Similarly, already in the first volume of *Capital*: 'the mass of surplus value is determined by the product of the number of labour powers simultaneously exploited by the same capitalist and the degree of exploitation of each individual labour power' (Marx 1976b, p. 418). 'With a given length of this working day ... the mass of surplus value can be increased only *by increasing the*

surplus value and surplus labour. 'The more of the latter are employed … the more massive is production and the greater the surplus value or profit.'[213] 'It is simply the needs of the capitalist mode of production … that lead *the number of wage labourers to increase absolutely*, despite this relative decline.'[214]

From this characteristic of capitalist production, it is already apparent how unfounded, indeed unintelligible, is the following objection that Oppenheimer raises against Marx. Oppenheimer writes that Marx 'lost the match when he had to concede that in industry as a whole the workers set free are more than offset' [by new employment];[215] that, by and large the number of employed industrial workers increases (see pages 165 et seq. above). The conclusion from our discussion is, rather, that capital accumulation is only possible precisely to the extent that it succeeds in creating a broader basis for valorisation of the growing capital. The situation in Germany can illustrate this. The low level of capital accumulation up to the end of the 1880s in Germany made it impossible for nascent large-scale industry to absorb the whole of the annual growth of population in the cities and the excess which was freed from the countryside. The safety valve of emigration had to be opened. That had grown continuously since the beginning of the nineteenth century. In the first decade after the foundation of the German Empire, 622,914 people emigrated. In the following decade, 1881–90, the number grew to 1,342,423. With the rapid industrial upswing and the accelerated tempo of accumulation that followed in the 1890s, emigration ceased, and immigration (of Poles, Italians) into the industrial areas of western Germany even began.[216] Only this growing absorption of additional labour power could provide a sufficient basis for the creation of the surplus value required to valorise the expanded capital. Soon, however, the natural growth of population in the cities and its displacement from the land to the city failed to suffice, even though with the development of the capitalist mode of production the *intensity* of labour does constantly grow, so that the mass of exploited labour increases more rapidly than the number of workers.

Not only were the workers displaced by progressive mechanisation, that is, the progressively higher organic composition of capital (to say nothing of the periodic growth of the reserve army in times of crisis) absorbed. In addition,

---

number of workers, i.e. the size of the working population. The growth of population here forms the *mathematical limit to the production of surplus value* by the total social capital' (Marx 1976b, p. 422). [Grossman's emphasis.]

213 Marx 1981, p. 413.

214 Marx 1981, p. 372. [Grossman's emphasis.]

215 [Oppenheimer 1903, p. 59.]

216 Waltershausen 1924, p. 94.

the available reserves of workers were employed in growing numbers in production. According to the occupational census of 1895, 42.7 per cent of the total population were 'economically active'; by contrast, in the 1907 census 45.7 per cent were. That still did not suffice to valorise the expanding capital. After the 1907 crisis, capital was compelled to create an even broader basis for valorisation, by a more widespread recruitment of women workers, who have the convenient advantage of being cheaper to employ ... And this phenomenon became permanent. Arthur Feiler, an expert and penetrating observer of the German economy, writes:

> It became increasingly clear that the *rapid expansion of female labour*, which had marked the depression years [1908 and 1909], was not some passing phenomenon that would vanish once levels of employment rose but a feature that persisted during the revival as it had during the depression ... The number of women workers grew and grew. By the start of December 1910 it was 33 per cent higher than it had been on 1 January 1905. Allowing for natural population growth over the six years from 1905, the number of these working women grew by a whole third! And precisely this trend became even more pronounced in the years that followed. The number of women employed in factories and offices grew at a much more rapid pace than the number of men. This amounted to a revolution ... We are now confronted by the staggering fact that, to a previously unimaginable degree, women and girls in Germany have today become, as men have long been, *worker bees*. At the end of 1913 there were exactly as many women employed as men, close to one and a half times as many as there were in 1905.[217]

The available reservoir of people is used still more extensively. According to the 1925 census of occupations and establishments, the number of economically active people has risen still more and was already 51.3 per cent of the total population.[218]

It is, however, clear that not much more can be extracted in this way. Children and the aged cannot be employed in the production process. The domestically available reserves of people are inexorably running dry. The future is regarded with a sense of disquiet. In the *Vierteljahrshefte zur Konjunkturforschung* we read: 'If the long-term growth of productive capacity in Germany's economy over recent decades was *mainly possible on the basis of population*

217 Feiler 1914, pp. 86–7. [Feiler also emphasised 'women and girls'.]
218 *Wirtschaft und Statistik* 1927a, p. 447.

growth, which allowed the continuous absorption of new masses of labour power, then this gives rise to the impression that a standstill in the number of economically active persons would place the possibility of further economic expansion in doubt'.[219] In this essay, 'Demographic Developments and the Economy', the Institut für Konjunkturforschung attempts to calculate the future shape of the labour market in Germany. Despite the losses caused by the War, it states, the German population is still growing. At the start of 1928, about 33.1 million economically active people were available to Germany's economy, i.e. about five million more than at the outbreak of the War.[220] But prospects for the future are unfavourable. 'In the following years an annual growth of population of around 300,000 to 400,000 persons is to be reckoned with. Compared to the years immediately before the War, when there was annual population growth within today's borders of around 750,000 persons, the rate of increase has slowed considerably.'[221] According to its calculations, the 'predicted numbers of men and women gainfully employed in the years 1928–40' will be as follows (in thousands):[222]

Year	Males	Females	Total
1928	21,311	11,825	33,136
1929	21,574	11,938	33,512
1930	21,836	12,045	33,881
1931	21,907	12,081	33,988
1932	21,856	12,050	33,906
1933	21,786	11,999	33,785
1934	21,715	11,953	33,668
1935	21,806	11,963	33,769
1936	22,028	12,071	34,099
1937	22,301	12,184	34,485
1938	22,462	12,240	34,702
1939	22,594	12,281	34,875
1940	22,685	12,312	32,997

219 *Vierteljahrshefte zur Konjunkturforschung* 1928a, p. 34. [Grossman's emphasis.]
220 *Vierteljahrshefte zur Konjunkturforschung* 1928a, p. 33.
221 *Vierteljahrshefte zur Konjunkturforschung* 1928a, p. 32. [The first sentence was emphasised in the original text.]
222 *Vierteljahrshefte zur Konjunkturforschung* 1928a, p. 33.

The growth in the numbers of economically active people is extremely slow and tends to stagnate. The Institute consoles itself by noting that 'the progressive rationalisation of plants and increasing use of machinery will even make it possible to enlarge productive capacity *without employing new workers*. Developments in the past few years already indicate that a very considerable proportion of the additional economically active people have not found employment opportunities in the production but in the distribution of goods.' This forgets that value and therefore surplus value can only be *created* in the production of goods. Once the influx of workers into the sphere of production stops, the establishment of additional *domestic* sources of surplus value will be restricted. That means, however, that the expanded capital is only able to squeeze the additional surplus value needed for its valorisation from the world market, through transfers, by means of foreign trade.[223] But for Germany, this means *sharper struggles on the world market*.

But, even in countries with a growing population, the dangers of overaccumulation are unavoidable.

In fact, with a rising organic composition of capital, that is with its accelerated rise, every expansion in the number of workers signifies only a temporary weakening of the breakdown tendency but not that it is finally overcome. From the fact that constant capital grows more rapidly than population, it is inevitable that, after a more or less protracted period of accumulation, a time must come when a *given population does not suffice* to valorise the swollen mass of capital. It is in the nature of capitalist accumulation that capital has a constant tendency to outgrow the narrow basis of valorisation imposed by the population. Capital now begins to press hard against the maximum limits of valorisation. Population starts to form a barrier to capital accumulation, however, not because the *basis for consumption* under the capitalist mode of production becomes insufficient but because the *basis for valorisation* becomes insufficient, because 'the growth of population here forms the mathematical limit to the production of surplus value …'[224]

Once this boundary point is reached, 'dire consequences' – to use Lexis's phrase – for the capitalist mode of production must follow. For, as a consequence of insufficient valorisation, i.e. as a consequence of the overaccumulation of capital, a reserve army must permanently grow and the setting free of workers will become a permanent phenomenon; but not the setting free

223 There is more detail on this in the section below, '2a The Function of Foreign Trade under Capitalism', pp. 363–385.

224 Marx 1976b, p. 422.

of labour because of machinery but setting free because of capital accumulation. As a result of an insufficient population base an excess working population must emerge! That this threatens the whole mechanism scarcely needs to be emphasised. We have already mentioned Lexis's melancholy deliberations on capitalism's prospects in the future.

So we see why the question of population has so fundamentally changed since Malthus. It is the contrast between the initial and late phases of capital accumulation that sets the current epoch apart from that of Malthus,[225] the contrast between the slow tempo of accumulation when capitalism was beginning (hence a reserve army due to insufficient accumulation) and the accelerated tempo of accumulation at higher stages of capitalist development (hence a reserve army due to overaccumulation).

This transformation explains the concern of bourgeois theorists, not only in France but also in Germany, about whether enough labour power will be available to sustain capital accumulation in the future.[226] The more accumulation advances in the United States, the more numerous are the voices of American statisticians who fear a US demographic standstill in the near future.[227] This transformation also explains the fear of the steep decline in the excess of births over deaths with the advance of civilisation experienced by the theoretical representatives of 'civilisation', i.e. of capitalist production. Leroy-Beaulieu plaintively asks '… les races européennes conserveront-elles longtemps encore un excédent notable des naissances sur les décès?' And he states, 'Il y a un siècle, au temps de Malthus, cette question ne se serait pas posée … depuis une vingtaine d'années tout au moins, cette question se pose d'une manière press-

225 Leroy-Beaulieu, therefore, correctly writes, 'Quoique le danger auquel est exposée la civilisation moderne se trouve dans une direction opposée à celle où le cherchait Malthus, il peut être passagèrement vrai, que dans certains pays encore … *pauvres en capitaux*, la population peut s'entasser d'une manière excessive par rapport aux moyens d'action, dont elle dispose' (Leroy-Beaulieu 1913, p. 287). ['Although the danger to which modern civilisation is exposed is the reverse of that Malthus identified, it can still be true temporarily, in certain countries *poor in capital resources* that the population can pile up excessively compared with the means of action available to it' Grossman's emphasis.] He has a correct perception of the facts without being able to explain them.

226 Spiethoff writes: 'Every start, and equally the expansion, of capitalist production of goods, presupposes available and idle … labour … The uncertainty about whether idle labour will always be available for the entire future, has given rise to doubts concerning the permanent repetition of upswing movements' (Spiethoff 1953, p. 153).

227 Dublin 1925. It is doubtful if the ban on immigration is sustainable in the long run. The gaps (disregarding illegal immigration) will be temporarily filled by an exodus of Blacks from the South. In 1910–20, 363,918 Blacks migrated to the North and in 1921–22 alone this figure rose to 478,000.

ante'.[228] From this perspective, he assesses the 'masculinisation' of women, i.e. their effort to achieve economic independence. 'La masculinisation de la femme est, à tous les points de vue, un des grands périls de la civilisation contemporaine', because it contributes to the decline in the excess of births over deaths.[229] Leroy-Beaulieu, however, fears this decline. In a separate chapter he depicts the 'Les dangers économiques et moraux d' une population stationnaire et d' une trop faible natalité.'[230] Only the expansion of population can guarantee the economic and moral development of civilised nations. 'Le globe a donc des besoins notables en population …'[231] He calculates that, for an average density of 50 people per square kilometre of space that is still available, 'on peut fixer à 5 milliards le nombre des êtres humains que le globe convenablement exploité pourrait entretenir dans l' aisance …'.[232]

Fear not of overpopulation but its opposite, underpopulation is characteristic of contemporary bourgeois economics. Numerous scholars are concerned with the question of how many people the earth can still sustain at today's level of technology. For example, Ernest George Ravenstein (1891), [Arthur] Fircks (1898), Karl Ballod (1912), [Hermann] Losch (1923), [Albrecht] Penck (1924)[233] and others come to the conclusion that the earth can be inhabited by a maximum of six to eight billion people. This according to the current state of our technological and economic potential. Imagine the wealth, the profits that could be extracted from them! But sadly this population is not there and capitalism has hardly a third of the number cited, hardly 1.9 billion inhabitants of the earth at its disposal. Of this number, half are in autonomous, independent countries that would first have to be conquered before they could be objects of colonial exploitation. Of the other half, 344.7 million are in colonising states and 558.0 million are colonised peoples, as the table in the note below shows.[234] Of the 558 million colonised peoples, 405 million are in British

228 Leroy-Beaulieu 1913, p. 177. ['… will the European races still retain a marked excess of births over deaths for long? A century ago, in Malthus's time, such a question could not have been posed … for the past twenty years at least this question has been posed with urgency'.]

229 Leroy-Beaulieu 1913, p. 273. ['The masculinisation of women is from all points of view one of the great perils of contemporary civilisation'. Leroy-Beaulieu emphasised the whole sentence.]

230 Leroy-Beaulieu 1913, pp. 287–94. ['The economic and moral dangers of a stationary population and excessively low birth rate'.]

231 Leroy-Beaulieu 1913, p. 177. ['The world does desperately need population …'.]

232 Leroy-Beaulieu 1913, p. 175. ['The number of human beings the planet could comfortably support, if it was appropriately exploited, can be determined to be 5 million …'.]

233 [Possibly Ravenstein 1891; Fircks 1898; Ballod 1911; Losch 1923; Penck 1924.]

234 The colonial possessions of the colonising states [Grossman did not specify his source but Statistisches Reichsamt 1926, appendix 'Internationale Übersichten' pp. 1–6 includes the

colonies and hardly 153 million in colonies controlled by the other colonising states together! The world has already been divided up; the available human reservoir is limited. Here capitalism confronts a limit to its development, which it strives and is compelled to break through. Here, then, is a permanent source of conflicts and wars over scarce sources of surplus value. 'Two thirds of the still available parts of the world lie in the hands of Britain, France and the United States. The intention to reserve space for one's own people will certainly arise.' With reference to the stagnant character of France's population it is said, with envy:

> And yet France is the core of a gigantic colonial empire … World history will sweep such unnatural barriers aside and assign the space needed by them to the peoples which expand more rapidly. Stagnant and backward peoples will be pushed into the corner.[235]

data for areas in his table and data for population which is, in some cases, different, as is the data in subsequent issues of the publication to 1929.]

States	**Mother countries**		**Colonies**		**Ratio of mother country to colony**	
	Area '000 **km²**	**Population** '000	**Area** '000 **km²**	**Population** '000	**Area**	**Population**
Great Britain	246	44,196	34,373	405,383	1:14	1:9
France	551	40,744	11,418	52,272	1:21	5:6
Netherlands	34	7,416	2,030	51,211	1:60	1:7
Belgium	30	7,812	2,439	11,434	1:8	2:3
Portugal	92	6,033	2,426	8,837	1:26	2:3
Spain	505	21,314	340	999	10:7	21:1
Italy	310	40,548	2,117	1,908	1:7	21:1
Denmark	43	3,420	2,175	36	1:51	98:1
USA	7,839	113,484	1,856	12,207	4:1	9:1
Japan	381	59,737	298	23,718	4:3	5:2
		344,704		568,005		

The earlier German colonies comprised a total surface area of 2,952,900 [this number has been corrected, as Grossman's figure was 100 lower than the sum of the relevant numbers in the source table] square kilometers, with a population of 12,293,000 inhabitants (Statistisches Reichsamt 1926, p. 22).

235 Winkler 1926, p. 210.

Of great interest in this connection are Winkler's remarks at the Vienna Conference of the Verein für Sozialpolitik, in his presentation on the state of the population on German soil. Starting from current high unemployment, his 'perspectives' on the future development of the population were thoroughly pessimistic.

> It may seem strange that today, at a time of acute overpopulation, I have talked about the dangers of *underpopulation in the future*. But the workers we will need in 20 or 30 years have to be born today; otherwise they will not be in place. The development of population, however, as it plays out before our eyes, is enough to unleash the greatest apprehension about the future of the German people
>
> It is not the evil which is on the agenda today that seriously threatens us in the long-term but the opposite: *underpopulation* … The number of people can be reduced by thousands at one stroke but their number cannot be enlarged as suddenly. *In particular, the missing workers cannot be moulded out of the earth*.[236]

Using the data available to him, the speaker comes to the conclusion that 'Today's overpopulation on parts of German territory, especially the German Empire and Austria, is *only a temporary condition* that will shortly be superseded by *underpopulation*, according to all predictions'.[237] He deplores the 'many … unborn children who will be missing in the future, thanks to our decadent way of thinking' and believes that, 'if only we were a little more modest', enough nourishment could be found not only for the unborn but also for the unemployed.[238] Thus even such means of combating unemployment as emigration, for example, should be condemned. 'Every emigrant means … missing out on the value of their labour.'[239]

Werner Sombart formulates similar perspectives. 'As, in the end, every upswing … means nothing other than more labour, which mainly amounts to the *employment of more workers*, it follows that the ready creation of additional worker-material is perhaps the most significant condition for bringing about economic expansion.' Sombart sees the basis for the USA's powerful upsurge

236 Winkler 1926, p. 213. [Grossman's emphasis.]
237 Winkler 1926, p. 210. [Grossman's emphasis.]
238 Winkler 1926, p. 213.
239 Winkler 1926, p. 210.

in 'the influx of labour power brought about by immigration'.[240] But capitalism's future prospects are not pleasant, according to Sombart. Not because of the depletion of energy[241] or raw materials,[242] as is often supposed. Rather, 'the scope for capitalist existence … will be diminished because population growth will doubtless decline more and more'. (Decline in the birth rate!) 'As … the stormy development of economic life in the age of high capitalism is largely due to an unprecedented expansion in population, the conclusion seems obvious *that the pace must slow down, once population ceases to grow or even declines in extent*.'[243]

But Sombart is unaware of the consequences of a stagnant population for capitalism. He believes that, after its storm and stress period, capitalism will now assume the deliberate developmental tempo of old age. In doing so, Sombart misunderstands the most essential foundations and conditions of capitalist production. Capitalism is not a unified structure but rather a multiplicity of national economies in competition with one another. Capital's permanent transition to a higher organic composition is therefore a necessary condition and precondition for successful struggle on the world market. The requisite level of the organic composition always depends on conditions on the world market and is dictated by them. This has important consequences for the scale of the capital required in any given economy. With an organic composition of 50 c : 50 v and wages of £1 per worker, £2,000 will be needed to employ 1,000 workers. If, however, the organic composition rises to 90 c : 10 v, then £10,000 will be needed to employ 1,000 workers. From where, however, will this larger amount be taken? Even with a growing population, the source of new capital formation – surplus value – is soon exhausted, and 'capital shortage' is the object of continuous complaints from bourgeois theorists and practitioners. With a static or even declining population, raising the surplus value required is quite unthinkable. As the level of the organic composition of capital is, however, given for an organism integrated into the world economy, it is clear that the whole population cannot be employed in the process of production and that, with the transition to an ever higher organic composition of capital, a constantly larger part of the population will be pushed into the ranks of the reserve army. For an organism integrated into the world economy, these effects can of course be temporarily weakened, as can be observed in the French example. The more population stagnates or actually falls, however, the

240 Sombart 1927, 2, p. 577. [Grossman's emphasis.]
241 Sombart 1927, 2, p. 1011.
242 Sombart 1927, 2, p. 1012.
243 Sombart 1927, 2, p. 1014. [Grossman's emphasis.]

greater the number of states with a stagnant population – not to mention the losses inflicted by the War – the more threatening is the danger of insufficient formation of surplus value and hence also of capital, and the more immediate the danger of a constantly expanding reserve army. Bourgeois economics refuses to be perturbed by these issues. From its point of view, it is correct. According to an old proverb, ropes should not be mentioned in the house of the hanged.

If, in contrast, it is argued that capitalism need not regard the danger threatening it quite so tragically, as there are still hundreds of millions of people in gigantic territories of Asia and Africa who come into consideration as objects of its 'keen appetite for alien labour',[244] it must be kept in mind that the point is not whether there are masses of people anywhere in the world but that they must be available where capitalism needs them. From this perspective, it must be asserted that *a shortage of labour power* is precisely the characteristic feature of colonial capitalism and imperialism, whether in Australia or Asia, Africa or South America. While in countries with advanced capital accumulation ever larger masses of workers are pushed into the reserve army, if only periodically, colonial capitalism everywhere struggles with great problems thanks to a shortage of workers.

It would be superfluous to prove this with all the evidence available from every part of the world. We confine ourselves to a few illustrations.

One study of *Australia* states 'that there is no question on which the future of Australia so certainly depends, as upon the question of *immigration*'.[245] For 'the number of Aborigines, who are at a very low level of development, has melted away to roughly 70,000 full-blooded natives, as a consequence of innumerable conflicts with the immigrants and among themselves'.[246] Here there is no non-capitalist market in the sense of Luxemburg's theory. Australia is not a non-capitalist *market* of significance. Its value and significance lie not in the area of market demand but in production. It possesses favourable conditions for production and natural prerequisites for sheep-raising and other branches of agriculture. Next to Argentina, Australia is the world's most important *sheep country*. The Broken Hill district alone supplies 20 per cent of the world's total production of *zinc* (1926). The *copper* mines of Mount Morgan are among the world's largest. Raw materials hold out splendid prospects for monopoly profits! But to mine these treasures labour power is necessary!

---

244 [Marx 1988a, p. 332.]

245 Royal Commission 1914, p. 310. [Grossman's emphasis.]

246 Dreßler 1915, p. 3.

The question of the immigration of *cheap labour power* has therefore always played a great role in all projects for the colonisation of Australia, even as early as the first, now famous system of [Edward Gibbon] Wakefield, 'economist and businessman', as Albert Métin described him. The Wakefield system, which Marx also mentions,[247] rested on the sale of land[248] to capitalist entrepreneurs, the proceeds from which 'would be used to pay for the immigration of a class of poor workmen who, thrown in large numbers on the colonial labour market, would provide a very *cheap work-force* for the landowners'.[249] This was the basis of two Wakefield companies which founded Adelaide and South Australia (1836) as well as Wellington (New Zealand, 1839).

This hunger for labour power has remained to the present. Since the 1860s, the natural increase in population has become progressively weaker. 'While in 1861–1865 the birth-rate was 42.01 per thousand, by 1905/1909 it amounted to only 27.00.'[250] In his analysis of economic relations in Australia, [Robert] Schachner came to the conclusion that 'Australia's greatest need is that for *people*'.[251] '*This part of the world is hungry for people*; it needs them to plough its lands, prospect for its ores, and hammer and weave its industrial products.'[252] 'Australia's production could be increased substantially by *allowing coloured workers to be employed on the plantations of Queensland* … The production of sugar would reach an altogether different level with the help of coloured workers', especially because 'with the entry of coloured workers *wages would fall* …'[253] Here, however, capital runs into the opposition of white workers who fear the unfavourable impact of coloured workers on their living standards and therefore oppose the admission of coloured labour. Thus the Australian exclusion acts for the maintenance of a White Australia already began early, with the Victorian law of 1855.[254] [Walter] Dreßler tries to assuage this fear of cheap competition from coloureds by pointing out that 'in the long run' European or white workers 'will be able to leave the unsuitable and unhealthy jobs to coloureds' and they themselves will be drawn only into 'the supervision of coloured workers and other public services'.[255] Even as recently as 1925, the same

247 Marx 1976b, pp. 932 et seq.

248 [Instead of 'land' Grossman's original had 'landless'.]

249 Métin 1977, p. 5. [Grossman's emphasis.]

250 Schachner 1912, p. 47. [Schachner's calculation seems to include New Zealand.]

251 Schachner 1912, p. 58. [Grossman's emphasis.]

252 Schachner 1912, p. 57. [Grossman's emphasis.]

253 [Dreßler 1915, pp. 188, 189. The reference is to the Chinese Immigration Act.]

254 Reeves 1902, pp. 325–64. In 1891, 42,521 Chinese were counted in Australia and New Zealand, in the Census of 1901 only 34,638 (Reeves 1902, pp. 330–1). [The influence of the white labour movement did not, in fact, give rise to the 'White Australia Policy'.]

255 Dreßler 1915, pp. 188–9.

complaints could be heard: 'In Australia there is an absolute shortage of labour power'.[256] This is where capitalism runs up against its limits, not in the lack of markets.

What has been stated about Australia is true of all colonial states. '*Toutes les nations colonisatrices*', *Le Temps* reports '*ont, à l'heure actuelle, la préoccupation de s'assurer la main-d'œuvre nécessaire à la mise en valeur de leurs possessions d'outre-mer. La Belgique … en raison du faible peuplement du Congo belge, a traduit cette préoccupation en un axiome … "Avant de cultiver des palmiers à huile et du café, il faut cultiver les habitants"*'.[257] *Le Temps* complains in the same article about the shortage of labour in *Indochina*. A similar shortage exists in *Southern Rhodesia*. On 22 July 1925 a new agreement was signed for the recruitment of native workers from Portuguese East Africa.[258] Recruitment is allowed so long as no more than an average of 15,000 workers from Tete per month stay in Rhodesia. The export of this living commodity is a source of revenue for Portugal. A special Portuguese official collects various rather high pass and other fees that the recruitment agency has pay.[259]

When the government of South Africa against the wishes of private employers declared itself in favour of signing a new agreement with the Portuguese colony of Mozambique regarding the recruitment of workers the *Transvaal* Chamber of Mines explained that a further influx of native workers was necessary, as the number of workers employed in the mines had declined from 182,000 to 168,000 between February and November 1925, for example. The result was that European white-collar employees had to be laid off.[260]

To solve the labour shortage on the cocoa plantations of *São Tomé*, an agreement was made with the colony of Mozambique that allows an annual recruitment of 3,600 workers in Mozambique.[261]

In the *Belgian Congo*, where the number of workers employed in trade and industry amounted to 278,104 in 1924, the health conditions of native workers were extremely poor, according to a 1924 report of the Belgian government.

256 Heß 1925, p. 138.

257 *Temps* 1928. ['All colonial powers are currently preoccupied with securing enough labour power necessary to make their overseas possessions valuable. Belgium … by virtue of the low populiation density in the Belgian Congo, has transformed this preoccupation into an axiom … "Before cultivating oil palms and coffee, it is necessary to cultivate the inhabitants"'.]

258 [I.e. Mozambique.]

259 *Informations Sociales* 1926b, pp. 148–9.

260 *Informations Sociales* 1926a, pp. 260–1.

261 *Wirtschaftsdienst* 1926d, p. 933.

The number of fatalities has been rising. Half of these are due to pneumonia. 'The depletion of existing labour resources is due to a shortage of labour for public works and for private industrial and agricultural enterprises. The natives … are not disposed to enter the enterprises belonging to European employers, where bad working and living conditions await them.' 'The government exerts a certain degree of pressure on the natives to secure the requisite labour for enterprises.'[262] It is already difficult to find enough labour in the thinly populated province of Katanga (copper mining). The brutal treatment of native workers explains the progress of Pan-African agitation against white businesses precisely in those mining areas.[263] To overcome the difficulties in obtaining labour for the renovation of the Congo's railways, the government's Colonial Council recommended (July 1926) the conscription of 6,000 natives for two years of labour service.[264] In *Southwest Africa* the Administrator Johannes Albertus Werth took the stand, with respect to the natives, that the Prime Minister should be requested to legislate to allow local authorities to try cases and administer corporal punishment on farms. Moreover, the administrator raised the prospect of mobilising all available labour power from the reserves.[265]

The cultivation of cotton in French *Cameroon* and *Equatorial Africa* was considered but was abandoned 'as the all too thin population would make for insurmountable difficulties in solving the labour problem'.[266] Because of the labour shortage, the emigration and recruitment of native workers and their employment abroad was subjected to certain restrictions by an ordinance of 9 July 1925. The natives of the province can only emigrate with the special permission of the authorities and after paying a security deposit of 500 francs, to be paid back on their return.[267] The same requirements were imposed on *Syria and Lebanon* by a decree of the High Commissioner dated 9 December 1924.[268] About *Nigeria* where the mines employed 163 Europeans and 19,124 natives in 1923, it is reported that, 'Although native workers have been offering their services in increasing numbers, there is still undoubtedly a shortage of labour'.[269]

The shortage of labour in *Natal* is an obstacle to the extension of sugar production.[270]

262 *Informations Sociales* 1926c, pp. 549–52.
263 Reichwein 1928, p. 399.
264 *Wirtschaftsdienst* 1926f, p. 1078.
265 *Wirtschaftsdienst* 1926e, p. 1010.
266 Reichwein 1928, p. 257.
267 *Internationale Rundschau der Arbeit* 1926a, p. 649.
268 *Internationale Rundschau der Arbeit* 1926a, p. 649.
269 *Informations sociales* 1925.
270 Reichwein 1928, p. 223.

In *Madagascar* a decree of 3 June 1926 authorised the Governor-General to round up those natives who had previously 'withdrawn their labour' by hiding in forests and savannah, for work in public construction, roadworks etc.[271] In *Uganda* there is a labour shortage due to the rapid expansion of cotton cultivation, which has led to tension between the native chiefs and the cotton planters.[272]

In the Mandated Territory of *Kenya*[273] there are roughly 1,700 European landowners in possession of 4.5 million acres, yet only 400,000 of these are actually under cultivation, because native workers are lacking. At a conference of colonists' associations that took place in February 1926, it was explained that there was opposition to the importation of Asian workers but not the admission of labour from other parts of Africa. Enough labour would be available if the government ensured 'that all natives engaged in some kind of employment'. In 1925 the government authorised two private companies to approach the administration in Portuguese East Africa to enlist workers there. Agricultural workers are to be introduced into Kenya on long-term contracts.[274]

'In large parts of Africa', Otto Corbach reports in the *Berliner Börsen-Courier*, 'Blacks have been pushed back into ever smaller reserves, the way [American] Indians once were … In Kenya almost 5 million acres have been reserved for white settlement … In reality it is a matter of the Black population not having land available on which they could avoid the compulsion to work on the plantations of the whites for any wage.' In fact, 'they are being forced in ever greater masses to sell their labour power to European enterprises for starvation wages'. '[I]n the whole country there is insufficient Black labour required to help white owners cultivate this area.'[275]

The scarcity of labour creates particular difficulties for sugar production in the *Dominican Republic*.[276] 'England's hopes for sugar cultivation in *Guyana* have not been fulfilled.' '[T]he severe shortage of labour has not been eliminated even by encouraging immigration from the East Indies.'[277]

> The extension of sugar cultivation on the *Fiji Islands* was [likewise] limited by the shortage of labour … The scarcity of workers has even led to

271 *Wirtschaftsdienst* 1926d, p. 934.
272 *Wirtschaftsdienst* 1926d, p. 934; Reichwein 1928, p. 255.
273 [Kenya was never a mandated territory; during the 1920s it was a British crown colony and protectorate. Neighbouring Tanganyika, formerly a German colony, was a British League of Nations mandated territory, from 1922.]
274 *Internationale Rundschau der Arbeit* 1926a, p. 648.
275 Corbach 1928, p. 2.
276 Reichwein 1928, p. 216.
277 Reichwein 1928, p. 222. [Grossman's emphasis.]

> reductions in cultivation and to whole plantations closing down. Further declines in production are predicted.

The volume was 100,000 tonnes in 1913/14, 80,000 tonnes in 1918/19, 60,000 tonnes in 1919/20 and 35,000 tonnes in 1923/24.[278]

A similar situation exists in *Brazil*. Once rubber trees began to be planted in East Asia, Brazil's wild trees became less and less significant. Today rubber production from Brazil's primeval forests has become almost insignificant. In 1923 the share of East Asian plantation rubber was 93.2 per cent of world production. All attempts to raise Brazil's production of rubber *remain unsuccessful due to the shortage of labour*. A similar shortage prevails on the rubber plantations of *Sumatra and Borneo*. The few workers who are available prefer to work on the small peasant plantations of the natives than on the big capitalist plantations owned by Europeans, on which they are literally treated like animals. In East Sumatra contract coolies running away from the capitalist plantations is a common phenomenon. The native population, which as recently as 1921 produced only a tenth of the total output of the capitalist plantations throughout Indonesia (6,000 tonnes against 62,000), already produced 91,000 tonnes in 1925 compared to 104,000 tonnes from the capitalist establishments. Hence the ever more brutal actions of European big capital against the native population.

The shortage of labour is worsened by bad health conditions and high mortality rates among native workers in the colonial countries.

When Marx described the cruel exploitation of the English working class in *Capital*, bourgeois economics initially made an effort to cast doubt on the accuracy of his evidence, then stressed the 'one-sidedness' of his account and finally wrote about capitalism's 'infantile disorder'. The cruel conditions that Marx described supposedly only occurred during the earliest epoch of industrial development but have long since been overcome by the evolution of social policy. Hence the attempt by bourgeois economics to portray the cruelty of exploitation as a *singular* historical phenomenon and thus to distort the essential content and results of Marx's analysis. For Marx's description of the conditions of the English working class in the early nineteenth century is only an empirical illustration of wider tendencies that he established through a theoretical analysis of the 'nature of capital'. Once fixed capital has emerged and grown, it has to be rapidly amortised if it is to be protected from possible devaluation etc.; hence the tendency to prolong the working day. '*Capitalist production therefore drives, by its inherent nature*, towards the appropri-

278 Reichwein 1928, p. 223.

ation of labour throughout the whole of the 24 hours in the day.'[279] Restrained in its 'keen appetite for alien labour' in the capitalist countries of western Europe, capital celebrates even more unbridled orgies of exploitation in territories newly conquered for capitalist production. All the shameful aspects of the capitalist system with respect to the exploitation of women and children arise here once again, intensified tenfold. The monstrous waste of human life contributes to the deepening of the labour shortage. Capital depends on the recruitment of foreign workers but that complicates the already difficult conditions of Europeans even more. So, for example in South Africa, Indians were brought in a planned manner to the Transvaal for the first time in 1861, bound by long-term contracts to perform agricultural labour. By 1911 the Indian population of Natal surpassed the white population by almost 50 per cent and this circumstance prompted the passing of an immigration law in 1913, banning the immigration of Asians. According to the 1921 Census, South Africa's population was 6,928,580, of whom natives, Bantus or Blacks made up 67.8 per cent, mixed-race or 'coloureds' 7.9 per cent, Asians 2.4 per cent, and Europeans 21.9 per cent. Of the 161,339 Indians, 141,336 were in Natal, where the number of whites was just 136,838. At the British Imperial Conference of 1923 General [Jan] Smuts explained, on behalf of the South African government, that with regard to the Indians in South Africa it was a question was economic competition with a population which has a completely different style of life and that in Natal 'white civilisation' was at stake. The South African government proposed draft legislation that envisaged stipulating special rural districts in which only people with particular racial characteristics could live or engage in economic activity. The proposal, which mainly affected Natal and to a lesser degree Transvaal led to a conflict with the government of India. The South African government hoped to encourage the 'voluntary' repatriation of Indians and thus to reduce South Africa's Indian population. The government of India called for the recognition of the rights already enjoyed by Indians settled in South Africa.[280] In this part of the world capitalism therefore confronts problems it is incapable of solving. The ground below its feet is shaking more and more. Matters have become even more acute since the World War. The colour-bar law gives a Minister of the South African Union the right to pass ordinances excluding natives in the Union from specific occupations and economic activities.[281] And what has been stated about South Africa applies more or less to other colonial countries that suffer from a shortage of labour.

---

279 Marx 1976b, p. 367. [Grossman's emphasis.]

280 *Internationale Rundschau der Arbeit* 1926a, p. 651.

281 *Wirtschaftsdienst* 1926d, p. 927.

n A Historical Retrospective: The Problem of Population in Early Capitalism. The Character of Early Capitalist Colonial Policy

It is only once its 'keen appetite for alien labour' is recognised as the capitalist mode of production's driving force that the correct theoretical basis is gained for assessing the individual phases of capitalism's historical form.

The issue that we are dealing with here is the character of the policy of colonial expansion under early capitalism. What was the driving factor behind this policy? Was it really a matter of sales outlets, of the 'realisation' of surplus value produced in Europe, that first created the possibility for the existence of capitalism and accumulation of capital? Did European capitalism with the help of its colonial policy of the sixteenth to the eighteenth centuries actually seek and find *consumers* for its otherwise unsaleable commodities? This must have been the case if Luxemburg's theory is correct.

A populationist orientation is characteristic of the entire period of early capitalism, of mercantilism. This is the direction in which the suggestions made by [Jean] Bodin in France go. [Jean Baptiste] Colbert made efforts to counteract the depopulation of the country to secure the labour power essential for industry and agriculture.[282] The proponents of mercantilism simply translated the state's practical population policies into theory. The principal theoretical conception, it could almost be said the world view of most politicians and intellectuals who set the standard in that period, all their speculation about the state and its well-being, can be summed up in [Gottfried Wilhelm] Leibniz's proposition: 'Vera regni potestas in hominum numero consistit. Ubi enim sunt homines ibi substantiae et vires'. Population is the greatest wealth the state has and the foundation of its power and well-being.[283] In view of the *backwardness of technology at the time*, this was not just a self-evident conception for early capitalism but an essential one. Among the industries making means of production in this period, entire *industries making means of labour*, industries producing tools and machines, containers and instruments, were absent.[284] Transport technology was just as backward and thus consumed extensive human and animal energy.[285] About the 'infancy' of capitalist production Marx writes, 'The composition of capital at that time underwent only very gradual changes'.[286] Given *almost static technology*, production could only be expanded on the basis

282 Grossmann 1916, pp. 338–9.
283 Grossmann 1916, p. 415. [Quoting and translating Leibnitz 1768, p. 502.] Reynaud 1904.
284 Marx 1976a, p. 137; Sombart 1919, 2, p. 1029.
285 Sombart 1919, 2, p. 1126.
286 Marx 1976b, p. 785.

of the simple, extensive accumulation of capital, that is only by *increasing the application of labour power*. 'By and large, therefore, the proportional growth in the demand for labour corresponded to the accumulation of capital. Even though the advance of accumulation was slow … it *came up against a natural barrier in the shape of the exploitable working population*; this barrier could only be swept away by … violent means …'[287] Hence the ever more intense shortage of labour power. At the end of the eighteenth century a general scarcity of spinners emerged.[288] Eight to ten spinners were needed 'to spin the yarn that *one* weaver could weave in the same amount of time'.[289] Because of the shortage of labour both spinning and weaving were in a terminal state, their downfall seemed inevitable.[290] It was only the *technological revolution* of the last third of the eighteenth century that brought about truly fundamental change in this regard.

Colonial expansion had the same character as the populationist orientation of mercantilism in western Europe. From the start, it had nothing to do with the mystical question of the 'realisation' of the surplus value produced by capital and was not a problem of *circulation*, a problem of outlets for the sale of commodities but a problem of *production*, a problem of producing the greatest possible surplus value. Here the facts are clear. In step with Portuguese discoveries, the *slave trade* begins. In 1441 [Antão] Gonçalves first brought Black slaves and gold dust to Portugal. Slave labour became entrenched in the southern provinces of Portugal but it was only the discovery of the Americas, the extermination of the West Indian natives and the later efforts of [Bartolomé de] las Casas to protect the Indians that gave momentum to the trade in Blacks to America. 'The *regular export* of West African Blacks to the new world started in 1517',[291] when Emperor Karl V gave the privilege of conducting the slave trade to the Flemish. Already in 1444 companies were formed for trade with West Africa and the Portuguese trade in Blacks expanded.[292] 'The fort on the island of Arguin was erected in 1448.' In 1471 the Portuguese 'reached the long-desired sources of gold in upper Guinea. In 1482 Fort Emina (São Jorge da Mina) was built near the rich gold mine of Aprobi (Little Commenda)'.[293] Both forts were nothing more than bases for the trade in gold and slaves.

287 Marx 1976b, p. 785. [Grossman's emphasis.]
288 Sombart 1919, 2, p. 1135.
289 Sombart 1919, 2, p. 1027. [Sombart emphasised the whole text.]
290 Sombart 1919, 2, p. 1135.
291 Supan 1906, p. 38. [Grossman's emphasis.]
292 Beer 1860, p. 115.
293 Supan 1906, p. 13.

The Spanish set up sugar plantations on the *Canary Islands*; the Portuguese on the island of *Madeira*, discovered in 1419, and likewise on the island of São Tomé in the Gulf of Guinea, which they occupied in 1472. 'The voyages of discovery were … continued in order to obtain ever more gold and *slaves for plantation labour*.'[294] Soon *sugar began to be exported from there to European markets*. At the beginning of the sixteenth century 'sizable sugar plantations were established on the island of São Tomé, on which many thousands of Black slaves worked; there were planters here who each owned up to 3,000 Black slaves'. Finally, also from the start of the sixteenth century, the Portuguese and Spaniards brought Black slaves into *Brazil* and the *West Indies*.[295]

Human labour and nature are the two elements of all production. If colonial expansion occurred in certain parts of the world predominantly because of favourable climate and soil, and abundance of raw materials, even when they were thinly populated, other colonial countries were mainly sources of human labour power. Jamaica, Haiti, Puerto Rico and Cuba belonged to the first group; the Bahamas by contrast

> *were only of interest as a hunting ground for human beings*. In 1508, supposedly 10,000 natives were transplanted from here to Haiti. Once the islands were completely depopulated, the Spaniards were no longer interested in them.[296]

These colonies, from their inception, were not farming colonies, settled by colonial farmers, that is producing to satisfy their own needs, but what Marx called 'the second type of colonies – plantations – where commercial speculations figure from the start and *production is intended for the world market*'.[297] One might be inclined to doubt their capitalist character since slaves and not free wage labourers are employed on them. To this Marx's response is: here, '*capitalist* production exists, although only in a formal sense, since the slavery of Blacks precludes free wage labour, which is the basis of capitalist production. But the *business in which slaves are used is conducted by capitalists*. The mode of production which they introduce has not arisen out of slavery but is grafted on to it'.[298]

Not without reason is the first generation of Spanish colonists in Mexico, Peru, Bogota and various other regions of America called the *conquistadores* –

294 Ungewitter 1851, p. 296. [Grossman's emphasis.]
295 Ungewitter 1851, p. 326.
296 Supan 1906, p. 19. [Grossman's emphasis.]
297 Marx 1989b, p. 516. [Grossman's emphasis.]
298 Marx 1989b, p. 516. [Marx only emphasised '*capitalist*'.]

conquerors. Here the settlers did not want to benefit from their own peaceful production but, as [Wilhelm] Roscher concedes, from the exploitation of the natives.[299] This ruthless process of exploitation already became obvious with the first steps on the newly discovered lands of America. When, centuries earlier, the Romans subjugated the Celts and the Germans, they seized 'only a part of their arable lands, pastures and forests – sometimes half, sometimes a third; the previous owners were never *entirely* deprived of their property'. The Christian conquerors of the early capitalist era were the first to use other methods. They treated the soil and land of the New World as *res* because they took no account of earlier inhabitants' rights.'[300] The legal theory of feudalism was applied to the Indians. 'According to the constitutional law for the Indies [!]', writes Roscher, 'the land and soil of all the colonies were the property of the crown; hence also the *encomiendas* … which were granted to the discoverers and other highly deserving men.'[301] 'The legislation denied the Indians any genuine property.' 'In 1499 [Christopher] Columbus already introduced the so-called *repartimientos*, dividing up the land of the natives, who were compelled to do forced labour, among the Spaniards.'[302] 'Initially the conquerors took entirely unregulated [!] possession of the Indians as slaves, which led to a rapid fall in their numbers, as is well known.' Later, in place of this 'unregulated' slave hunting, and to the satisfaction of Roscher, who hates any lack of regulation, 'the orderly system of the *encomiendas* was introduced, according to which the Indians were bound to the soil and distributed often in hundreds of families, along with it, in the manner of fiefs, to officers, lawyers, monasteries etc. Apart from labour services, especially for mining, each native household had to pay an annual tribute … three-quarters of which went to the estate owners, the rest to 'their own community officials and institutions'.[303] [Alexander] Supan thinks the first organiser of Hispaniola (Haiti), Bartholomew Columbus, the discoverer's brother, was 'incapable of curbing the raw instincts of the band

299 Roscher and Jannasch 1885, p. 132.

300 Kowalewski, *Die Entwicklung der wirtschafte Zustände in Westeuropa*. [Grossman's reference does not include a page number, nor is the start of the second quotation indicated. The most likely title is Kowalewski 1901–04 but none of the quotation can be found in any of its volumes. '*Res*' means 'objects'.]

301 Roscher and Jannasch 1885, pp. 133–4. ['*Encomiendas*' were feudal grants of rights to land and labour.]

302 Roscher and Jannasch 1885, p. 4. [Editor's interpolation. The initial *repartimiento* system of forced labour was replaced by *encomiendas*. In practice but not formally they entailed the control of land by the colonists.]

303 Roscher and Jannasch 1885, pp. 4–5.

of colonists who were work-shy and eager for plunder'.[304] The frightful treatment of the natives drove them to despair. There were mass suicides of these children of nature who preferred death to slavery. 'This mania of entire families hanging themselves in huts and caves, of which Garcilasso [de la Vega] speaks, was without doubt caused by despair; however, rather than bewail the savagery of the sixteenth century, one wanted to exculpate the conquistadores by attributing the disappearance of the indigenous people to their *penchant for suicide*.'[305] The unfortunates sought to resist. According to Roscher's assurances, Fort La Navidad on Haiti was certainly built by Columbus in 1492 'to protect the natives against the Caribs'![306] The ungrateful natives! The fort was destroyed by them in Columbus's absence. An uprising by the horrendously ill-treated natives ended in 1495 with their complete defeat. The rest of the islanders on Haiti rose up again under the expert leadership of the baptised chieftain Don Henrique, and the Spaniards eventually had to conclude a peace treaty with him, after 14 years of war. In return for recognition of Spanish sovereignty, it conceded asylum to him and his comrades in Boya. Jamaica and Puerto Rico were conquered and dealt with in similar ways in 1508, Cuba in 1511.[307] The expedition against Mexico was launched from Cuba in 1519. Bourgeois economics tries to white-wash this appalling extermination with shallow philosophical reflections. For example, Roscher writes: 'Experience teaches us that very crude peoples are bound to go under when suddenly merged with a highly cultured one. Wholly abrupt transitions are always dangerous'.[308]

None of these colonial 'settlements' were ever farming colonies or settlements of self-supporting colonists on agricultural land. 'Districts that were best suited to farming colonies, such as Caracas, Guyana, Buenos Aires, *were neglected by the Spanish for centuries*.'[309] They turned their attention chiefly to *mining* and *plantations*, where a great deal of labour power was required. 'They' therefore, writes Roscher, 'seized the natives to sell as slaves. The very Spaniards, who always disdained to conduct the trade in Blacks themselves, became exemplars of the perpetration of atrocities when they conducted the

304 Supan 1906, p. 19.

305 Humboldt 2011, p. 81. [Grossman's emphasis. Editor's interpolation.]

306 Roscher and Jannasch 1885, p. 4.

307 Supan 1906, pp. 18–9.

308 Roscher and Jannasch 1885, p. 5. How things stood with 'highly cultured' and 'crude' peoples is clear from the fact that at the time of the Aztecs, Mexican cotton cultivation was extensive and only fell into decay under Spanish colonial rule (see Reichwein 1928, p. 260).

309 Roscher and Jannasch 1885, p. 132. [Grossman's emphasis.]

trade in Caribs.'[310] Columbus himself participated in the export of Indian slaves to Seville.[311] The corvées exacted from the Indians were for *work in the mines* or on *road construction*, *maize cultivation*, *cattle-raising*, etc. '[I]n reality, it was quite common, *whenever slaves* (*poitos*) *appeared to be necessary*, for missionaries to raid heathen regions, at the head of their troops and Indian converts (*Indios reducitos*) to steal young people.'[312] [Alexander von] Humboldt reports that a plan to introduce camels instead of using natives as porters was scuttled by the *encomenderos*, who were afraid that income from their rights to corvée labour would be endangered.[313]

The principal theatre of Spain's history as a colonial power was, however, not Central but South America. The conquest of Peru by [Francisco] Pizarro (1531) and the shocking events that unfolded there are well known. The conquest of Chile was mainly prompted by the discovery of the rich, but soon exhausted, *gold deposits* of Quillota. In the same way, the Spaniards gained a solid foothold in the region of La Plata in the course of the sixteenth century, while Brazil was discovered and conquered by the Portuguese. The economic centre of gravity lay in these South American colonies; they supplied precious metals. 'In the earliest period of the Conquista the output of gold and silver came principally from the *theft* of accumulated treasure, especially in Mexico and Peru.'[314] Later it had to be obtained by *producing* it. That was why, following the initial war of annihilation against the natives, Emperor Karl V's well-known law of 20 November 1542 was passed, initiating the 'protection' of the Indians. Or, as Roscher writes, in his remarkable but typical language, 'The Spanish West Indies was a colony of conquest in the beginning; after the extermination of the natives it became … a plantation colony'.[315] The *production of silver* was now massively expanded, after the mines of Zacatecas, Durango, Guanajuato and especially Potosi were opened up, and Bartholomé de Medina invented the amalgamation process. According to [Adolf] Soetbeer, the value of American precious metal production was 13.6 million marks in 1521–44, and 59.5 million

310 Roscher and Jannasch 1885, p. 132. There can be no talk of the Spaniards 'disdaining' the trade in Black slaves. Spain lacked the required capital, ships and the commodities that came into consideration as the price for buying slaves in Africa. The Spanish were therefore compelled to farm out the right to supply the colonies with slaves to other peoples.

311 Roscher and Jannasch 1885, p. 133.

312 Roscher and Jannasch 1885, p. 139. [Grossman's emphasis.] See Humboldt 1852, pp. 218–19, 337, 388.

313 [Humboldt 1852, p. 81. '*Encomenderos*' had feudal control over the labour of indigenous populations, under grants from the Spanish government.]

314 Supan 1906, p. 41. [Grossman's emphasis.]

315 Roscher and Jannasch 1885, p. 29.

marks in 1545–60, totalling to 73.2 million marks over 40 years.[316] But along with production of precious metals, *plantation agriculture* was also of great significance. Coffee, cocoa and cotton were cultivated in the plantation territories of the West Indies, Venezuela, and Guatemala. Above all, the later history of colonial development was scarcely less influenced by *sugar cane* than by precious metals. Already transplanted to the Mediterranean by the Arabs in the Middle Ages, from its home in the East Indies, sugar spread to Madeira around 1420, to the Canary Islands in 1503, and from there to São Tomé. It already appeared in Haiti as early as 1494. [Nicolás de] Ovando was laying out very substantial sugar plantations at Santo Domingo, for which the local reserves of labour were simply insufficient. 'His transplantation of inhabitants from the Lucayan Archipelago to Domingo in 1508 was thus … a forerunner of the trade in Blacks.'[317] Sugar cultivation only became large scale, however, in 1516. In Cuba, the first *sugar refinery* was established around 1580. In Brazil, where it had already been recognised that the future of the country lay in plantation agriculture, settlement could only proceed gradually for *lack of labour power*. With the exception of São Paolo, where the gold and iron ore mines of Sorocaba were opened up, the coastal areas were the only ones to be settled. To overcome the shortage of labour power, there was resort to *deportation*. Convicts became free in the colonies. *Jews* were also sent to Brazil in two shiploads a year. They introduced sugar cane into Brazil in 1532.[318] But Jews and criminals

316 [Soetbeer 1879, p. 107.] Later too, the need for markets was not the motivation for colonial expansion but rather interest in surplus value production. Whether the American mainland should belong to England or France first became a burning issue already at the start of the eighteenth century, in [John] Law's time – an issue that was only decided by the Seven Years War. 'It is entirely clear', wrote [John Dalrymple] the Earl of Stair, the English ambassador in Paris, to Minister Stanhope in October 1719, 'that Mr Law intends to build the trade of France on the ruins of our own trade and that of Holland'. The famous Mississippi Company had the development of the French colony of Louisiana as its objective. In 1719 the mineralogist [Jacques] De Lochon discovered lead ore deposits on the Mississippi that [ostensibly] contained 12 per cent pure silver, that is, three per cent more than the mines of New Mexico delivered. England was jealous, all the more so because, in 1718–19, France gained Spanish territory in America. The forms of struggle that then flared up between England and France was already similar to common methods in colonial politics today. The English sought to harm the French in Louisiana, especially by inciting various Indian tribes. For their part, the French, who also controlled Canada at the time and thus ringed the English, threatened to drive them into the sea. The English minister [James] Craggs [the younger] complained, at the time, that Law was out to devalue English stocks by selling them at a low price (Michael 1908, p. 566). [Michael did not cite the (presumably manuscript) source of the quotation from Stair.]

317 Roscher and Jannasch 1885, p. 26.

318 Supan 1906, pp. 38, 41. See Sombart 2001, p. 27.

were not enough. Plantations needed a great deal of human labour; Indians were not suitable for the work and died out quickly. Thus the transition to the *trade in Blacks* soon occurred. With regard to such circumstances, it must be asked: where were the 'consumers' for the excess of commodities produced and unsaleable in Europe? In reality, the colonies were not markets but territories for production and export.

The colony of Brazil experienced a brilliant upswing when it passed into the hands of the Dutch in 1624. In the course of the seventeenth century Brazil became *the world's most important producer of sugar*. After sugar, which was exported to the west in huge quantities, Brazil also delivered dyewood, leather and livestock products to Europe and, from the eighteenth century, tobacco, cotton, cocoa and rum in increasing quantities. After the Dutch conquered the colony, wealthy Dutch Jews poured into Brazil as entrepreneurs. Six hundred prominent Jews from Holland migrated to Brazil's 'Jewish colony'. In the first half of the seventeenth century all the big sugar plantations were already in the hands of Jews. In François Pyrard's travel diary, we read: 'The profits they make after being nine to ten years in those lands are marvellous, *for they all come back rich*'.[319]

Sombart is therefore correct when he emphasises 'that the colonial plantations were where the first truly *large-scale capitalist organisation arose*, from which an irresistible drive to expand had to emanate'.[320] The Portuguese and English, as well as the French, drew *great profits* from plantation enterprises, which even at that time were often financed by foreign money. [Charles] Davenant already counts the plantation business among the most important sources of England's enrichment.[321] 'In England in the eighteenth century' annual profit was 'estimated at fifteen to twenty pounds sterling per slave per year'. This 'depended upon strict plantation discipline'. Max Weber's description, which provides this information about the returns from slave labour, suffers from a lack of clarity and coherence when he claims that assets accumulated 'to an enormous extent' in the colonies and bred a large number of rentiers but that this did not promote the western form of organisation, 'since colonial trade itself rested on the principle of exploitation and not that of securing an income through market operations'.[322] Slave labour rests on the principle of profitability just as wage labour does. The difference between the purchase price plus maintenance costs of the slave and the price of plantation products

319 Sombart 2001, p. 28. [Grossman's emphasis.]
320 Sombart 1919, p. 1011. [Grossman's emphasis.]
321 Sombart 1919, p. 1071.
322 Weber 1950, p. 300.

determined the magnitude of the returns from slave labour, and therefore also its expansion. For as Otto Keye, a Dutch enthusiast for the plantation economy in Guyana, wrote in 1659, no capital is needed for this business, except for the money invested in purchasing slaves:

> no houses, no cattle sheds, no livestock; everything is done by slaves, whose purchase price is scarcely higher than that of a free servant. Slaves produce the whole of their subsistence in just *one* day of the week … All profits are then best reinvested in slaves.[323]

'The Blacks', writes [August] Sartorius von Waltershausen, 'were a commodity and were paid for according to the state of the economy … If there was an oversupply, the shipowners were indifferent to the death on the ocean of some of these unfortunates, so long as their total costs were covered by profits. This calculation … [which applied to white slaves] also applied to the trade in black slaves'.[324]

Max Weber's distinction between a 'principle of exploitation' and that of 'calculation based on profit' is utterly superficial; it remains on the juridical surface without taking account of the economic content. On the other hand, Weber concedes that the colonies with those relations offered comparatively few market outlets for the industry of the metropolis.[325]

We see here that the process of colonial expansion did not develop according to Luxemburg's formula. The surplus value produced in Europe by capitalist methods was not 'realised' through the colonial trade; *rather, surplus value was squeezed out of plantation slaves in the colonies* and 'realised' in the developed capitalist countries of Europe. It is important to be aware that, during the first century after the discovery of the Americas, Spanish and Portuguese colonisation already had a capitalist character; it was a hunt for surplus value, even though the plantation economy was run on the basis of slave labour. The main points of attraction for colonial expansion were initially countries rich in gold and silver; soon, however, also the great plantation regions, which offered entrepreneurs the opportunity of rapid enrichment. At the same time, however, 'Spanish America was the classic base for the so-called aristocracy of ennobled officials', i.e. the bureaucracy of the newly emerging bourgeoisie.[326] 'The numerous state and church offices in America were very

323 Laspeyres 1863, p. 108. [Grossman's emphasis.]

324 Waltershausen 1924, p. 66.

325 Weber 1950, p. 300.

326 Roscher and Jannasch 1885, p. 152. [Roscher and Jannasch emphasised the whole sentence.]

handsomely paid, so that the government of the metropolitan country found a host of opportunities there to enrich people of distinction or favourites.'[327] On the other hand, '[t]he development of the newer colonial system roughly coincided with the formation of large state monopolies and protectionism' in European metropolitan countries.[328] It therefore occurred at the same time as the beginnings of capitalist development in Europe. *The cultivation of coffee, sugar and cotton* could on the whole be carried out on plantations, as a fairly numerous and well-off middle class emerged in metropolitan countries and ensured that the sugar, coffee etc. would be consumed. 'This explains why the plantation colonies could only truly flourish in the age of Cromwell and Colbert.'[329] The more capitalism developed in Holland, the more demand expanded for so-called colonial products and the stronger the drive for colonial expansion and the *demand for Black slaves* became. Sugar production on large plantations on the basis of slave labour persisted until the nineteenth century. As late as 1852, 'about 1,000 sugar mills were operating in the province of Pernambuco'. They produced sugar on 'plantations using the old primitive methods.' 'Oxen or water-power drove the mills, slaves fed cane into the presses, boiled the juice, clarified and dried it, then pounded the resulting sugar to a powder [and] packed the finished product into chests …'[330] Cuba had exported almost 173,000 hundredweight of sugar by 1753; this grew to 283,000 hundredweight by 1790.[331] The same evolution was replicated in the other colonies. *Barbados*, 'which had been depopulated earlier by Spanish slave hunters', came into England's possession in 1625. 'Immigration began in 1627', sugar cane was introduced from Brazil in 1641 and the *export of sugar* had already started by 1648. After a few improvements, introduced by the Dutch Jews who had been expelled from Brazil in 1654, sugar exports grew so much that in 1661 Charles II could already confer baronetcies on 13 plantation owners who drew an income of £10,000 from Barbados. Around 1676 the island was in a position to load 400 ships each with 180 tons of raw sugar.[332] From Barbados, the islands of Tortuga on the northwest coast of Venezuela and Providence were both seized in 1630 and transferred to a company that began operating plantations there.[333]

327 Roscher and Jannasch 1885, p. 171. [Roscher and Jannasch emphasised 'state and church offices'.]
328 Roscher and Jannasch 1885, p. 130.
329 Roscher and Jannasch 1885, p. 29.
330 Wätjen 1925, p. 52.
331 Büchele 1867, p. 144.
332 Supan 1906, p. 55; Sombart 2001, p. 26.
333 Supan 1906, p. 55.

In 1656, the English had finally seized *Jamaica* from the Spaniards.[334] While there were only three small *refineries* in Jamaica at that time, by 1670 there were already 75 mills in operation, some of which produced 2,000 hundredweight of sugar, and in 1700 sugar was Jamaica's principal product.[335] In *Surinam* the English had established around 50 sugar plantations by 1666, protected by a fort they built.[336] By 1730, 344 plantations were there. The more important French colonies of Martinique, Guadeloupe, Saint-Domingue etc. offer the same picture as the Dutch and English colonies. Here, too, the *sugar industry*, conducted capitalistically on large plantations for the world market, was the principal industry and source of profits for the owners, alongside a few other industrial sectors. 'In Martinique the first large plantation and refinery were established in 1655 by Benjamin da Costa, who had fled there from Brazil with 900 fellow religionists and 1,100 slaves.'[337] '[W]e must never lose sight of the fact', writes Sombart

> that in those critical centuries in which the colonial system was taking root in America … the production of sugar was the backbone of the entire colonial economy [and therefore indirectly of the domestic economy as well], leaving out of account, of course, the mining of silver, gold and gems in Brazil. One can scarcely form a truly accurate impression of the overwhelming importance that the sugar industry and the trade in sugar had in those centuries. Indeed, it is somewhat difficult exactly to picture to ourselves the enormous significance in those centuries of sugar-making and sugar-selling. The Council of Trade in Paris (1701) was guilty of no exaggerated language when it placed on record its belief that 'French shipping owes its splendour to the commerce of the sugar producing islands, and it is only by means of this that [it] can be maintained and strengthened'.[338]

Next to the sugar industry (including plantations, refineries, rum production etc.) the *slave trade* constituted one of the leading branches of the economy of that time. Slaves constituted the most important means of production and

334 [The English invasion of Jamaica, expulsion of the Spanish and occupation of its towns actually happened in 1655.]

335 Sombart 2001, p. 28.

336 Ungewitter 1851, p. 361.

337 Sombart 2001, pp. 29–30.

338 Sombart 2001, p. 30. [On the basis of the original German text (Sombart 1911, pp. 37–8), the editor's interpolations correct errors in the published translation.]

the purchase of slaves required huge investments in constant capital. Trade with Africa only became significant in the seventeenth and eighteenth centuries once the export of Blacks from Africa assumed a larger scale.[339] In France, the United Senegal and Guyana Company acquired a monopoly of the trade in Blacks between the coast of West Africa and other French colonies, in Colbert's day. The Company was, furthermore, paid a premium of 13 livres per head, as Blacks were evidently crucial to the colonies as labour power and to the shipping industry as lucrative cargo.[340]

The Asiento Treaty of 1713 secured the monopoly of an expanding trade in slaves [to Spanish colonies] for the English and thus simultaneously made it the sole power on the African commodities market. 'With the development of capitalist production during the period of manufacture', writes Marx,

> public opinion of Europe lost its last remnant of shame and conscience. The nations bragged cynically of every infamy that served them as a means to the accumulation of capital. Read, for example, the naïve commercial annals of the worthy A[dam] Anderson. Here it is trumpeted forth as a triumph of English statesmanship that, at the Peace of Utrecht, England extorted from the Spaniards, by the Asiento Treaty, the privilege of being allowed to ply the slave trade, not only between Africa and the English West Indies, which it had done until then, but also between Africa and Spanish [South] America. England thereby acquired the right to supply Spanish America until 1743 with 4,800 Negroes a year. At the same time this threw an official cloak over British smuggling.[341]

It goes beyond the remit of this work to provide a history of the colonial economy. Here, we only want to briefly characterise its economic and populationist aspects and to indicate how important the problem of securing necessary

339 Sombart 1919, pp. 975 et seq.

340 Brandt 1896, p. 14 et seq. The capitalist character of sugar monoculture also entailed the importation, apart from its most important means of production, the slaves, of everything that was required for the slaves' subsistence: *linen*, for the slaves' clothing (Sombart 1919, p. 1002); salted *meat*; *grain*; and other *means of sustenance* (Sombart 1919, pp. 1031, 1033). In addition, copper pans and other equipment for the refining of sugar, etc. It is not the non-capitalist indigenous populations of the colonies who create a market there for the capitalistically produced commodities of Europe but rather the capitalist plantation industry, which in turn sells its own commodities in European markets. We are dealing with the mutual exchange of commodities between two branches of capitalist production.

341 Marx 1976b, p. 924. [The first interpolation is the editor's.]

labour power was at that time. *Slave labour developed symmetrically with the development of capitalism, as its concomitant.* Liverpool 'grew fat on the basis of the slave trade'.[342] 'In 1730 [it] employed 15 ships in the slave trade; in 1751, 53; in 1760, 74; in 1770, 96; and in 1792, 132.' 'The cotton industry … gave the impulse for the transformation of the earlier, more or less patriarchal slavery into a system of commercial exploitation.'[343] How slavery increased with the expansion of the capitalist system is best illustrated by the island of Haiti,[344] the pearl of the French West Indies, where intensive sugar and coffee agriculture was practised for export, while on the neighbouring Spanish part of the island – Santo Domingo – herds of wild cattle constituted the sole wealth of the residents. According to a statistical survey of 1790, their populations were:[345]

	Whites	**Free Coloureds**	**Slaves**	**Total**
Santo Domingo	25,000	73,000	15,000	113,000
Haiti	30,000	24,000	480,000	534,000

In the Cuban city of Havana, in 1791, there were 10,849 slaves in a total population of 44,337 or 30 per cent. In 1817 the island as a whole had 630,980 inhabitants, of whom 225,268, that is almost 36 per cent, were slaves. At the end of 1825 260,000 slaves were already present there.[346]

The historian George Bancroft estimates that the number of slaves transported from Africa in the period 1620–1776 was 430,000; Henry Charles Carey that the number transported in the following period to 1790 was 293,000. The first US Census of 1790 already has 752,069 Blacks, next to 3,177,257 whites.[347] So Blacks were 19 per cent of the total population. In 1850 three million Blacks were counted, with cotton production of 2.13 million bales. By 1861 the number of Black slaves had risen to four million, the production of cotton to 4.49 million bales. Over the same period the number of slaves outside the US also grew.

342 [Marx 1976b, p. 924.]
343 Marx 1976b, p. 925.
344 [The island was and is generally called Hispaniola. Its western third was the territory of the French colony of Saint-Domingue which became an independent country, Haiti, in 1804 after a slave revolution.]
345 Handelmann 1856, pp. 30–1.
346 Humboldt 2011, pp. 32, 66, 67.
347 Waltershausen 1924, p. 66; Marx 1976b, p. 571.

For the end of 1823 Humboldt provides the following compilation,[348] which is far from including all countries with slave populations:

	Total population	**Slaves**
Cuba	715,000	260,000
Jamaica	402,000	342,000
Haiti	820,000	over 650,000
Antilles archipelago total	2,843,000	1,147,500
USA	10,525,000	1,665,000
Brazil	4,000,000	2,060,000

According to [Henry] Brougham, in 1790 the English West Indies had 10 slaves for each free person, the French West Indies 14, the Dutch West Indies 23.[349] According to estimates currently available, at the start of the nineteenth century, perhaps seven million slaves lived in European colonies. From 1808 to 1848 a further five million slaves were imported from Africa and the total number of slaves imported from there to the trans-Atlantic slave territories was the same as the total population of a major European power in the eighteenth century.[350] This colossal demand for slaves, further intensified by unbelievably high mortality,[351] caused a *permanent shortage of labour power*. The price of slaves rose throughout the eighteenth century.[352]

In view of all this information, it is clear that for the whole period from the sixteenth to the eighteenth century the problem of population was expressed

348 Humboldt 2011, p. 67. [Humboldt noted that the figures for Cuba are for 1825, for the other territories, 1823. As Humboldt made clear elsewhere in his book, slaves in Haiti had emancipated themselves, although most former slaves were forced to work on plantations by the Haitian government. Grossman's figure for 'slaves' in Haiti is unsourced and, when added to Humboldt's figures for slaves in Cuba and Jamaica results in a figure higher than Humboldt's total for the whole Antilles archipelago, which includes islands beyond those three.]

349 Cited Marx 1976b, p. 925, n. 12.

350 Weber 1950, p. 299. It is estimated that, in total the brutal colonial system robbed Africa of 100 million human beings who were despatched to America and Asia as Black cargo. 'Only one in six slaves reached the destination' (Reichwein 1928, p. ix).

351 This was still 25 per cent in the nineteenth century and was earlier many times larger (Weber 1950, p. 299).

352 Sombart 1919, p. 1004.

in economics by concern to secure a sufficient supply of labour power. As early as 1847, Marx writes, with reference to the slavery of Blacks in Surinam, Brazil and the southern States of the USA,

> Direct slavery is just as much the pivot of bourgeois industry as machinery, credits, etc. Without slavery you have no cotton; without cotton you have no modern industry. *Only slavery gave the colonies their value*; it is the colonies that created world trade, and it is world trade that is the precondition of large-scale industry. Thus slavery is an economic category of the greatest importance.[353]

Portraying colonies as a sphere for the 'realisation' of the surplus value produced in Europe, contributes to extenuating the most ruthless capitalist production of surplus value in the colonial countries themselves over many centuries of history. That the slavery found under capitalism does not simply belong to the past, that it is on the contrary, despite various legal disguises, a necessary component of capitalism or, as Marx writes, 'an economic category of the greatest importance' is demonstrated by the treatment of coloured workers in the colonies.

The prohibition of the slave trade by the Congress of Vienna in 1815[354] and the abolition of slave labour in the United States of America in the 1860s (in South America, e.g., Brazil, the last 200,000 slaves were only freed in 1888) were the consequences of the industrial revolution in the last third of the eighteenth century and the nascent introduction of machinery. New technology brought about a temporary shift in the problem of population. Hence Malthus.[355] Fear of overpopulation was understandable at a time when human labour was being replaced by machines but the accumulation of capital was in its initial stage and consequently the setting free of workers could not be offset by the employment of even more workers. Constant plus variable capital, $c + v$, were too small in relation to the size of the population. But in a mode of production whose basis is the exploitation of human labour, *Malthusianism* could only

353 Marx 1976a, p. 167. [Grossman's emphasis.]

354 The factor that was decisive for England in taking this step was not 'moral' considerations but the secession of the North American colonies. England's interest in the slave trade fell with the loss its most important slave-consuming territories and the prohibition of the slave trade served as a means of punishing the breakaway colonies economically. 'The decrees of the Congress made it possible for the English to suppress the foreign slave trade and at the same time themselves to carry on a buoyant smuggling business' (Weber 1950, p. 301).

355 [See Malthus 1826.]

be and was bound to be *merely a passing trend*. For, in the course of capital accumulation and because of it, capitalism in the developed countries of western Europe entered a new phase after a few decades. As a consequence of massive capital accumulation in the leading capitalist states, the capital amassed ($c + v$) proves to be too large in relation to the population, i.e. a given rate of population growth no longer suffices to deliver the mass of surplus value s required for the valorisation of the capital which has been amassed and which is growing even *faster*. The employment of a constantly expanding population, however, requires additional capital $a_c + a_v$, which can, precisely, only be drawn from the mass of surplus value s, but this no longer suffices to valorise the capital already amassed. So the mass of surplus value can suffice even less for additional accumulation. So a reserve army of the unemployed must necessarily form, despite overaccumulation and as its consequence. The unemployment that is growing, by and large, in capitalist countries is, however, essentially different from the unemployment in Malthus's day. At that time, the $c + v$ was too small in relation to the population; now $c + v$ is too large. In contrast, $a_c + a_v$ is now too small. Unemployment due to insufficient population! Both – overpopulation and shortage of workers – are only functions of the different stages of capital accumulation. This confirms the correct, bourgeois instincts of Leroy-Beaulieu and other population theorists, when they favour faster population growth despite widespread unemployment.

2 The World Market. Restoring Profitability by Dominating the World Market. The Economic Function of Imperialism

Bourgeois economics has nothing to say about the true economic function of foreign trade under capitalism. It does not go beyond describing details and reports solely about its scale, forms of organisation, specialisation etc.[356] The state of understanding the function of foreign trade in the existing Marxist literature is no less dismal.

Among the many simplifying assumptions which underlie Marx's analysis of the reproduction process is the assumption that the capitalist mechanism can be depicted as standing alone, i.e. isolated from all external relationships. 'Bringing trade into an analysis of the value of the product annually repro-

356 Rosenbaum 1928. Esslen 1916.

duced can therefore only confuse things, without supplying any new factor either to the problem or to its solution. We therefore completely abstract from it here …'[357]

Lack of clarity about the nature of the method that underlies Marx's work results in theoretical difficulties, which seem impossible to solve. Yet Marx himself repeatedly emphasises the colossal significance of foreign trade for the development of capitalism and, in *A Contribution to a Critique of Political Economy* (1859), already identified the 'world market' as one of the six parts that he intended to deal with.[358] And although the structure of the work changed, the object of enquiry remained the same. In *Capital* the 'establishment of the world market' is reckoned as one of the 'three *cardinal facts* about capitalist production'.[359] Marx therefore writes, 'Capitalist production never exists without foreign trade'.[360]

> But it is only foreign trade, the development of the market to a world market, which causes money to develop into world money and abstract labour into social labour … Capitalist production rests on the value or the transformation of the labour embodied in the product into social labour. *But this is only possible on the basis of foreign trade and of the world market.* This is at once the precondition and the result of capitalist production.[361]

What scientific value can a theoretical system which disregards the decisively important factor of foreign trade then have?

This difficulty has been avoided by assuming that there is a gap in Marx's system, pointing out that *Capital* remained incomplete. Thus Parvus, already in 1901: 'As in so many others, so on the question of trade policy the founders of scientific socialism … died much too early'.[362] Most recently, Alfred Meusel tries to 'deepen' this conception.[363] 'The conditions which caused *socialist theory's previously limited interest in problems of foreign trade policy* is a very complex phenomenon.'[364] Marx was, allegedly, naturally less interested in problems of foreign trade and therefore never thought this part of his system through to the

357 Marx 1978, p. 546.
358 [Marx 1987b, p. 261.]
359 Marx 1981, p. 375. [Grossman's emphasis.]
360 Marx 1978, p. 546.
361 Marx 1989c, p. 388. [Marx emphasised 'abstract labour' and 'value'.] So too in Marx 1989c, p. 58.
362 Parvus 1901, p. 587.
363 Meusel 1928.
364 Meusel 1928, p. 78. [Grossman's emphasis.]

end.[365] Meusel explains this limited interest, 'the insignificance of foreign trade policy in Marx' further with reference to the most significant foreign trade controversy he experienced, the struggle over the abolition of the Corn Laws, which appeared to be a controversy between the landed aristocracy and an industrial middle class growing in strength, between ground rent and profit on capital. 'When the struggle over the Corn Laws was played out in the "the heavenly realms of the propertied", the conviction could easily spread that the working class had no strong, immediate interest of its own in foreign trade policy.'[366] This, Meusel's principle conviction, explains why he was not capable of grasping the great importance of foreign trade in Marx's work, despite the repeated and emphatic emphasis on it in *Capital* and *Theories of Surplus Value*. What Meusel now writes is that Marx's position on foreign trade is *not a discussion of the economic function of foreign trade in his system* but just isolated statements about free trade or protective tariffs and early capitalist protectionism.

Luxemburg also starts from the conception that Marx simply ignored foreign trade in his system, that 'what he sets out to do, as he states repeatedly and emphatically, is to present the accumulation process of total social capital in a society consisting only of capitalists and workers'[367] (see page 258 above). Luxemburg could only explain this state of affairs by assuming that there is *a gap in Marx's work*, in relation to this problem, arising from 'the circumstance that the second volume of *Capital* is no finished work; instead it is a manuscript that breaks off in mid-sentence'. 'In the second volume of *Capital*, at any rate, no solution to the problem is given.'[368] Her own theory is only an auxiliary construction to fill this alleged 'gap'. At any rate, this is a convenient way of disposing of theoretical problems. If you do not know how to get out of the dead-end street you have ended up in, then you explain that there is a gap in the system and try to support the main dilapidated structure with *ad hoc*

---

365 'Every system has a central core from which it grows and in terms of which it should be understood … The decisive experience for Marx was the proletariat's poverty during the early capitalist era'. Marx

> studied these relations in a particular country … the path that led from the presentation of his analysis of English labour relations to foreign trade policy was long, convoluted and *never really taken to its end*. Superficially, Marx's comparatively *limited consideration of trade policy* is explained by its inclusion among the problems listed in the "Introduction to a Critique of Political Economy" but which, although he was tireless, he was *not granted the time* to articulate and include in a finished economic system. (Meusel 1928, p. 78) [Grossman's emphasis.]

366 Meusel 1928, p. 79.

367 Luxemburg 2015a, p. 236.

368 Luxemburg 2015a, p. 114.

extensions. It is self-evident that the underlying unity of the basic theory will suffer from this and a hundred new difficulties will be created in place of the one avoided.[369] Furthermore, can it be assumed that a thinker of Marx's rank, who worked for 30 years on the construction of his system, did not comment on decisively important, fundamental problems that constitute the core of his system?

What Luxemburg only regards as a gap in Marx's system, Sternberg turns into its limitation. Marx was an unrealistic system builder, who ignored essential elements of reality and whose theoretical system therefore necessarily led to untenable results. Sternberg goes on to assert that 'Marx … analysed capitalism on an assumption *that never corresponded with reality*, namely that there is no non-capitalist domain'.[370] 'Such an analysis works with assumptions that are unproven and, more than this, assumptions whose realisation [!] is unlikely.'[371] Therefore, 'only after generations does Marx's system in its purity find the domain on which it was conceived'.[372] What it cannot do is pass over into the 'domain' of the present. If Luxemburg only sought to fill a gaping hole in *one* place in Marx's system, nevertheless regarding the system as a whole as the proudest result of theoretical thought, Sternberg teaches us that the entire system is dilapidated. 'Not one problem of Marxism remains unaffected.' Luxemburg 'broke off too soon' in her demolition of Marx's system. She 'did not see that *every stone* in the structure is affected by the fact of a non-capitalist domain, not only the accumulation of capital itself but just as much

369 In any case, it is very characteristic that all opponents of Marxism endorse Luxemburg's critique with great jubilation, because it, at the same time, concedes the deficient character of Marx's system on an essential point. 'The theory of society that socialists have recently elaborated, based on Marx's analysis of the capitalist economic process, has *expanded and deepened* Marx's own theory about historical conditions and thereby *gone beyond Marx*, at least on an essential point that Marx himself only dealt with in a fragmentary way: the theory of the formation of new capital or the regeneration of capital'. Further, this author follows Luxemburg in reiterating that, with his fiction of universal capitalist production, Marx

> blocked insight into the historical milieu which alone makes capitalism and continuous capital formation possible. For accumulation is impossible in a purely capitalist milieu … In this theory [of Luxemburg], which is grounded in empirical, historical material and interprets it, we can, *in fact*, see a *significant* improvement of Marx's doctrine … When dealing with the question of the possibility and future of the capitalist economic system, he [Marx] set out from a *fiction*, that is just as true and correct as the fiction of the classical economists, who underpin their own analyses with an imaginary state of society and the economy. (Salz 1925, pp. 218–19) [Grossman's emphasis.]

370 Sternberg 1971, p. 303. [Grossman's emphasis.]

371 Sternberg 1971, p. 301.

372 Sternberg 1971, p. 303.

crises under capitalism, the industrial reserve army, workers' wages, the workers' movement and above all revolution'.[373] All these fundamental questions of Marxist theory are thus wrongly dealt with, and this because Marx built his system on an unproven assumption whose realisation is improbable! As though Marx expected his assumption to be realised!

The grotesqueness of this entire exposition is obvious. It is the product of a whole generation of theoreticians who cling to results and quasi-results without any philosophical background, without asking by what methodological means these results were achieved and what significance they have within the total architecture of the system. Sternberg asserts that Marx merely portrayed 'pure' capitalism, isolated from all foreign trade relations, and thereupon writes a book of over 600 pages. Because Marx neglected to summarise the various passages in which he dealt with the role and function of foreign trade under capitalism in a single chapter or to order them into sections and paragraphs, with an appropriate heading, these passages are totally ignored. A sad demonstration of the decline of theoretical thinking.

Marx actually devotes quite considerable space to describing the role of foreign trade, all the more so as he disagreed with Ricardo on this question and therefore polemicised against him.

If among the many simplifying assumptions, on the basis of which Marx's work is constructed, the assumption of the non-existence of external trade is also to be found, then this assumption obviously has purely preliminary validity. The results achieved with the help of this *assumption* are *provisional* insights, intermediate stages in the method of successive approximation. The factors that are at first excluded from consideration must obviously be brought back into consideration later. The provisional insights *are thus subject to subsequent correction and reconciled with empirical reality*.

a *The Function of Foreign Trade under Capitalism*

i The Significance of Foreign Trade in Enhancing the Diversity of Use Values

The mass of the surplus product that accrues to the capitalists grows with the advance of capitalist production. Boudin, who wanted to prove that the annual product cannot be sold under capitalism and therefore the necessity of external markets, asks: 'what is the capitalist class going to do with the increased output …? The capitalists themselves cannot use them …'[374] The

373 Sternberg 1971, p. 9. [Grossman's emphasis.]
374 Boudin 1907, p. 168.

notion of restricted capacity to consume hovers before Boudin. He forgets that needs are unlimited, that when enough of a certain product has been consumed, there are always others which can be needed. In fact, a much wider range of products was consumed around the middle of the nineteenth century than at its start, and there is even greater variety today. Foreign trade plays an important role in expanding this variety. Here, it should be immediately added that what matters is international exchange as such, regardless of whether it takes place with capitalist or non-capitalist countries. For, by expanding the range of use values, international trade has the same effect as the invention of new ways of using a particular product on the domestic market. The expansion of the variety of use values facilitates accumulation, thus weakening the breakdown tendency. Marx writes,

> For example, if corn is used as raw material in the preparation of spirits, then a new *source of accumulation is opened up*, because the surplus product may be converted into new forms, satisfy new wants, and enter as a productive element into a new sphere of production. The same applies if starch, etc., is prepared from corn. *The sphere of exchange of these particular commodities and of all commodities is thereby expanded.*[375]

Foreign trade has the same effect as the invention of new uses. 'Capitalist production', writes Marx, 'rests *on value*' and on surplus value as 'abstract wealth'. However, 'If surplus labour or surplus value were represented only in the *national* surplus product, then the increase of value for the sake of value and therefore the exaction of surplus labour would be restricted by the limited, *narrow circle of use values* in which the value of labour would be represented. But it is foreign trade which develops the surplus value's real nature as value by developing the labour embodied in it as social labour which manifests itself *in an unlimited range of different use values, and this in fact gives meaning to abstract wealth*.'[376] In this way, then, the limit to surplus value production, to accumulation, is expanded, the breakdown tendency weakened.

This aspect of exchange relationships does not exhaust the problem of foreign trade and its impact on capitalism's developmental tendencies. In posing the question above, Boudin forgets that when the saleability of commodities under capitalism is discussed, it is not a matter of the capacity to consume *products* but of effective demand, that is of a quantity of *value*, so in this case

375 Marx 1991a, p. 366. [Grossman's emphasis.]
376 Marx 1989c, pp. 387–8. [Grossman's emphasis.]

it is also impermissible to leap from a value perspective to a natural perspective.[377] From the standpoint of value, however, we have shown that the problem of breakdown is not an excess of surplus value but, on the contrary, a lack of sufficient valorisation. We must therefore examine foreign trade, from the standpoint of its effects on valorisation, more closely.

ii Extension of the Territorial Market as a Means of Reducing Costs of Production and Circulation

To grasp the significance of foreign trade and the expansion of markets, it is not at all necessary to fall back on the metaphysical theory of the 'realisation of unsaleable surplus value'. Its explanation is closer to hand and more plausible.

> [T]he size of the economic territory … has always been extremely important for the development of capitalist production. The larger and more populous the economic territory, the large the individual plant can be, the lower the costs of production, and the greater the degree of specialization within the plant, which also reduces costs of production. The larger the economic territory, *the more* easily can industry be located where the natural conditions are most favourable and the productivity of labour is highest. The more extensive the territory, the more diversified is production and the more probable it is that the various branches of production will complement one another and that transport costs on imports from abroad will be saved.[378]

An industry such as England's, which was the 'workshop of the world' until the 1870s, could use mass production to push through a division of labour and thus productivity increases and *cost savings* of a kind that for decades was nowhere possible outside England.[379]

While weaving and spinning were originally combined, they later separated. This resulted in local specialisation. Burnley makes common calico prints; Blackburn clothes India and China (so-called *dhotis*, T-cloth);[380] Preston manufactures the finer, unpatterned cloths. The factory districts lying closer to Manchester and dedicated largely to spinning specialise mainly in more com-

377 [I.e. a use value perspective.]
378 Hilferding 1981, p. 311. [Grossman's emphasis.] See also Bauer 2000, pp. 151–2.
379 Schulze-Gaevernitz 1892, pp. 84, 98.
380 [A '*dhoti*' is a rectangular cloth used on the Indian subcontinent to wrap around a man's waist and legs. T-cloth was a plain cotton fabric made for the Indian and Chinese markets.]

plicated fabrics, like the cotton velvets of Oldham, the twills of Bolton, and the high-quality calicoes of Ashton and Glossop. The district of Colne makes common coloured goods. Only mass production of this kind allows the *construction of specialised machines* for individual operations, which in turn means lowering the costs of equipment and factory operations.[381]

Manchester itself, previously the centre of the industry, came increasingly to specialise in being the exclusive base of the export trade. '[I]n the basements of tall commercial buildings, which had often several storeys underground, steam engines and hydraulic presses reduce bales of yarn and fabric to half their size or less.'[382]

'The reason universally cited for centralisation of activities' in specific districts 'is that only in localities that are exclusively dedicated to one industry can highly-skilled labour force be found.'[383] Specialisation as a consequence the expansion of the world market can be so extensive that most spinning mills produce just a single yarn number, year in and year out.[384] Many mills weave staple articles especially for the East. Those in North Lancashire, which produce simple fabrics and have little or no connection with fashion, for example, deliver only one and the same pattern.[385] 'If European taste changes in a matter of months and seasons, that of the Hindus changes over centuries.'[386]

It is self-evident that such specialisation in production means huge *cost reductions*, due to savings in unproductive expenditures, [fewer] interruptions of work, increases in productivity and the intensity of labour, and all this increases valorisation, the rate of profit. To advantages in the sphere of production are added those in the sphere of circulation, in the purchase of raw materials and sale of manufactured goods. Business is organised so that the number of intermediaries such as importers and brokers is reduced to the absolute minimum required and they make do with the smallest commissions, as a consequence of higher turnover. The same effect is achieved by a highly developed network of railways and canals which facilitate the transport of raw materials from markets to the centres of production. The opening of the Manchester Ship Canal, for example, cheapened transport from Liverpool to Oldham, which had been 'no less costly than the transport from Bombay to Liverpool, by at least a third'.[387]

---

381 [Schulze-Gaevernitz 1892, pp. 98–9.]
382 [Schulze-Gaevernitz 1892, p. 99.]
383 Schulze-Gaevernitz 1892, p. 99.
384 [A yarn's number specifies its thickness.]
385 Schulze-Gaevernitz 1892, p. 100.
386 Schulze-Gaevernitz 1892, p. 92.
387 Schulze-Gaevernitz 1892, p. 101.

The influence of market size on the profitability of industry can be traced further in a different direction. Specialist organisations emerge for credit, conditions of sale, insurance and an organisation of commodities exchanges in raw materials and finished goods. It would be superfluous to describe all of them in more detail here. Suffice it to say that they all cheapen investment in factories and the costs of factory operations and marketing, which is why English goods previously had a *huge lead over every other country in the competitive struggle*. The enormous significance of extensive sales markets and hence also of the struggle over them is thus comprehensible from the standpoint of the *production* of the largest possible amount of surplus value, without needing to take refuge in Luxemburg's thesis of the 'realisation' of surplus value. On the contrary. From the perspective presented here, in purely economic terms, it is irrelevant whether those markets are capitalist or non-capitalist. What matters is mass sales, hence mass production which permits a corresponding specialisation and rationalisation in the labour and circulation processes. So it is completely irrelevant whether, for example, England or China purchases German chemicals.

Finally, specialisation and local concentration of production in specialised articles contribute to the education of a highly qualified labour force, for they make possible the 'exclusive employment of a population in the same industry for generations' and thus contribute to raising skill and the intensity of labour. As a German manufacturer quoted by Schulze-Gaevernitz declared, German workers are less efficient than English workers due to lack of tradition, as workers in England, who have dedicated themselves to specialised tasks for generations, have acquired experience in handling machines, so that three to four workers can operate 1,000 spindles, while in Germany six to ten workers were needed, at that time.[388]

All these circumstances explain why France, for example, which had an old and flourishing silk industry in Lyons, totally depended on England for the import of raw silk from China and Japan. All attempts by France in the 1860s to acquire Chinese silk directly, with the help of French banks, failed 'because *the English were able to buy it more cheaply* … due to their extensive trade relations … and the lower freight costs connected with better use of their shipping. Only after the Suez Canal was opened were the efforts of Lyons to take the trade in Asian silk in hand successful.'[389] Even today the English woollen industry, for example, remains cheaper and more competitive than the Australian woollen (finished goods) industry, even though its raw material is available locally, des-

388 Schulze-Gaevernitz 1892, pp. 108, 109.

389 Mehrens 1911, p. 62. [Grossman's emphasis.]

pite the double freight costs involved in importing the raw material all the way from remote territories like Australia and shipping the final product back there. For the small Australian population and its small purchasing power 'have led companies to diversify instead of specialising their production'.[390] The domestic price level is therefore higher than the world market price, sales are exclusively confined to the domestic market and have to be secured by means of *tariff protection*. The same is true of the woollen industries of La Plata (Argentina) and South Africa. In all markets for high-quality and fashion articles, English goods dominate, even though the domestic industry has wool on the spot and does not have to pay twice for transportation. These circumstances explain why the United States of America has emerged as an increasingly formidable competitor in the fight to dominate sales markets. The powerful advantage of a single, large economic territory that is not restricted by customs barriers, visa restrictions, different commercial laws and different languages, commercial treaties and currencies gives American industry completely different possibilities for economic expansion than those available in Europe. In America it was possible to push industrial specialisation to the extreme and with the mass production of standardised articles resting on it introduce mechanisation to replace specialised human labour, i.e. to invent a particular machine for each special function.

Mass production and mass sales have, on a capitalist basis, always been worth pursuing. However, only in the late phase of capital accumulation, when valorising the gigantic mass of capital domestically becomes increasingly difficult, do the expansion and control of the largest possible sales outlets become matters of life and death for capitalism. For only in that way are the advantages of specialisation, described earlier, and therefore staying ahead in competition on the world market at all possible. Hence also the triumphant advance of 'large enterprise' over 'small and medium enterprise' in the field of politics. Hence the tendency to form transnational imperial entities in place of nation states. Today's categories of thought are no longer nation states but continents.

iii Foreign Trade and the Sale of Commodities at Prices of Production Deviating from Their Values

We have already pointed out that among the simplifying assumptions that underpin Marx's reproduction schema and his theoretical analysis in general, the assumption that commodities exchange at their values, i.e. that the prices of

390 Heß 1925, p. 140.

commodities do *not* deviate from their values, has an especially important role. This can only occur if supply and demand are in *equilibrium* or, what amounts to the same thing, there is *no competition*, only the exchange of one commodity of a given value against another commodity of *the same value* in the circulation process (as described in the second volume of *Capital*). In reality, however, commodities are *not* sold at their values. 'Not only is the circulation process, for its part, the scene of those transformations that were considered in Volume 2, but these also coincide with actual *competition*.'[391] It follows that the fictitious assumption just mentioned can only have a *preliminary character*. In the final stage of the analysis, the elements of reality that were initially excluded must to be taken back into consideration. The preliminary results of the analysis are subsequently corrected.

But what sorts of corrections are at issue? The problem, to the extent that it was recognised as one, was previously always examined solely from the standpoint of transfers of value *among capitalists*. *Under* capitalism commodities are sold not at their values but at prices of production, which deviate from those values. The validity of Marx's law of value for the determination of prices is not affected by this; if some commodities are sold *above* their values, others are sold *below*. The sum total of prices paid is identical to the total quantity of value, i.e. it is conditioned by the quantity of social labour expended.[392] The problem of the deviation of prices from values in *international* exchange has not been discussed in any systematic way in the Marxist literature, still less integrated into the overall structure of Marx's system, either by Hilferding or anyone else. Initially, this seems remarkable. After all, Marx did consistently extend the theory of the classical economists, namely Ricardo, free it from inner contradictions and incorporate it into the totality of his system, especially into the theory of breakdown. But Hilferding and in general Kautsky's whole school could not recognise the elements of novelty and originality in Marx's achievement, precisely because they sought to refute Marx's theory of breakdown and to erase every trace of it from the edifice of his thought. So closer analysis of the function of foreign trade under capitalism, from the standpoint of Marx's system, was neglected.[393] What was simply a distortion of Marx's theory by Kautsky's

391 Marx 1981, p. 134.

392 Hilferding 1949, p. 51; Hilferding 1981, p. 231.

393 Bauer, of course, saw the naked implication of Marx's theory of price for foreign trade relations between two regions in different stages of capitalist development, namely the fact that the capital of the more developed country appropriates part of the labour of the less developed country, without being capable of connecting and reconciling it with Marx's basic law of capital accumulation (see Bauer 2000, p. 200).

school was then taken for pure wine by Luxemburg and that is the only reason she and her disciples could talk about 'gaps' in Marx's system.

Let us consider the problem as it emerged historically. If the absolute validity of the law of value, that is sale of commodities at their value in international trade, is accepted – as Ricardo did – then foreign trade must have no significance for the problem of value and the accumulation of values. Under these circumstances, foreign trade only involves the exchange of use values of one kind against use values of another kind, so that the magnitudes of value and profit remain the same. 'No extension of foreign trade', writes Ricardo in the seventh chapter of his *Principles*, 'will immediately increase the amount of value in a country.' 'It has been my endeavour to show throughout this work, that the rate of profits can never be increased but by a fall in wages … Foreign trade, then, though highly beneficial to a country, as it increases the amount and variety of the objects … *has no tendency to raise the profits of stock*.' And in another passage he writes, 'If, by the introduction of cheap foreign goods, I can save 20 per cent from my expenditure, the effect will be precisely the same as if machinery had lowered the expense of their production, *but profits would not be raised*'.[394] Ricardo therefore holds fast to value equivalence even in foreign trade. In contrast, Marx emphasises the role of competition in international, inter-state exchange relations.

If the *sphere of production* is considered, it follows that national rates of profit are higher in economically undeveloped countries, as a consequence of their low organic compositions of capital, than in advanced capitalist countries, even though the rate of surplus value is significantly higher in the latter and rises more and more as the capitalist mode of production develops and the productivity of labour grows. Assuming that the rate of surplus value is 100 per cent in Europe and only 25 per cent in Asia, consideration of differences in the organic composition of capital results in the following calculation:[395]

In the Asian country
the value of the product is $16\,c + 84\,v + 21\,s = 121$
the rate of profit is $21/100 = 21$ per cent.

In the European country
the value of the product is $84\,c + 16\,v + 16\,s = 116$
the rate of profit is $16/100 = 16$ per cent.

394 Ricardo 1912, pp. 77, 80. [Grossman's emphasis.]
395 Marx 1981, p. 250.

As, however, equivalents are not exchanged in international trade, because here too, as on the domestic market, there is a tendency for rates of profit to equalise, it follows that the commodities of the advanced capitalist country, that is a country with a higher organic composition of capital, are always sold at prices of production *higher* than their values; while, conversely, with free competition the commodities of countries with a lower organic composition of capital are sold at prices of production that must, as a rule, be lower than their values. In Marx's example, just cited, this means that an average rate of profit of 18.5 per cent would form on the world market, i.e. that the European country would sell its commodities at a price of 118.5 instead of 116. In this way *transfers* of surplus value occur on the world market, and *within the sphere of circulation*, from undeveloped to more developed capitalist countries, as the distribution of surplus value takes place not according to the number of workers employed but to the size of the functioning capital.

Marx therefore writes, 'It also explains how foreign trade influences the rate of profit, irrespective of any effect that it has on wages by cheapening the necessary means of subsistence … The fact that any understanding of the rate of profit … has been so completely lacking is responsible for a situation in which … economists … such as *Ricardo fail to recognize the influence of such things as world trade on the profit rate*.'[396] And, in another passage,

> Ricardo is therefore *wrong* when, contradicting Adam Smith, he says 'Any change from one foreign trade to another, or from home to foreign trade, cannot, in my opinion affect the rate of profits' … Because of his completely wrong conception of the rate of profit, *Ricardo misunderstands entirely the influence of foreign trade* … He does not see how enormously important it is for England, for example, to secure *cheaper raw materials* for industry, and that in this case … the *rate of profit rises* although prices fall.[397]

This cheapening of imported commodities comes about because in foreign trade '*three* days of labour of one country can be exchanged against *one* of another country'. '*Here the law of value undergoes essential modification … In this case the richer country exploits the poorer one, even where the latter gains by the exchange*.'[398] In the capitalist country, in this case, 'Profit can also be made

396 Marx 1981, p. 202. [Grossman's emphasis.]

397 Marx 1989c, pp. 71–2. [Marx only emphasised 'rate of profit rises although prices fall'.]

398 Marx 1989c, p. 294. [Grossman's emphasis.] About trade relations between two regions with different levels of capitalist development and differing organic compositions, Bauer

by cheating, one person gaining what the other loses'.[399] The same principle applies to price formation on the world market as governs prices in a conceptually *isolated* capitalism. But the latter is simply an auxiliary theoretical construction and only the *world market* as the unity of different national economies is a real and concrete phenomenon, because prices of the most important raw materials and final products are today determined on the level of the world economy, not simply nationally, and we do not have national price levels but the price level of the world market. Just as *within* a conceptually isolated capitalism entrepreneurs equipped with technologies more advanced than the social average make *an extra profit* at the expense of those entrepreneurs whose techniques remain behind the social average, when they sell their commodities at socially average prices, so *on the world market the most technologically developed countries obtain super profits at the expense of countries whose technological and economic development is backward*. Marx points out that this function of foreign trade has been a constant feature of the capitalist mode of production since it began, when '*the accumulation of urban capital* in the Middle Ages … was principally due to the exploitation of the countryside by trade as well as by manufacture'. '[T]he town, which exchanges a smaller quantity of labour against a *greater quantity of labour* from the countryside, draws excess profit and excess wages compared with the country. This would not be the case if it did not sell its commodities to the country *for more than* their value.'[400] The further development and expansion of the capitalist mode of production from urban economy to world economy did not change the nature of this sort of price formation, but rather developed it to the fullest extent. Marx makes an effort to underline this consequence of the law of value for the world economy at every available opportunity, and writes, for example, 'most agricultural peoples are forced to sell their product *below* its value whereas in countries with advanced capitalist production the agricultural produce rises *to its value*'.[401] So too in chapter 22 of *Capital*'s first volume, which deals with 'National Differences in Wages': '*the law of value is yet more modified in its international*

correctly writes: 'If we consider only the *prices* of commodities, each region receives in exchange as much as it provides; if we focus, on the other hand, on the *values*, it becomes clear that *it is not equivalents that are exchanged*'. 'The capital of the developed region appropriates a part of the labour of the less developed region.' '*The capitalists of the more highly developed region thus not only exploit their own workers, but also always appropriate a part of the surplus value that has been produced in the less developed region*' (Bauer 2000, pp. 200–1). [Grossman's emphasis.]

399 Marx 1989c, p. 294.

400 Marx 1989b, p. 454. [Grossman's emphasis.]

401 Marx 1989c, p. 108. [Marx only emphasised '*below*'.]

application by the fact that, on the world market, national labour which is more productive also counts as more intensive, as long as the more productive nation is not compelled by competition to lower the selling price of its commodities to the level *of their value*'. For, with the development of capitalist production in a country, the national intensity and productivity of labour rise above the international average. 'The different quantities of commodities of the same kind, produced in different countries *in the same working time, have, therefore, unequal international values*, which are expressed in different prices, i.e. in sums of money varying according to international values. *The relative value of money will therefore be less in the nation with a more developed capitalist mode of production* than in the nation with a less developed capitalism.'[402] Meanwhile, with these cheap commodities in the less developed countries they can buy commodities of a higher value, that is sell their commodities above their value.

And Marx discusses the issue yet again in chapter 17 of the first volume on 'Changes of Magnitude in the Price of Labour Power', where he points out that, due to the different stages of development of capitalism in different nations, 'the intensity of labour would … be different in different countries, and would modify *the application of the law of value* to the working days of different nations. The more intensive working day of one nation would be represented by a greater sum of money than the less intensive day of another nation'.[403] Finally, in the third volume he writes about the function of foreign trade:

> Capital invested in foreign trade can yield a higher rate of profit … because it competes with commodities produced by other countries with less developed production facilities, *so that the more advanced country sells its goods above their value*, even though still more cheaply than its competitors. In so far as the labour of the more advanced country is valorised here as labour of a higher specific weight, the profit rate rises … *The privileged country receives more labour in exchange for less*.[404]

'As far as capital invested in the colonies etc. is concerned … the reason why this can yield higher rates of profit is that the profit rate is generally higher there on account of the lower degree of development, and so too is the exploitation of labour, through the use of slaves and coolies, etc.'[405]

402 Marx 1976b, p. 702. [Grossman's emphasis.]
403 Marx 1976b, p. 662. [Grossman's emphasis.]
404 Marx 1981, pp. 344–5. [Grossman's emphasis.]
405 Marx 1981, p. 345. John Stuart Mill already tells us: 'We may often, by trading with foreigners, *obtain* their commodities *at a smaller expense of labour and capital* than they cost to

In all the cases enumerated here, the gain of the more advanced capitalist country signifies *a transfer* of profit from the less developed country; it is a matter of pure indifference whether the latter are capitalist or non-capitalist. For it is not a matter of 'realisation' of the surplus value produced under capitalist relations in non-capitalist areas – as Luxemburg's theory asserts – but rather, there arises for the more developed country, alongside the surplus value produced in the country itself, an *additional* surplus value which is produced in the less developed country and *transferred* to the more developed country by means of competition on the world market, that is an *unequal exchange*, an exchange of non-equivalents. This transfer of surplus value from one country to another is the result of their different stages of economic development.

The same transfer of value occurs in foreign trade with another capitalist country, so long as it is technologically and economically less developed.

Only from the standpoint of the theory of breakdown presented here is it possible to grasp the enormous significance of this process of transfer through foreign trade and to understand the true function of policies of imperialist expansion. According to Luxemburg's conception, there is over-production of an unsaleable surplus under capitalism that can only find 'customers' and be 'realised' in non-capitalist countries. We have shown that capitalism does not suffer from hyperproduction of surplus value but rather from insufficient valorisation. This temporarily and periodically generates a tendency to breakdown, which gives rise to crises and, in the further course and from a particular level of capital accumulation, leads the breakdown tendency to intensify and finally leads to breakdown.

Under these circumstances an *injection of surplus value* from the outside by means of foreign trade must raise the rate of profit and thus *moderate and weaken the breakdown tendency*, weakening it. According to Luxemburg's conception, the amount of surplus value produced under capitalism does *not* change, it is simply 'realised'. According to our conception, which I believe I have demonstrated is also Marx's, in keeping with the law of value, the mass of the original surplus value is *augmented* by means of transfers from abroad. The super profit that flows from the sale of commodities above their values is a gain that is obtained on the margins of a capitalist economy by means of foreign trade. We have seen that this already happened at the beginning of the capitalist mode of production and has always accompanied it in its further develop-

---

the foreigners themselves. The bargain is still advantageous to the foreigner, because the commodity which he receives in change, though it has cost us less, would have cost him more' (Mill 1890, p. 391). [Grossman's emphasis.] For the issue here is not differences in 'absolute' costs of production but in 'comparative' costs.

ment. But only at more advanced phases of capital accumulation, as it becomes increasingly difficult to valorise the enormous capital amassed, which means nothing other than that the breakdown tendency is coming into effect, only then does the question of injecting additional profit from outside by way of foreign trade become *a matter of life and death for capitalism*. It is precisely a matter of weakening, of neutralising the breakdown tendency. Hence the ferocity of imperialist expansion precisely only at this late stage of capital accumulation. As it is entirely irrelevant whether the transfer of profits 'from abroad' come from an exploited country which is capitalist or non-capitalist (agrarian)[406] and as the exploited country can in turn exploit other, still less developed countries by means of foreign trade, *the consequence of capital accumulation in its late phase is intensified competition among capitalist countries on the world market*.[407] For the weakening of the breakdown tendency through increased valorisation or, what amounts to the same thing, the prolongation of one capitalist state's existence occurs at the expense of another. *The technologically and economically more advanced country appropriates additional surplus value at the expense of the more backward country*. In addition to more intense pressure on wages and class struggle against the working class, capital accumulation brings about a more and more destructive competitive struggle among capitalist states, a continuous revolutionising of technology, 'rationalisation', Taylorisation or Fordisation of the economy of the leading capitalist powers, to again and again try to achieve supremacy on the world market, by gaining technological and organisational advantages. On the other side, there is a more drastic pro-

406 This needs to be especially emphasised not just against Luxemburg but also against Bauer, since he interprets Marx's theory of the transfer of value from less developed countries to technically more advanced ones via foreign trade as if all that was involved here was an exploitation of agrarian countries by capitalist, industrial ones. In other words, Bauer maintains that there is a 'transfer of a part of the value produced to the capitalist class of the industrial region by means of the production price of industrial products' (Bauer 2000, p. 201). Later Bauer only writes about the exploitation of colonial countries by the mother country (Bauer 2000, pp. 386–8), something that Nachimson (Spectator) also repeats, following him (see Nachimson 1922, p. 191).

407 In opposition to Marx's account of the world market, as a unity of different countries at different stages of economic development which, in parallel with the advance of capital accumulation come into fiercer competitive struggle – all a self-evident consequence of Marx's law of vale – Varga asserts: 'As is well known [!], Marx was not able to elaborate the theory of competition any further … In his economic theory of capitalism, Marx sets out from the assumption that there is a *uniform world capitalism*.' To whom this assertion is supposed to be 'well known', apart from Varga himself, is unknown to me. Here Varga uncritically repeats Böhm-Bawerk's old fable that Marx overturned the theory of competition as the decisive force in price formation (Varga 1926a, p. 248). [Grossman's emphasis.]

tectionist policy in economically backward countries, which believe that they have a means of defence against the supremacy of the capitalist Leviathans by shutting themselves off.

We have seen how Kautsky sees the essence of imperialism in the drive to conquer non-capitalist, agrarian territories and therefore expects imperialism simply to be an episode in the history of capitalism, overcome by the industrialisation of these territories.[408] This conception is fundamentally false. Such a conception is only possible if imperialism is understood in the particular way that arises from Luxemburg's theory of the role of non-capitalist countries. We have, however, demonstrated that imperialist antagonisms are not only expressed in the relations between capitalist and agrarian countries but *that these antagonisms exist among capitalist states, if they find themselves at different stages of technological development* so that the more developed country can economically exploit the less developed. Far from being just an 'episode' that belongs to the past and becomes less and less significant, imperialism is, on the contrary, deeply rooted in the essence of capitalism at advanced stages of capital accumulation. Imperialist tendencies will therefore become stronger and stronger as accumulation progresses and will only be overcome with capitalism itself.

Only when this function of transferring surplus value through foreign trade has been recognised does the way foreign trade can operate to overcome the breakdown tendency become intelligible. True, commodities are not only

---

408 Gregor Bienstock repeats the same ideas in an essay, 'The Future of Capitalism'. 'Imperialism is not *the* problem in today's world politics … it appears that we do not live in the age of world wars and world revolutions' (Bienstock 1928, pp. 421–2). 'Gradually imperialism is ceasing to be modern, it belongs to past epochs, precisely because the world economic situation that spawned it has increasingly changed' (Bienstock 1928, p. 421). It is truly astonishing to see what Bienstock imagines 'socialism' to be and what is published in a reputedly scientific socialist journal [*Die Gesellschaft*]. In all seriousness he considers whether the tendency to export capital characteristic of capitalism will 'also be typical of the early socialist era' (Bienstock 1928, p. 420) and goes on to write about 'the organisation of socialist exports of capital' (Bienstock 1928, p. 422). 'The elimination of the commodity and money economy is also no longer regarded as a current problem' (Bienstock 1928, p. 423). This is intelligible when we go on to read that the concept of surplus value is also no longer relevant to today's capitalism. To the question he poses, 'Is the hunt for profit … to be seen as the main motor of modern large-scale capitalism?', the response is: that was only valid in the past. 'Today *profit* is no doubt to be seen simply as a measure of success. In this function we will no doubt *also find it again in a socialist economy*' (Bienstock 1928, p. 424). [Grossman's emphasis.] So socialism is conceived of as a simple continuation of existing capitalism, with its profits and capital exports. The trouble is that imperialism disrupts this conception and must therefore be portrayed as an 'episode' that belongs to the past.

exported during crises or periods of depression. But it can still be established that in periods of upswing, when domestic prices are high and rising, domestic accumulation in individual branches of production creates a market for industry and industry works mainly for the domestic market. Only at the moment when domestic saturation occurs, i.e. when valorisation disappears because of overaccumulation and demand for productive goods falls or ceases altogether, does foreign trade achieve greater significance. The forcing of foreign trade in periods of depression operates as a safety valve for overproduction on the domestic market. In Germany after the boom of 1927, a cyclical weakening was apparent at the start 1928. And although a full-scale depression has not yet come, in the first four months of 1928 a *drop in domestic sales* has occurred almost all along the line. This has simultaneously been offset, however, by the *safety valve of exports*. Overall, from January to April around 600 million marks more was exported than a year before (3,750 compared with 3,166 million marks), which comes to an increase of 1.8 billion marks, calculated on an annual basis. Here we have one of the means which contributes to the moderation of insufficient domestic valorisation.

iv Does the Industrialisation of the Colonial, Agrarian Countries Signify the End of Capitalism? The International Nature of Economic Cycles

In the industrialisation of the non-capitalist countries, Luxemburg's theory, already known to us, wants to see the 'beginning of the end' of capitalism. She simply took over widespread views from bourgeois theory and practice that arose from fear of emerging competition from the new countries. The 'yellow peril' was talked about. In his 1896 book, *The End of Europe*, [Amédée] Bocher was worried about the end of European capitalism and envisaged such powerful competition from the Far East that he envisaged its industrial products already turning up on the Champ de Mars and driving out French manufactures around 1900.[409] He predicted the 'starvation' of Europe in the foreseeable future, caused by 'the struggle against the rest of the world's competition'.[410] Gerhard Hildebrand developed similar ideas in Germany, 15 years later. In the industrialisation of the peasant countries, the industrial advance of eastern Europe and the 'yellow peril', he foresaw the shattering of western Europe's industrial dominance, and the approach of a worldwide crisis.[411] Because of the industrialisation of the peasant base [in those countries], workers in western

409 [Bocher 1896, pp. 87–93.]
410 [Bocher 1896, p. 82.]
411 Hildebrand 1910, p. 217.

Europe would lose employment and this would bring 'the danger of catastrophic upheavals' closer.[412] The erroneousness of this conception immediately meets the eye. For, however much the non-capitalist countries industrialise, the capitalist 'metropolitan countries' need not worry about their future, so long as they are able to maintain their technological and organisational *lead*. In this regard, Professor Theodor Sternberg's recent remarks, in correspondence from Tokyo about Japan in the *Berliner Tageblatt*, are instructive. The industrial development of that country has registered real advances. Yet, at the same time, development has been *much faster* in the old capitalist countries.

> Other countries have gained a great lead … In the competitive capitalist economy this *lead* is, however, every day becoming the principal factor for economic triumph and ruin. Japan's undeniable advances are being overtaken with *increasing speed* by advances in the west and their effect is ruinous competition. The delusion that tariff barriers can protect against this has already been shattered … Tariffs could withstand the catapults of old developed capitalism's improvements in production but not the artillery of modern developed capitalism.[413]

Clearly, as a consequence of the industrialisation of new countries, the most rudimentary consumer goods, previously obtained from abroad, are now produced locally. But concurrent with and as a consequence of industrialisation, *the purchasing power of these countries grows enormously*, to the extent that they develop their productive forces with the progress of industrialisation. So Paul Leroy-Beaulieu correctly remarked, almost 30 years ago, that 'the first effect of the introduction of European industries into China must lead … to the bettering of the condition of the Chinese labouring class … by … improvement in manner of living. If, therefore, European export trade may apparently suffer from the manufacturing of goods hitherto imported by the Chinese, such as cottons, for instance, matters will balance themselves eventually for the simple reason that, the richer the Chinese get, the more they will buy.'[414] Similarly, Adolf Weber writes: 'Encouraging industrial development means *strengthening foreign countries' purchasing power* and thus expanding the home country's market'.[415] Most recently, [Bernhard] Harms contends that the industrialisation of new economic territories 'indirectly gives a powerful boost to European

412 Hildebrand 1910, p. 164.

413 Sternberg 1927, p. 1. [Sternberg only emphasised '*lead*' and 'tariff barriers'.]

414 Leroy-Beaulieu 1900, p. 239.

415 Weber 1915, p. 227. [Grossman's emphasis.]

industry'. For '[t]he industrial construction of the new economic territories is mainly undertaken with *European* means of production'.[416] An analysis of European exports in the post-war period demonstrates this. While English textile exports showed a steady decline, the export of textile machinery reached record levels! Far from being the 'beginning of the end', the industrialisation of new countries, on the contrary, signifies a *rise in export opportunities*. At the outset of its industrialisation, a country does produce the simplest consumer goods but the emerging industry generates new requirements for commodities that the new industry is incapable of supplying. If an agrarian country goes over to the production of textiles which were previously imported from Europe, then it is true that European exports of those articles will fall but, by the same token, the export of cotton yarn, textile machinery and dyestuffs will grow. Likewise exports of numerous other articles for which there was earlier no demand, that only develops with the growing purchasing power of the new countries: all sorts of more complicated machinery, paper-making machines, machines for printing books, generators, all precision engineering, optics, the manufacture of coal tar dyes, nitrogen compounds, pharmaceuticals etc. In all these branches they have to depend on the advanced industries of Europe and America. Thus the industrialisation of the agrarian countries only changes the character of exports to them; exports do not cease; on the contrary, they increase. Correctly appreciating this fact, the 1927 conference of the Reichsverband der Deustchen Industrie, in Frankfurt am Main, emphatically declared that that the *manufacture of quality goods* is one of the most important means of expanding Germany's exports.

So, when adherents of Luxemburg's theory try to defend it by referring to the growing importance of colonial markets, when they invoke the colonies' share of a little over one third in the total value of Britain's exports in 1904, whereas it was already close to 40 per cent in 1913,[417] this proof is worthless for the conception they uphold. With it they achieve the opposite of what they wanted. For these colonial territories do in fact achieve ever greater significance as markets. But only to the extent that they industrialise, *to the extent that they shed their non-capitalist character*! For the capacity to absorb commodities grows in parallel with the level of capitalist development. The industrialised colonies are better markets than the purely agrarian ones; the *advanced capitalist* countries have the greatest capacity to absorb commodities. Germany's largest markets are not colonial countries but other *advanced capitalist states*. Germany's best market was England. By far the largest fraction of the English

416 Harms 1929, p. 8. [Grossman's emphasis.]

417 Sternberg 1971, p. 421.

iron and steel industry's precision engineering used German steel; the finest precision machined English knives and blades were made of German steel. The distribution of Germany's total exports of 10,198 million marks in 1913 was:

Group	[Region]	Million marks	Per cent
I	Western Europe	5,272	52.2
II	Central, Eastern and Southeast Europe	2,405	23.8
III	Americas	1,547	15.4
IV	Asia	548	5.4
V	Africa, Australia and other	325	3.2
		10,097	100.0

Thus the largest markets were the advanced capitalist countries of western Europe; in contrast, the less developed countries of eastern and south-eastern Europe show much lower capacity to absorb commodities. The markets of the least developed capitalist countries of Asia and Africa show an even lower degree of development. But it is also apparent that the parallel between capacity to absorb commodities and degree of capitalist development, which we have asserted, is confirmed within each of the groups in the table immediately above. It is apparent that the market for German goods was greater, the more advanced the capitalist development of the country in question. So in group I, we see the following distribution of German exports:

Country	Million marks	Per cent
Great Britain	1,438	14.2
France	790	7.8
Netherlands	694	6.9
Scandinavia	675	6.7
Belgium	551	5.5
Switzerland	536	5.3
Italy	393	3.9
Western Europe, others	195	1.9
Total	5,272	52.2

In group II, exports were:

Country	Million marks	Per cent
Austria-Hungary	1,105	10.9
Russia	880	8.7
Balkans	214	2.1
East Europe, other	206	2.1
Total	2,405	23.8

Finally, in Category III, which accounted for 1,547 million marks of total exports, the distribution among countries was:

Country	Million marks	Per cent
USA	713	7.1
Argentina	266	2.6
Brazil	200	2.0
Americas, other	368	3.7
Total	1,547	15.4

The small but advanced capitalist countries of Belgium and Switzerland each absorbed more German commodities than all of Asia! Together, these two small countries imported more commodities from Germany than all the countries of Asia, Africa and North and South America together!

We see the same pattern in the post-war period, with differences in the relative significance of individual markets but not in the *general tendency* of the direction of exports, asserted here. Of Germany's total exports of 10,557 million marks during the first nine months of 1927, 5,415.6 million marks went to Europe states alone, and 1,440.4 million marks to the USA. By contrast, exports to Africa were 460.1 million, to Asia 1,071.0 million, to Australia 277.0 million, making a total of 1,808.1 million marks to these three continents. The best export markets were precisely the industrial capitalist countries. Exports to these were:

Country	Millions marks
Great Britain	688.4
Netherlands	521.8
France	407.2
Czechoslovakia	387.7
Italy	383.3
Belgium	338.4
Switzerland	242.3

Exports to the agrarian countries of eastern Europe were:

Country	Millions marks
Bulgaria	33.8
Yugoslavia	56.5
Greece	51.9
Hungary	58.9

The small Netherlands takes more German commodities than the whole of Africa and all the colonies there, which generated and still generate so many conflicts! The three small but advanced capitalist countries of the Netherlands, Belgium and Switzerland, with scarcely 20 million inhabitants, together take more exports than all the Asian countries including British India, China, the Dutch East Indies, Persia, Turkey, Palestine etc., with their combined population of hundreds of millions. Industrial Czechoslovakia takes more than Brazil (145.7), Chile (69.0), Columbia (21.0), Bolivia (10.1), Costa Rica (17.5), Cuba (7.9), Ecuador (3.4), Paraguay (1.7), Peru (10.7), Salvador (20.1), Uruguay (41.7), and Venezuela (38.1) together. Great Britain and the three smaller countries of the Netherlands, Belgium and Switzerland import 1,790.1 million marks of goods from Germany, that is as much as the three continents of Asia, Africa and Australia together.[418]

And the same is true of the United Kingdom's exports. According to data for 1920, the largest markets for English commodities were the advanced capitalist

418 *Wirtschaft und Statistik* 1927b, p. 1012.

countries of Europe and the United States. The six industrial countries of Germany, France, the Netherlands, Belgium, Switzerland and Italy imported goods from the United Kingdom to the value of £419.6 million, the United States another £131.0 million, a total of £550.6, while exports to all of Britain's possessions and protectorates on all five continents (e.g. Australia, Canada, Egypt, British India etc.) came to just £526.9 million.[419]

It is almost embarrassing to have to refer to these facts. The notion that undeveloped agrarian countries, with their undeveloped and primitive technologies, with their low labour productivity could produce enough commodities with a value equivalent to the colossal wealth of the capitalist states almost borders on the absurd. In reality, the non-capitalist countries are not the 'consumers' of commodities produced by capitalism but precisely the opposite is true. So far as pure commodity trade is concerned, all capitalist states have a *negative balance of trade*, i.e. they import more than they export. In Germany in the 33 years from 1881 to 1913, for example, the excess of commodity imports over exports was 32.2 billion marks and Germany financed this deficit through its 'invisible exports', i.e. freight receipts, bank charges, income from the travel of foreigners, interest on foreign investments etc.

∴

Precisely the following facts allow us to explain a phenomenon which leaves Luxemburg's theory at a loss: the more countries develop their own industry, the greater is their role as markets for industrial goods; that industrial countries constitute markets for each other's commodities; in a manner of speaking, individual countries relate to each other within the world economy in the same way individual departments do within Marx's reproduction schemas. We mean *the international character of economic cycles*. We conducted our theoretical discussion of the accumulation process using the example of an isolated capitalism. This is therefore the place to take up that problem, in connection with the discussion of the function of foreign trade. An upswing in production goes hand in hand with growing imports of raw materials, semi-finished goods and

419 Keltie and Epstein, 1921, pp. 70–3. [Grossman's figures include goods re-exported from the UK. His argument is weaker when Britain's exports of British produce alone are considered. These were worth £307.7 million to the six European countries, £77.1 million to the USA, together £384.8, and £501.5 million to the British Empire. But his point is validated when British produce exported to Canada and Australia, the most industrialised parts of the Empire outside Britain, worth £105.3 million, is taken into account. Exports of British produce to the six European countries, the USA, Canada and Australia were worth £490.1 while exports to the rest of the Empire were worth £421.6.]

those finished goods that are not produced domestically. During the upswing net imports of raw materials and semi-finished goods exceed net exports of finished goods while, conversely, in periods of depression net imports of raw materials and semi-finished goods fall and net exports of finished goods rise. There is, therefore, a strong correlation between upswings and the import of raw materials.

An upswing in one country is communicated to other countries through commodity imports. In this way the rhythm of upward movements becomes more and more synchronised, even when differences of a shorter or longer duration persist in the cyclical fluctuations of individual countries. In fact, before the War, economic cycles in the most important countries in the world market gradually synchronised and the crises of 1900, 1907 and 1913 had an international character. The World War and the interruption of reciprocal economic ties disrupted this synchronism but since the War it has gradually begun to re-emerge.

The composition of *Germany's imports* in 1925–27 in billions marks was:[420]

	1925	1926	1927
Raw materials & semi-finished goods	7.0	5.3	7.7
Finished goods	1.3	1.0	1.8
Total	8.3	6.3	9.5

During the minor upswing of 1925, 8.3 billion marks of raw materials, semi-finished goods and finished goods were imported; in the depression year of 1926 only 6.3 billion; and in the upswing of 1927 9.5 billion.

It is easy to imagine how invigorating such a rapid rise in German imports must have been for the world market. If sufficiently strong, an upswing in one country can be transmitted to all other countries with which it has trade relations. For example, the German upswing of 1927 drew along with it all the neighbouring states of central and northern Europe, which are economically tied to Germany. Conditions in Poland, Czechoslovakia, Austria, Hungary, Switzerland, Belgium, the Netherlands, Sweden and Finland were more or less strongly invigorated.[421] In periods of depression, matters are reversed. Imports

420 *Vierteljahrshefte zur Konjunkturforschung* 1927d, p. 35.
421 *Vierteljahrshefte zur Konjunkturforschung* 1927b, p. 65. See *Frankfurter Zeitung* 1927d.

fall and this affects the other countries; the cancellation of orders operates in the same direction. Foreign gold reserves are drawn down, which forces foreign central banks to take countermeasures, to raise their discount rates. That, in turn, puts greater pressure on foreign money markets and leads the business cycle to turn around.

b *Foreign Trade and the Significance of World Monopolies. The Struggle for World Raw Materials. The Significance of Monopoly Profits*

The transfers of surplus value from the economically less developed to the more advanced capitalist countries by means of foreign trade, described above, initially occur under free competition, without any artificial influences on price formation due to the effective monopoly position that technological superiority confers on the advanced capitalist countries. So long as England was the sole industrial country, to the end of the 1860s, it enjoyed a *virtual* world monopoly. Under those circumstances, it was the automatic beneficiary of advantages in international trade resulting from its possession of more advanced technology. At that time, English manufacturers told their customers abroad: 'You must buy what we make'.[422] The English totally discounted the wishes of foreign customers: 'They make for the British market only, and, if … the goods are not suitable … the supply must be sought elsewhere'.[423] This changed in the 1870s, as Germany and then the USA emerged as England's competitors on the world market. England's practical monopoly was over. Its competitors could now participate in the benefits resulting from trade with less economically developed countries too. Only now did it matter, in the fierce competitive struggle on the world market, for a country to thwart its opponent's participation and secure the transfers of value for itself alone. The means to do this was world monopoly and the compulsion to its establishment was that otherwise a world monopoly would be created by a competitor at its expense.[424] In this connec-

422 Bérard 1906, p. 289. [Bérard emphasised the whole sentence.]

423 Quoted [inaccurately] by Bérard 1906, pp. 389–90. [The accurate quotation here is from Colonial Office 1897, p. 357.] This monopoly position of England on the world market goes back to the last third of the eighteenth century. Thus Marx writes of the period from 1770 to 1815: 'During this period of forty-five years the English manufacturers had a *monopoly of machinery* and a monopoly of the world market' (Marx 1976b, p. 583) [Grossman's emphasis]; in the 48 year period from 1815 to 1863, '*competition* with the continent of Europe and with the United States *sets in*' (Marx 1976b, p. 587) [Grossman's emphasis], without at first posing a threat to England.

424 If there is a monopoly *against* a country, for example, Britain's rubber monopoly against the USA, then the transfers of value that flow from the technological and economic superiority of America are artificially weakened and slowed down.

tion, it suffices to cite illustrations of monopolistic control of a few *global raw materials*. It allowed monopolists to keep prices artificially higher than they would otherwise have been and to enhance their own profits at the expense of the rest of the world or, as John Maynard Keynes writes, 'these attempts at national profiteering tend to impoverish the world as a whole'.[425]

The great significance *of cheap raw materials* for the establishment of the rate of profit, that is also for the valorisation of capital, was established long ago 'through practical experience'. On the other hand, the classical economists had great difficulty explaining this fact theoretically, since Ricardo, for example, confused the rate of profit with the rate of surplus value. Marx was the first to bring clarity here, through his rigorous formulation of the laws governing the rate of profit.

> Since the rate of profit is $s/C = s/(c + v)$, it is clear that everything that gives rise to a change in the magnitude of c, and therefore of C, also brings about a change in the profit rate, even if s, v and their reciprocal relationship remain constant. *Raw material, however, forms a major component of constant capital* … If the price of raw material falls … the rate of profit rises. As long as other circumstances are equal, the rate of profit falls or rises in the opposite direction to the price of the raw material. This shows among other things how *important low raw material prices are for industrial countries*.[426]

Marx judges the significance of international trade from this perspective, in polemical contrast to Ricardo: 'Foreign trade particularly affects the prices of the raw or ancillary materials used in industry and agriculture'.[427]

Marx goes on to demonstrate not only that raw materials have great significance for the formation of the rate of profit but also that this significance becomes ever greater with the development of capitalist industry. For,

> the size and value of the machines employed grows as the productivity of labour develops, but not in the same proportion as this productivity itself, i.e. the proportion to which these machines supply an increased product. Thus in any branch of industry that uses raw materials … the increasing

425 *Wirtschaftsdienst* 1926a, p. 775. [Original source Keynes 1981, p. 551.]

426 Marx 1981, p. 201. ['Falls' in the published translation has been changed to 'rises' in light of the German text, Marx 2004, p. 106, and logic. Grossman's emphasis.]

427 Marx 1981, pp. 201–2.

> productivity of labour is expressed precisely in the proportion in which a greater quantity of raw material absorbs a certain amount of labour, i.e. in the *increasing mass of raw material* that is transformed into products in an hour, for example. In proportion therefore as the productivity of labour develops, *the value of the raw material forms an ever-growing component of the commodity produced* … because in each aliquot part of the total product, the part formed by the depreciation of the machines and the part formed by newly added labour both constantly decline. As a result of this, a *relative growth takes place in the other component of value*, that formed by the raw material, provided that this growth is not cancelled out by a corresponding decline in the raw material's value arising from the increasing productivity of the labour applied in its own creation.[428]

The growing importance of raw materials is also apparent in the ever greater dependence on raw material imports, as industrialisation advances in every capitalist country. In Germany, imports of raw materials for industrial purposes (including semi-finished goods) rose from an average of 1,501 million marks in

428 Marx 1981, pp. 203–4. [Grossman's emphasis.] This conclusion, achieved deductively, is thoroughly confirmed by data in the American Census:

Year	Industrial production	Total wages	Total wages/ production	Raw & ancillary materials	Raw & ancillary materials/ production
	Million dollars	Million dollars	Per cent	Million dollars	Per cent
1849	1,019	237	23.26	555	54.47
1859	1,886	379	20.10	1,032	54.72
1869	3,386	620	18.31	1,991	58.80
1879	5,370	948	17.65	3,397	63.26
1889	9,372	1,891	20.18	5,162	55.08
1899	13,000	2,321	17.85	7,344	56.49
1904	14,794	2,610	17.64	8,500	57.46
1909	20,672	3,427	16.58	12,143	58.74
1914	24,246	4,078	16.82	14,368	59.26
1919	62,418	10,533	16.87	37,376	59.88

(Bureau of the Census 1913, p. 33; Bureau of the Census 1920, p. 15) [Grossman's transcription errors corrected. Figures for the years before 1904 include 'hand and neighborhood industries'.]

the five-year period 1886–90, to 5,882 million marks in 1912 or from 41.8 per cent of the value of all imports to 55 per cent. The relative weight of raw material imports became larger and larger.

A further aspect of raw materials' significance is that monopolistic control of the world market can be most easily achieved in the area of raw materials, which have a very wide range of possible applications, while finished goods are less suited to the world market and are designed for market segments with a more local character. So it is clear that the competitive struggle among capitalist states first ignited in the struggle *for control over raw materials*, since they offered the best prospects for monopoly profits. Yet this is not the only factor. Control over raw materials leads to control over industry as such. Thus [Fritz] Kestner writes, 'As only raw materials or means of production can be monopolised in the long-term, while finished products, on the contrary cannot be monopolised at all or only with the aid of raw material syndicates, cartelisation necessarily *shifts the balance of the economy in favour of heavy industry, both in terms of price setting and in the sense that processing industries fall under the sway of raw materials industries*'.[429] In 1849 Marx already stated that,

> just as everything has become a monopoly, there are also nowadays some branches of industry which *prevail over all others*, and *secure* to the nations which especially foster them *the command of the market of the world*. Thus in the commerce of the world cotton alone has much greater commercial importance than all the other raw materials used in the manufacture of clothing.[430]

The struggle to control raw materials is therefore a struggle to dominate processing industries, *in the final analysis, however, a struggle to inject additional surplus value* into a particular capitalist economic unit. But raw materials are not evenly spread across the world and are, rather, tied to specific points on the globe (e.g. rubber, oil, zinc, copper and other metals, precious stones etc.). So there is a tendency, under capitalism, to secure and dominate these sources of raw materials, which are now stockpiled, as 'reserves', which can necessarily only happen in the form of the division of the world. If a country succeeds in creating its own global raw material monopoly then additional surplus value is pumped out of the world market to it. If a competitor is able to establish such a monopoly, that means that the first country is itself obliged to make tribute

429 Kestner 1912, p. 258. [Grossman's emphasis.]
430 Marx 1976c, p. 464. [Grossman's emphasis.]

payments to its opponent,[431] that the breakdown tendency becomes stronger there. One country can only enrich itself at the expense of others.[432] The deepest economic roots of imperialism, of the persistent tendency to extend capitalist and subsequently also political domination to more and more new territories, lie in the fact of insufficient valorisation, which is weakened by a country's own global monopoly but can be aggravated by a monopoly enjoyed by competitors. In this sense Lenin was right when he wrote that 'The capitalists divide the world, not out of any particular malice, but *because the degree of concentration which has been reached forces them to adopt this method in order to obtain profits*'.[433] The division of the world, securing own sources of raw materials is thus simply a means to remedy insufficient valorisation, 'to obtain profits'.

Ever since Malthus and Ricardo, the supposed law of the diminishing returns from the soil has been one of the favourite dogmas of bourgeois economics. According to this supposed 'law of nature', the production of foodstuffs must unavoidably lag behind population growth. According to this law of nature, the prices of all organic substances always rise whereas wages always fall. It is a natural law that raw materials become ever scarcer and the object of ruthless struggles on the world market.

---

431 '[W]e see here again how a *rise in the price of raw material can cut back or inhibit the entire reproduction process*, since the price obtained by the commodity's sale no longer suffices to replace all of its elements; or it makes it impossible to continue the process on a scale that corresponds with its technical basis, so that either only a section of the machinery is being used, or the whole machinery cannot work for the full customary time' (Marx 1981, p. 204). [Grossman's emphasis.] Conversely, 'The initial effect of *a fall* of a half *in the value or price* of the elements of productive capital would be that the capital value that has to be advanced for business *X*, continued on the same scale as before, would be reduced by a half, and so business *X* would also have to cast only half as much money into the market … The quantity of money cast into circulation would decline, because the price of the elements of production had fallen'. This would involve a 'setting free' of the 'available capital' (Marx 1978, p. 361). [Grossman's emphasis.] '[T]his would exert a proportionate pressure on the money market, greater or less according to its condition' (Marx 1978, p. 361).

432 As Marx says of the domination of the world market, by means of a monopoly over key raw materials, in his speech on free trade: 'If the Free Traders cannot understand how one nation can grow rich at the expense of another, we need not wonder, since these same gentlemen also refuse to understand how in the same country one class can enrich itself at the expense of another' (Marx 1976c, pp. 464–5). 'Every one of the destructive phenomena to which unlimited competition gives rise within any one nation is reproduced in more gigantic proportions in the market of the world.' This is '*cosmopolitan exploitation*' (Marx 1976c, pp. 464). [Grossman's emphasis.] And in the *Communist Manifesto* Marx writes of Sismondi that he 'proved, incontrovertibly … the *industrial war of extermination between nations*' (Marx and Engels 1976, p. 509). [Grossman's emphasis.]

433 Lenin 1964b, p. 253. [Grossman's emphasis.]

One of Marx's finest contributions in *Capital* and *Theories of Surplus Value*, unsurpassed to the present, was to have demonstrated that the supposed 'natural' limits to production stem not from 'nature' but from social institutions and are in that sense *social*, capitalist limits.[434]

According to the law of diminishing returns from the soil, production from the application of more labour and capital grows more slowly than the amounts applied, i.e. after an optimal point, the return per head becomes ever smaller. But this proposition is only valid on condition that agrarian technologies do not change. If, on the contrary, constantly improved technologies are employed then it is possible to more than offset the law, to achieve ever *higher* yields. In fact, thus far human beings, over many thousands of years of historical development, have always succeeded in obtaining ever greater quantities of foodstuffs from a given area, due to technological progress, 'proving that the potential for nourishment … is primarily a function of our intellectual and moral powers'.[435] Humanity has learnt how to recognise and use more and more crops and animals, which have made life possible for many millions of people. The use of millet and rice was learnt first, followed by wheat and barley, later still oats and rye. Potatoes and sugar beet have become important foodstuffs only in the last hundred years. Soya beans have most recently enjoyed a similar triumphal march.[436] These advances can be 'multiplied in the long run'. 'Plant breeding increasingly ensures that old cultivated plants bring higher and higher yields, and can be grown in less and less propitious climatic zones and on poorer and poorer soils.' We are only at the start of this development.[437] And even greater advances in agriculture can be expected from the application of machinery, electrification, soil chemistry and, finally, economies in drainage and irrigation. 'Humanity on the globe would soon suffocate in foodstuffs and other agricultural produce if there was rapid advance in the exploitation of mountain water resources for irrigation.'[438]

'It is not primarily anxiety about a *lack* of foodstuffs that dominates economic life but rather about finding markets for the *excess* of them.'[439]

If a 'growing scarcity of raw materials' is an alarm bell sounded by bourgeois economics, it must on the contrary be emphasised how *rich* the earth is and

434 Grossman 2019e, pp. 125–6. [Notably Marx 1981, p. 916.]

435 Aereboe 1927, p. 157.

436 [Grossman's account only applies to Europe and the Middle East. The potato, for example, was domesticated in South America between 5,000 and 8,000 BCE, soya beans in China between 6,600 and 7,000 BCE.]

437 Aereboe 1927, p. 125.

438 Aereboe 1927, p. 127.

439 Aereboe 1927, p. 145. [Aereboe emphasised the whole sentence.]

how it is becoming ever richer, with scientific advances, especially those in chemistry.[440] The growing shortage of raw materials is not caused by any natural laws; but rather by the laws of the capitalist mode of production. It is only these laws which ensure that the world's raw materials become the exclusive monopoly of a small number of trusts with the strongest capital base and that those resources increasingly become the object of the fiercest struggles on the world market.

What is the point of these struggles? Where is their motivation to be found? We have seen how, from a certain stage of capital accumulation the population, that is the source of valorisation in relation to the capital amassed, becomes insufficient and this necessarily generates the breakdown tendency. But foreign trade and monopolies over vital raw materials are effective weapons in the struggle over valorisation, over surplus value. Raw material monopolies offer the possibility of transfering large amounts of surplus value from around the world to monopolists, exacting tribute from others to weaken the breakdown tendency in their own economies and prolong the life of their own capitalisms. This fundamental fact lies behind the monstrous vehemence of the states with the largest accumulations of capital as they lay their greedy hands on the world's resources, along all latitudes and longitudes, with which a never sated capital extends its tentacles over the whole world, like Dante's monster in hell:

> She is by nature so perverse and vicious,
> her craving belly is never satisfied,
> *still* hungering for food the more she eats.[441]

440 In the USA, which is one of the world's richest countries in terms of timber, there is concern about its depletion. Dependence on timber imports from Canada is growing. American capital has therefore increasingly made efforts to secure a raw material base in Canada. In 1923, $325 million of US capital was already invested in Canadian forestry (see Nearing and Freeman 1926, p. 25). At the same time, the USA has subjected its own timber reserves to the most savage plunder. Exploitation proceeds four to five times faster than the rate of regrowth (Reichwein 1928, p. 337). In sawmills, logs that are shorter than six feet are often simply burned in the mill. The annual unjustifiable wastage of useful timber is currently estimated to be around 15 million cords (eight billion feet), that is almost double the enormous requirements of paper mills, which today process around eight million cords a year (Reichwein 1928, p. 335). [A cord is a measure of timber volume, equal to 128 cubic feet, i.e. 3.62 cubic metres.] According to A.D. Little's information, of the total amount of wood cut in the US every year 65 per cent is wasted in forests and sawmills. 'The reckless loss of timber in the yellow pine belt alone would suffice to double the USA's manufacture of paper, to say nothing of the loss of tar, oil, resin, turpentine and alcohol' (Reichwein 1928, p. 337). Also see Chase 1925, pp. 255–60.

441 Alighieri 1984, p. 70. [Grossman's emphasis.]

That tribute payments from abroad are not imponderable was demonstrated by a letter written by US Secretary of Commerce [Herbert] Hoover to Senator [Arthur] Capper dated 6 March 1924. He cites the example of a relatively unimportant raw material like sisal (henequen), which provides fibre for twine, mainly imported to the United States from Yucatan in Mexico. In the US, around 90,000 tons of twine were needed to bind the harvest of a single year. During the War, the sisal planters were able to form a syndicate that drove prices up from 12.5 cents a kilo (in 1916) to 32 cents a kilo. Hoover believed that US farmers lost close to $100 million due to the overpricing of this single article. In his speech to the House of Representatives Committee [on Interstate and Foreign Commerce] on 6 January 1926 he estimated the potential losses to the US due to overpricing of nine raw materials, all under foreign control, to be about $1.2 billion, if there were no price reductions. As a means of defence, Hoover recommended energetic attention to the problem of synthetic substitutes and conquest of other sources of raw materials. In the meantime, however, the US resorted to more practical measures. Despite the Sherman Antitrust Act, a consortium of raw material importers was permitted. On 14 March 1924, a bill was moved in the Senate 'To enable persons in the United States to engage in cooperative purchasing, for importation into the United States of raw commodities, which are produced principally in foreign countries'. Apart from that, Hoover issued instructions to American banks that in loan negotiations with countries that were suppliers of monopolised raw materials they should exert pressure for the moderation of raw material prices. It is well known that a US loan to the German potash industry did not come about. When, during the War, wool prices controlled by England seemed to the USA to be excessively high, the relevant circles in England were given to understand that copper prices could be correspondingly raised. This declaration was enough to bring about a fall in wool prices, which enabled the US to save $45 million in a single transaction! In response to high English-controlled rubber prices in 1926 there was a clamour in the US for increases in the price of raw cotton.[442]

These examples show both how the conflict over raw materials can take fierce forms and how they are more and more coming to a head.

Mombert provides a table for 1912 which shows that, because of increases in the prices some of the most important raw materials like copper, coffee, cotton, rubber, calfskins, cow hides etc., 'many hundreds of millions more had to be paid abroad for the same volume of imports'. He regards this as one of the factors that restrains capital accumulation in Germany.[443]

442 Reichwein 1928, pp. 236 et seq. Gliwic 1926, pp. 80–3.

443 Mombert 1916, p. 393.

The struggle over raw materials as a means of pumping additional surplus value into a national economy from outside is ultimately dictated by the same interests that were already expressed by mercantilism. Antonio Serra already taught that gold can be obtained in more ways than simply mining it. A superfluity of raw materials which can be exported serves the same end. They are tied to specific locations and cannot be arbitrarily increased.[444] Yet capitalism, to quote Marx, is only a rather more perfected and modified form of what mercantilism represented in a barbaric way.

For many nationalist circles the formation of 'self-sufficient' groups of larger states, with stronger bases of raw materials appears to be the only solution to the problem of raw materials. Today an 'autarchic' economy exists nowhere in the world; the example of the United States of America is particularly instructive in this regard, even though it is not a state in the sense of the great European powers but a continent. Despite the enormous extent of its land area and the wealth of its natural resources, it is most intensely integrated into and dependent on the world economy in many fields. The USA does have a monopoly of a series of important raw materials, especially the most significant textile fibre on the world market, *cotton*. The well-organised cotton farmers of the USA today account for about 60 per cent of the world's cotton harvest (of a world total of 25,295,000 bales in 1925, the USA accounted for 15,603,000; British India for 4,660,000; Egypt for 1,629,000; other countries like China, Turkestan, Brazil etc. 3,403,000). The USA has the ability to keep cotton prices high by careful observation of the whole market for textiles. Thanks to this relative monopoly of North American cotton producers, the price of raw cotton has risen more rapidly than the average price level over the last 25 years.[445] The monopoly is reinforced by the fact that the other countries bring special varieties to the market, so that the requirements of production of mass goods are met exclusively

444 Serra 1913, pp. 117, 119.

445 From the start of the nineteenth century, the price of cotton saw an unbroken fall until its end, except for the period of the Civil War and its aftermath. In cents per pound it was:

1800–09	22.0	1840–49	12.3	1880–89	10.7
1810–19	20.5	1850–59	11.3	1890–99	7.1
1820–29	12.5	1860–69	44.9		
1830–39	12.4	1870–79	14.7		

Since the turn of the century prices have gone up steadily:

1900–09	10.2
1910–19	17.5
1914–23	21.2

by the North American 'upland' variety, whose share of the worldwide supply of this variety is 92 per cent. The growing scarcity of cotton on the world market is also affected by structural changes in the North American economy. Compared to 1914, US exports of raw cotton were 25 per cent less in 1924, while own consumption has risen by as much or somewhat more. North America's monopoly position is expressed in the almost dictatorial influence that US Department of Agriculture harvest estimates exercise on the market. The Cotton Estimates Committee of this Department has been accused (with concrete evidence) of regularly underestimating the cotton harvest over the last 10 years, not by accident but as conscious obfuscation of the actual market situation, to keep prices high.[446]

On the other hand, the US depends on imports for many raw materials. 'The pressing demand for certain raw materials, such as rubber, oil and silk, which are not produced in sufficient quantity within the United States, forces American enterprises to seek out and hold the sources of such products.'[447]

'The *total* monopolies [directed] *against* the United States include':[448] rubber, jute, sisal and other tropical fibres; the alkaloid stimulants coffee, cocoa and tea; bananas, certain tropical tanning agents, especially quebracho;[449] furs; (among minerals) precious stones, potash, tin, asbestos, tungsten, monazite, molybdenum, manganese and other raw materials. In 1925 imports of these materials were worth $1,820 million, 40.6 per cent of total US imports. In addition, there are *partial* monopolies, where there is substantial but not sufficient domestic production of the commodity. Domestic production of wool contributes roughly 50 per cent of domestic consumption. Production of sugar on the

---

446 Reichwein 1928, p. 242.

447 Nearing and Freeman 1926, p. 16. The character of US imports has changed significantly since the middle of the last century. In 1850, raw materials for manufacturing constituted only 6.8 per cent of total imports, while finished and semi-finished goods were over 82 per cent of the total, of which consumer goods were 54.9 per cent. The complete reversal of this situation was apparent by 1910, when raw materials for manufacture constituted 34.6 per cent of the total, while imports of finished manufactured goods for immediate consumption had fallen to 23.6 per cent. *The centre of gravity of imports has thus shifted from finished manufactures to raw materials*. 'The value of crude materials imported increased between 1850 and 1920 by nearly 150-fold. The value of manufactured products increased during the same time only nine-fold ... The crude materials came, in the main, from Canada, Mexico, Central America, the West Indies and the Philippines' (Nearing and Freeman 1926, p. 8). *The countries supplying raw materials mentioned here also constitute the main areas of American imperialist expansion*.

448 Lufft 1926, p. 273. [Lufft emphasised 'The total monopolies'. Editor's interpolation.]

449 [Quebrachos are species of tree with very dense timber from which tannins, used for tanning leather, can be extracted.]

continental mainland in 1924 came to just 18.4 per cent of total consumption (16.4 per cent from sugar beet, two per cent from sugar cane). The Union does export vegetable oils and fats from cotton and flax seed but imported huge quantities of tropical oils (coconut oil); the value of total exports of oils and fats was about nine per cent of the value of imports. Domestic production of hides and skins, timber, timber materials and paper is likewise insufficient. Imports of commodities in this group were worth $1,282 million or 28.2 per cent of total imports. Finally, there is the group of *relative* monopolies (petroleum, copper, lead, aluminium), where domestic consumption is fully covered by domestic production, while the latter does not suffice for *exports*. A very significant proportion of the production of these raw materials takes place outside the country, so that the US economy concentrates only on refining. Domestic refinery production to a very large extent is for export but depends on imported raw materials. The share of domestic copper ores in total copper refined amounted to 77 per cent; imports of oil amounted to 10 per cent (in 1924); imports of lead ores amounted to 18 per cent; aluminium to 37 per cent. These relative monopolies account for a total of $230 million worth of imports (in 1925) or 5.1 per cent of total imports. Imports in the three categories mentioned (total, partial and relative monopolies) amounted to $3,330 million in 1925, 74.5 per cent of total US imports.[450]

The wide range of these *potential* monopolies *against* the United States still does not imply that all the commodities in question are subject to actual monopolies against that country. Geographical conditions are not the decisive influence here but rather capitalist financial power. Where production of these commodities is controlled by private American capital, *no price rises worth mentioning occurred* or they were not the result of artificial price-fixing. Such price rises can be explained by temporary shortages on the world market. This is the case with lead, asbestos (an insulating material imported from Canada), bauxite (for aluminium production and imported from Dutch and British Guyana), copper (from Canada, Alaska, Mexico, Chile, Peru), fish (from Alaska), newsprint, timber and timber materials (from Canada), and sugar (from Cuba). All these commodities are largely dominated by private American capital. To some degree (sugar, newsprint) there were even declines in prices. The prices of the other commodities listed above rose by no more than five per cent. This category also includes two commodities subject to absolute foreign monopolies – silk production (80 per cent in Japanese hands, 14 per cent in Chinese) and the tea trade, even if not tea production (in English hands). Their relatively small price rises are explained by the competition which silk and tea face

450 Lufft 1926, pp. 273–81.

from other commodities, which may well be substitutes (synthetic silks, or coffee and cocoa from Brazil). In contrast, foreign monopolies against the US effected price rises of more than 25 per cent between 1924 and 1925 (hides and skins, cocoa, coffee, jute, mercury, rubber). 'On the other hand, monopolies controlled from abroad where production was sufficiently concentrated were, without doubt, intensely and ruthlessly exploited.' In this connection England has been vigorously and successfully active in the last few years. It can exercise control over the prices of jute, tin, and rubber from its own territories; English capital can control the production of quebracho; and England gives the lead in the setting of cocoa prices. Brazil and Japan pursue similar monopoly exploitation of coffee and silk.[451]

Great Britain owes its successes in these markets, however, purely to its monopolistic organisations which control the international raw materials in question. England is by nature even less autarchic than the USA. The *Economist* complained that 'we have to import 80 per cent of our wheat, 50 per cent of our meat, half our iron ore, over 80 per cent of our wool, all of our cotton, copper, rubber, silk and tobacco, and nearly all our oil, timber, wood pulp, zinc and sugar'.[452] Thanks to domination over a series of international raw materials, England was not only able to free itself from tribute payments to others but also to make other states pay tribute to it.

The scale of profit derived from English dominance of the international rubber market (three quarters of world rubber production is used by the US car industry) emerges from a small table [reproduced on the next page] published by the London *Economist*. It shows the movement of company *profits*, according to reports for the last quarter of 1926. That 1926 was a particularly unfavourable year, due to the coal miners' strike, is irrelevant for the purposes of our discussion.

The older industries (iron, steel, coal, textiles, breweries) experienced losses.[453]

The largest absolute and relative profits were in the petroleum and rubber industries. Monopolistic control over several raw materials worldwide is increasingly beginning to be the principal aspect of England's economic power. The excess of monopoly prices over the level that would be current under free competition can be regarded *as a tax* imposed on foreign buyers. In an essay, 'World Raw Materials Tax', Professor Julius Hirsch writes:

451 [Lufft 1926, pp. 285–90. The quotation is on p. 90.]
452 [*Economist* 1927b, p. 1020.]
453 [*Economist* 1927a, p. 94.]

	Difference from previous year £	Per cent
Iron, steel, coal	−1,110,280	–
Textiles	−1,591,329	−42.2
Nitrate	−110,495	−86.1
Breweries	−79,681	−2.0
Shipbuilding	26,029	1.6
Car industry	15,861	2.1
Petroleum	984,418	23.8
Rubber	1,601,937	81.9
Tea	71,204	29.0

> Before the end of the year, I spoke with one of the best known English financiers about the fact that European industry, especially British industry, is backward compared with American industry and in danger of being crushed by that country's overwhelming power. The financier responded: that is not decisive, at least not for us. This year, we will already earn more from four or five raw materials, especially rubber, than from the whole of [manufacturing] industry.[454]

Through monopolistic price rises, the economies of countries that enjoy those monopolies pump in additional surplus value from outside and thus the tendency to breakdown is weakened. Conversely, this tendency is intensified in those countries against which monopolies are directed. On the basis of the theory developed here, imperialist expansion is readily comprehensible. Through economic and political control of substantial colonial territories, it aims simultaneously to secure monopoly processing of major raw materials by its industry and to shake off the monopolies of hostile competitors. In 1923, [Scott] Nearing and [Joseph] Freeman report: '*Cuba produces 28 per cent of the*

454 Hirsch 1926, p. 1. [Hirsch emphasised the final sentence. Editor's interpolation.] The roaring business done by the stock exchanges from all this is shown by the following:

> From a table that the *Frankfurter Zeitung* (1910) put together during the rubber fever in Britain in 1910, it appears that there were then 116 rubber companies in Southeast Asia whose securities were traded in London, with an issued capital of £10.24 million. Their market capitalisation leapt to £67.5 million in a relatively very short time, entailing a premium of 568 per cent.

world's sugar cane and over 85 per cent of Cuba's yearly sugar crop is sold to the United States'.[455] Consequently, the island is of the greatest importance to the American sugar refineries. From 1908 to the end of 1923, American investments in Cuba rose from $50 million to $1,250 million, $750 million of which went into sugar plantations alone. The United States' drive to expand in Cuba is not a matter of sales, of consumers for otherwise unsaleable American commodities. Imports from Cuba into the United States are and have always been greater than exports to Cuba. In 1902 US exports to Cuba were worth $25 million. By end of 1923 their value had risen to $193 million annually. During the same period imports from Cuba into the US rose from $34 million to $359 million. But the tiny island is the world's largest sugar producer and produces a million tons more every year than huge India, the world's second largest producer. That is why efforts to dominate the island economically and politically started very early. Instigating revolutions in other countries has long been a proven method for combating foreign enemies and was used early on to serve imperialist ambitions. [Justus] Hashagen writes, 'The United States had always demonstrated great mastery in combating their Spanish rival in this way, particularly in South America. Already in the 1840s, it utilised this excellent means to shake Spanish rule in Cuba: it encouraged numerous uprisings of Cubans against the mother country and already allowed rebels to be led by American officers in 1851.'[456] 'The interest of the United States in annexing Cuba', write the authors of *Dollar Diplomacy*, '... was as old as the United States.' After the Civil War, the US Foreign Secretary's chief goal vis-à-vis Cuba was 'protection' of American interests there. 'During the ten-year war from 1868–1878 in which Cuba sought to break away from Spain, the United States threatened to intervene, with the implication of annexing the island.'[457] In 1895 when Cuba began her final insurrection against Spain, the US used the opportunity to intervene again. Negotiations were started for the sale of Cuba to the US. When Spain refused to sell Cuba, the US declared war on Spain, although most of the contentious issues between them had been settled and Spain had agreed either to fulfil the remaining US demands or refer them to arbitration.[458] The annexation of Cuba by the US followed in 1898. The facts show the precise economic

455 Nearing and Freeman 1926, p. 173. [Grossman's emphasis.] World production of sugar, both cane sugar and beet sugar, amounted to 27,138,000 tonnes in 1925–26. Cuba's production in the same period was 5,470,817 tonnes, so Cuba's share in total world sugar production was 20.2 per cent (Reichwein 1928, pp. 210, 212).

456 Hashagen 1925, pp. 251–2.

457 Nearing and Freeman 1926, p. 249.

458 Nearing and Freeman 1926, p. 250.

consequences: in no sense did the annexation of Cuba have anything to do with the 'realisation' of otherwise unsaleable surplus value. Apart from the circumstance that the US established two naval stations in Cuba, which were of crucial strategic importance for the domination of the Caribbean, and control over the Cuban public debt and debt-servicing, the US also succeeded in securing a series of private economic benefits from wholesale plunder of the Cuban treasury and economy.

> The three years of General [Charles Edward] Magoon's occupation have been described by Cubans as "the most disastrous in the island's history". At the beginning of the second occupation Cuba had over $13,000,000 in the national treasury. When Magoon left the island in 1909 there was a national deficit of over $12,000,000.

In addition, American firms received concessions (e.g. for paving roads and building sewers in Havana) that gave them the chance to get rich more quickly and easily.[459] Financial control by US banks meant that loans could be forced upon Cuba; at the same time, the capital and interest payments involved in these loans were exempted from taxation for all time, while the Cuban government's control of sugar prices was abolished. Finally, a preferential tariff on Cuban exports to the US was placed before Congress, according to which Cuban produce would be allowed into the US at a 20 per cent lower rate. 'This preferential tariff works chiefly to the advantage of the American sugar refiners, who import 85 per cent of Cuba's total sugar output … [not] the Cuban producers but the organized American refiners … The refiners make the most of it by bidding less for Cuban sugar than for Java or other foreign sugar.' Among the most active supporters of the proposal was Francis Beatty Thurber, President of the US Export Association, who was in the pay of the American Sugar Refining Company and of the American military governor of Cuba, General [Leonard] Wood. Wood officially conceded that he had paid out more than $15,000 to support the preferential tariff. Notwithstanding this, [President Theodore] Roosevelt implemented the preferential tariff by means of a treaty with Cuba dated 11 December 1902.[460]

The example of Cuba is instructive. There is no trace of the 'realisation' of surplus value produced in the US and unsaleable there, but we do see that it was a matter of the wholesale plundering of Cubans, that is of the creation of surplus value in Cuba and its transfer into American pockets.

459 Nearing and Freeman 1926, p. 180. [Editor's interpolation. Magoon was the US governor of Cuba from 1906 to 1909.]

460 Nearing and Freeman 1926, pp. 189–90.

At the same time, imperialist expansion secures monopolistic domination of the most important industrial raw materials.

Hawaii offers a second instructive example. In 1875 there was a trade treaty between Hawaii and the United States, according to which Hawaiian sugar could be imported into the US duty-free, while competitors had to pay duties. Sugar production in Hawaii developed extraordinarily up to 1890 and the Hawaiian planters, mostly Americans, earned colossal profits. When the McKinley Tariff placed sugar on the list of duty-free goods and Hawaii now had to compete with Cuba, Java and Brazil, it was all over for the planters' super profits. In short, American interests now demanded the integration of Hawaii into the United States; a 'revolution' was almost instantly staged in Hawaii in 1893; an American warship was despatched to Honolulu 'to protect American life and property'; the previous government was dispersed; the monarchy was abolished and a new provisional government installed; the country was occupied; and then finally, in 1898, annexed. Meanwhile, the Wilson Tariff introduced customs duties on sugar. As, however, Hawaii was now an American territory, sugar could be imported duty-free and so high super profits were again possible.[461] Was the island, perhaps, annexed in order to help 'realise' American surplus value? To create a market for unsaleable commodities? According to the 1900 Census, there were 154,000 (!) inhabitants on the whole island group, mostly Japanese and Chinese.[462] But the 'revolution' was – as is certain today – staged by the US government, because, 'of the capital invested in the islands, two thirds is owned by Americans'[463] who wanted to secure quasi-monopoly profits.

Nothing demonstrates capitalism's predatory economic relationship with nature's resources more strikingly than the *economics of timber*. The worldwide use of firewood and timber amounts to 1,575 million cubic metres, while annual wood growth is only 1,065 million cubic metres. This means the annual deficit is already 510 million cubic metres today, which is equal to almost one third of the entire world consumption of wood. And although wood is gradually being replaced by substitute materials (coal, iron etc.) in many applications, its use is at the same time being extended to fulfil new needs, so that overall consumption is continuously rising. In future, the gap between consumption and annual growth will therefore increase even further. The predatory economy of timber is most strikingly apparent in the USA. Of an original forested area of 822.2 mil-

461 Nearing and Freeman 1926, pp. 74–7.
462 Keltie and Epstein 1921, p. 640.
463 Nearing and Freeman 1926, p. 77. [Quoting the revolutionaries.]

lion acres, in 1922 barely 469.5 million acres remains.[464] Timber exports from the USA peaked in 1913. Compared to the five-year period 1910–14, they declined by 50 per cent in the five years from 1915 to 1919. Timber imports have risen since the beginning of the century. In 1907, 80,000 tons of wood pulp (almost exclusively from Canada) was imported, in 1920 800,000 tons. Since the War, timber imports have, to an increasing extent, exceeded exports.

Net US timber imports were

1922	$71.75 million
1923	$64.59 million
1924	$63.74 million

This in a country with 277 million hectares of forest and where forests still make up 9.1 per cent of the total land area. Clearly, other capitalist states which lack such extensive forested areas of their own depend even more on imports of timber. Great Britain, France, Belgium and Holland together but without their colonies possess scarcely 0.4 per cent of the world's total forest reserves and are dependent on timber imports. The significance of colonies as suppliers of raw materials becomes clear when it is recalled that together with their colonies the four countries mentioned account for 30.8 per cent of the world's timber resources.

England's own timber base amounts to scarcely 4,662 square miles of forest.[465] Its imports of wood and timber are constantly rising, from £33.8 million worth in 1913 to £82.2 million in 1920.[466] England does possess an enormous reservoir of timber in its colonies and possessions. The areas under forest timber in thousands of square miles are:[467]

Canada	456.8
India	136.3
Nigeria	60.0
Australia	37.8
Malaya	21.2
Southern Rhodesia	18.3
British Guyana	13.9

464 Reichwein 1928, p. 333. [Citing Bureau of Foreign Commerce 1925, p. 661.]
465 [Reichwein 1928, p. 359.]
466 Keltie and Epstein 1921, p. 75.
467 Reichwein 1928, p. 365.

Yet the value of the British colonies in supplying England is currently very low and their share in its total imports of wooden materials was scarcely 12.7 per cent in the decade from 1903 to 1912. England has been increasingly dependent on timber imports from other states. Only thanks to England's enormous capital and financial power before the War, thanks to a trade network spanning the globe, could England regulate the international timber market for the whole century before the War, although it was dependent on foreign imports. During the second half of the nineteenth century timber prices fell. In shillings and pence per cubic foot, they were:[468]

	Price	**Index**
	Shillings/pence	
1853/62	1/4	100
1863/72	1/2	88
1873/82	1/1	84
1883/92	0/10	69
1893/02	0/11	72
1903/12	1/0	75

After the end of the nineteenth century, however, timber prices began to rise and with them the problem of rising tribute payments for timber from abroad. After the War this tendency worsened, even more so because Canada, where half of Britain's timber reserves were located, was more and more dominated by US capital. Consequently, there was increasing concern in England about future timber supplies, as indicated by the convocation of the Imperial Forestry Conference, which met in London for the first time in 1920. The second was held in Canada in 1923. According to the reforestation plan of 1919, gradually, after about 40 years, timber imports will not be necessary.[469] To start with, around 18,000 acres will be newly planted in 1925.

It would go too far to describe the struggle over world raw materials in all its details here. Individual episodes in this international struggle among the leading capitalist powers have played out most recently and are still fresh in public

468 Gliwic 1926, p. 160.
469 Reichwein 1928, p. 359.

consciousness, and the open or covert manoeuvres to eliminate competitors as well as the changing focus of these disputes are described in the newspapers daily. Within the framework of our discussion, all that matters is to grasp the perspectives underlying these struggles and to demonstrate their economic function in the framework of the capitalist system.

Perhaps the best known is the Anglo-American struggle over *oil*. The literature on this topic is enormous.[470] The struggle over petroleum in the Caucasus, Mesopotamia and Persia are also already well known,[471] so it is only briefly mentioned here. Oil only became a 'burning' issue for England when the invention of the diesel engine secured enormous advantages for the use of liquid fuel over coal in sea transport. But the largest oil deposits and the greatest oil production were concentrated in American hands. England saw the American monopoly as a threat. 'It can be said', [Francis] Delaisi writes, 'that England's entire commercial and industrial prosperity rested for a century upon its command of coal'. For, thanks to its supremacy on the coal market, especially its phenomenal production of bunker coal, England was able to consolidate her traditional maritime dominance, because it could afford to charge lower rates on return freight than competitors. 'As a result, all merchandise consigned to Britain costs less to transport than if consigned to any other country; and British industries enjoy the equivalent of a rebate upon all raw materials bought abroad. This is a weighty advantage over all competitors in the struggle for international markets.'[472] During the early years of oil-powered sea transport, all this could have changed. Britain produced no petroleum. English domination of sea transport was threatened. In addition, the experience of the World War demonstrated the importance of motor vehicles and aircraft. The superiority of the Allies' oil reserves took on ever greater significance the longer the War lasted. '[T]he victory of the Allies over Germany was the victory of the lorry over the locomotive.'[473] The oil policies of the postwar era are a direct consequence of these experiences.

England realised all the implications of this situation early and, at the beginning of the twentieth century, already started, quietly and unobtrusively, to acquire any oil reserves that were still available anywhere in the world. Against Rockefeller's Standard Oil Trust it set up a series of its own oil trusts – Royal Shell, later expanded into Royal Dutch Shell, Mexican Eagle in Mexico, Anglo-

470 Delaisi 1922; L'Espagnol de la Tramerye 1924; Reichwein 1928, pp. 470–522; Krüger and Poschard 1926; Nearing and Freeman 1926.

471 Fischer 1926.

472 Delaisi 1922, p. 20.

473 Delaisi 1922, p. 29.

Persian Oil – and it even established a presence in the US, to take on the competition of Standard Oil there. On 7 May 1919, the London *Times* could report a speech by Ernest George Pretyman, 'a well known oil authority, at the laying of the foundation stone on the inauguration of the new Anglo-Persian refinery': 'When the War came, the position was … that the British Empire, with its vast interests in the whole world, controlled about two per cent of the world's petroleum supplies … Now, with the seeds sown and the processes in use, concerning which he had no time to go into detail, he thought that when adjustments were completed the British Empire would not be very far *from controlling one half of the available supplies of petroleum in the world*.'[474] These successes were possible thanks to the enormous vertical integration of all branches of the oil industry, from production to distribution; this assembled an enormously powerful capital, which could work with corresponding force.

The English oil industry is thus welded together into a block which today embraces 90 per cent of Britain's oil interests. At the end of 1920, Anglo-Persian Oil brought together some 77 companies, with a nominal capital of around £120 million, and Royal Dutch Shell 50 companies with a total capital of £300 million. In addition, there are another 177 companies representing £266 million and closely connected with that block, through personal ties. Altogether these firms therefore represent a total capital of £687 million and are distributed across different branches of the English petroleum industry as follows:[475]

	Number of firms	**Capital £ million**	**Capital % of total capital**
Production	167	358	52
Transport	13	85	12
Refining	30	73	11
Trade	46	111	16
Finance	51	60	9

What was the purpose of these enormous efforts? War purposes, military security, can only provide a partial explanation. Just as the most important

474 Quoted in Fischer 1926, pp. 20–1. [The first ellipsis is Grossman's.]

475 Reichwein 1928, p. 480.

coaling stations in all the seas prior to the War were in English hands, in future the oiling stations are to be controlled through a tightly organised petroleum industry. 'Today', writes Delaisi, 'on all the trade routes of the globe, Britain, if she pleases, can duplicate her coaling stations with oiling stations. She no longer has to fear *an American* monopoly.'[476] On the contrary. One of the basic objectives of English oil policy was to *monopolise the transport of oil*, to the extent possible. Sir [Edward] Mackay Edgar informed *The* [*Sunday*] *Times* in April 1920 about successes:

> I should say that two thirds of the improved fields of Central and South America are in British hands. In Guatemala, Honduras, Nicaragua, Costa Rica, Panama, Colombia, Venezuela and Ecuador, a decisive and really overwhelming majority of the petroleum concessions are held by British subjects … [T]he Shell group … owns exclusively or controls interests in every important oil field in the world, including the United States, Russia, Mexico, the Dutch East Indies, Rumania, Egypt, Venezuela, Trinidad, India, Ceylon, the Malay States, North and South China, Siam, the Straits Settlements, and the Philippines.[477]

Sir Mackay Edgar stated quite openly what these enormous efforts might achieve in economic terms: 'I estimate that, if their present curve of consumption, especially of high-grade products, is maintained, Americans in ten years will be under the necessity of importing 500,000,000 barrels of oil yearly at $2 a barrel – a very low figure – that means an annual payment of $1,000,000,000 per annum, most, if not all, of which will find its way into British pockets'.[478] 'We shall have to wait a few years yet before the full advantages of the situation shall begin to be reaped, but that the harvest will eventually be a great one there can be no manner of doubt.'[479]

Whether the gains hoped for are so certain is another matter. More than once in economic history technology has upset such calculations. Synthetic indigo and synthetic camphor are witnesses to how radically technology can revolutionise the relations of production. The well-known attempts to extract hydrocarbons, above all benzene, from coal by means of distillation, may have similar effects. Germany, which today has benzene requirements of almost one million tonnes and depends almost entirely on imports of that raw material,

476 Delaisi 1922, p. 31. [Grossman's emphasis.]
477 Delaisi 1922, p. 35. [Citing Edgar 1920, p. 12.]
478 Delaisi 1922, p. 35. [Citing Edgar 1920, p. 12.]
479 Delaisi 1922, p. 35. [Citing Edgar 1920, p. 12.]

would then be freed from its dependence on imports. And the same is true of the USA where the consumption of crude oil (750 million barrels in 1924) today already surpasses domestic production, so that it produces only 75 per cent of its own requirements domestically even though it does control about 70 per cent of worldwide production.[480] But, regardless of whether the English miss out on the future gains they hope for or not, the war over petroleum sketched here is no less significant. The point of the effort invested in this war is to transfer large amounts of surplus value from one country to another, by means of a monopoly. The victor in the struggle acquires additional surplus value from abroad; the valorisation of domestic capital is improved, the tendency to breakdown is weakened. The vanquished experience opposite consequences.

Next to the war over petroleum, the struggle over the supply of fuel, the *struggle over iron ore* today constitutes the most important theatre of imperialist rivalry.[481] If the average value of world production of the eight principal metals is 100 (in the decade from 1915 to 1924, the annual average was roughly $3 billion), the share of iron was 50 per cent, copper 16.1 per cent, gold 13.2 per cent, lead 5.6 per cent, silver 5.3 per cent, zinc 5 per cent, aluminium 2.8 per cent and tin 2.0 per cent.

The efforts to secure access to iron ore arise from the great significance of iron production. Now it could be supposed that this need not encounter any difficulties, that any effort to establish an iron ore monopoly is ruled out because iron is among the most common of the earth's metals. However, it is a matter of ores with particular chemical compositions. With the current state of technology, ores with less than 25 per cent iron content are unprofitable. If only the better deposits are considered then it is apparent that today's known reserves will scarcely suffice for a century. Under these circumstances, efforts to dominate iron ore reserves are not without prospects of success.

Germany has always depended on the importation of iron ore. If imports of iron ore totalled 765 million kilograms in 1872, by 1910 they had risen to 19,630 million kilograms and by 1913 to 280,000 million kilograms. During the World War, expanding access to iron ore, annexation of the ore basins of Briey and Longvy in the west and of the Dąbrowa coal basin in the east were therefore the most important of German heavy industry's war goals. [Johann Gottlieb] Fichte and Hegel had to be dragged in to justify the 'world historical necessity' of this annexation.[482] 'The enemy', writes [Johann] Plenge, 'must help in strengthening … our future industrial supremacy. We will have to take

480 Krüger and Poschard 1926, p. 130.
481 On this see Reichwein 1928, pp. 374 et seq.; and Leonid 1928, p. 178.
482 Plenge 1915, p. 171.

enduring hold of the coal and iron districts near our borders.'[483] 'Expanding the coal and ore deposits in our hands also serves the interest of our future position in world trade.'[484]

The imperialists on the other side had similar plans and realised them in the Treaty of Versailles. That powerfully shifted the distribution of Europe's iron ore deposits. According to pre-War estimates, France had over 3.49 billion tonnes at its disposal, Germany over 3.6 billion tonnes. By acquiring the minette region[485] and after a new estimate of reserves in Normandy (4.75 billion tonnes), France's significance, with almost 10.0 billion tonnes of ore deposits and annual ore production of almost 40 million tonnes (1926), has been well-nigh decisive for the European supply of iron ore. Europe's second largest source of iron ore – disregarding Russia – is Sweden, where the Swedish ore trust, Trafikaktiebolaget-Grängesberg-Oxelösund, possesses reserves of almost two billion tonnes.

In contrast, today Germany's reserves of ore are scarcely one billion tonnes. The cession of Alsace-Lorraine has meant that Germany has lost access to 65 per cent of its iron ore reserves and 74 per cent of its annual output of ores (21.14 million tonnes, in a total of 28.61 million), so that today it must meet the greater part of its ore needs from abroad. In 1925 the output of German ore was just 5.92 million tonnes, while production of raw iron reached 10.17 million and of raw steel 12.19 million tonnes. Since 1924 Germany has again become the leader in Europe's iron and steel production. As a result, it has become dependent on foreign ore suppliers and is compelled, in order to free itself from their arbitrary control of prices, to buy up mines throughout the world, wherever they are not yet owned of competitors.

But even those countries, like France and Sweden, whose reserves of iron ore have increased since the War have likewise been looking for mines all over the world to prevent them from being acquired by countries which purchase iron ore, to consolidate their own monopoly position by eliminating all competition among the sellers of ore. They attempt to establish an 'International Ore Exporters' Trust', in order to be able to dictate prices to European consumers of iron ore. So the enormous struggle over the world's reserves of iron ore is coming to a head.

The domestic nature of this conflict and the constellation of hostile powers are much more complicated in the case of iron ore than in that of the petroleum industry. The struggle over oil, its sources and its market outlets is only

483 Plenge 1915, p. 175.
484 Plenge 1915, p. 179.
485 [The area of Lorraine in which deposits of sedimentary iron ore, 'minette', are found.]

conducted by the producers, the great international oil trusts. With iron ore, by contrast, there is: 1) a struggle between producers and consumers, that is between ore magnates on one side and steel magnates on the other; and 2) a struggle among iron ore consumers themselves – among the steel industrialists of different states. Petroleum is a mass product so the producers alone constitute a strong, compact and powerful capital within the oil industry, while the consumers are millions of customers strewn across different sectors of the economy. Iron ore, by contrast, is a raw material whose consumers, the steel trusts in individual countries, are almost more strongly concentrated than the producers of ore. While, then, in the petroleum industry monopolistic sellers have absolute mastery over buyers and dictate market conditions, in the iron industry there are two powerful capitals of approximately equal strength pitted against each other. If the sellers here, that is the ore producers, attempt to develop a monopolistic tendency, the buyers, the steel industrialists immediately start to transform themselves into suppliers of the iron ore they need and to take over mines, for which they have more than enough capital.

That is how the hunt for this raw material begins. The fear of hostile price dictation was enough to reconcile the German steel trust with its domestic competitors, the outsiders, and to combine with them in the formation of a united consortium for the purchase of foreign mines. This consortium started by attacking the enemy in its own camp: from 1926 to 1928 a whole series of iron ore mines in Scandinavia 'were purchased by the German trust group' (the Norwegian Fasdalen and Sydvaranger iron ore mines, the Swedish Nyängsgruvan, Blötberget and Ställberg mines). 'In the case of the Sydvaranger mine alone, potential production is estimated to be 900,000 tonnes.' This was followed by the acquisitions of 'iron ore deposits in the Spanish province of Galicia (1926); manganese ore fields in Postmastburg in South Africa … and iron ore deposits in New Zealand'. In the spring of 1927, the Swedish trust retaliated with a counterstrike. 'At that time, the Grängesberg Group', which has the backing of American capital, acquired a series of iron ore mines in Algeria, 'Ouenza, Zaccar, Timezrit, Rar el Maden, Bhou Khadre', which 'have an annual productive capacity of 1 million tonnes. Furthermore, Grängesberg won prospecting rights for deposits in Sidi Maarouf in Algeria and Jebel Hadid in French Morocco'.[486]

486 [Leonid 1928, p. 180. Some of the names of mining districts Grossman copied from Leonid have been corrected.] 75 to 80 per cent of Swedish ore exports, which are mainly exports from the Grängesberg Trust, go to Germany (*Frankfurter Zeitung* 1927e).

One more reason for intensified conflict between the sellers and consumers of iron ore is that various countries' engineering industries are also indirectly affected. This is also why the American steel industry, which has secured its own ore reserves domestically, is supporting the Swedes in the conflict just described. For the result of higher raw material prices in Europe is increased sales for American competitors in the Far East and South America.

As well as other advantages offered by imperialist expansion, command over raw materials plays a role that can scarcely be exaggerated. This also justifies, in part, the policies of capitalist powers in the Far East. If, for example, according to [Harry] Foster Bain's latest research,[487] China turns out to be less rich in coal and iron reserves than was previously assumed (even though these smaller quantities provide enough scope for decades of surplus value production) and is also quite poor in copper, lead, zinc and silver, it still does have at its disposal many minerals of great significance for capitalist countries, e.g. *antimony* which is very important for steel production. Chinese supplies of this metal were:

	Per cent of world production
1908–16	50
1917–20	60
1921–23	80
1924–25	90

In 1924, China supplied 63 per cent of the *tungsten* consumed in the world.

A series of metals, moreover, have played a special role on raw-materials markets. These are of the greatest importance not in view of their quantities but because of their specific significance in the production of high-quality steel. Their relative rarity everywhere gives rise to decidedly monopolistic tendencies in the production of these metals. The *nickel* indispensable for the production of chrome nickel steel is a relative monopoly of Canada but is controlled by US capital. About 75 per cent of all nickel deposits are found in Canada (32,972 tons out of a world total of 36,500 tons in 1926). Production is almost entirely controlled by two companies: the International Nickel Company based in the USA and the British Mond Nickel Company. The ores are sent either to the US or England to be refined. For some time, there has been an intention in Canada to

487 Bain 1927.

refine the ore there. The consequence was the erection of a series of refineries in Canada but these are almost completely controlled by US capital.[488]

Britain possesses an almost unrestricted monopoly over *chromium* ore, while the US is the country that makes greatest use of this metal for alloys. Of a world production of about 257,000 tons in 1924, 209,000 tons was produced within the British Empire (with Southern Rhodesia supplying about half of world production, 154,000 tons, and India 45,462 tons).[489]

Vanadium is of greater and greater importance. Chrome vanadium steel is the hardest steel now successfully produced and is increasingly used in the construction of bridges and motor cars but also in the casting of machines and malleable iron. The US, with its gigantic automobile industry, is by far the largest consumer of this metal as well and seeks to lay its hands on the production of vanadium. Peru and South America are today the main centres of vanadium extraction. The most significant Peruvian deposits are owned by American Vanadium. Germany, England and France are forced to source their requirements of ferrovanadium in the US or to buy American controlled vanadium ore. As for *titanium*, the US and Canada together own two thirds of all minerals that contain titanium; Norway almost all the remainder.[490]

'Perhaps the most interesting, even if not by any means the most important, of all textile fibres is *jute*. British India (Calcutta) possesses an absolute jute monopoly on the market and in setting the price.'[491] The current world demand for raw jute is 9–9.2 million bales; the harvest is only 8–8.5 million bales. The shortfall in actual supplies of raw jute is thus 0.7–1 million bales; this drives prices up and severely damages the processing industry, as the price of the end product must be set in a certain relation to the other textiles. This situation is likely to worsen because the jute planters in India have a strong tendency *to artificially restrict production*,[492] as a way of consciously exploiting their monopoly and because, on the other hand, world consumption of jute (production of sacks) is steadily rising.

Similar phenomena can be observed on the *flax market*. As a consequence of the monopolistic position of eastern European flax producers (Soviet Russia, Latvia) Livonian flax prices were driven from £54 per English ton to £112 in October 1927, a price rise of over 100 per cent. 'This enormous boom' cast the

488 Reichwein 1928, p. 620.
489 Reichwein 1928, p. 622.
490 Reichwein 1928, p. 623.
491 [Reichwein 1928, p. 234.] [Grossman's emphasis.]
492 *Economist* 1925, p. 1095; Reichwein 1928, p. 235. [The expression 'jute planters' is misleading, since jute was not a plantation crop but grown by a mass of small cultivators. It was the mill owners who restricted production through short-time agreements and restraints on new capacity.]

flax processing industries in western Europe 'into major difficulties', as the linen industry could not raise its prices in proportion; its products 'would otherwise have become uncompetitive compared to cotton goods.'[493]

American control over the world *sulphur market* has also given rise to concern in the numerous German branches of industry that use sulphur, namely the superphosphate, galvanizing, paper, chemicals (especially copper sulphate), nitrogen and other industries. Recently two American firms have established virtual world domination over the whole sulphur market, through their control over the extraction of raw sulphur in Texas as well as binding price-fixing agreements with sulphur producers in Sicily, which they '*use to keep prices high*'. As a consequence of this actual monopoly, shares in both American companies (Texas Gulf Sulphur Company and Freeport Texas Company) have experienced five to sevenfold rises in recent years.[494]

How much monopolies can raise prices is shown by the example of *mercury*. Before Mexico's declaration of independence, one kilogram of mercury from the Spanish mines in Almadén cost the silver mines there 4.60 francs; in the second half of the nineteenth century, at the time of the Rothschild monopoly, the price rose to 18.5 francs, that is by over 400 per cent. Around 1870, after the discovery of new mercury mines in California and the disintegration of the Rothschild monopoly, the price fell to 6.75 francs. After Californian production was monopolised around 1875, the price rose to 21.0 francs. After the dissolution of the Californian monopoly on 1 August 1876, it fell to 6.78 francs.[495]

It is hard to determine the profits that flow from monopolistic domination of world markets, because there is a tendency to conceal the real level of profits, for tax and other reasons. In the years 1913–20, for example, the Royal Dutch side of the concern always distributed dividends of 40 per cent to 48 per cent, in the same period the Shell side of the concern distributed dividends of 35 per cent every year.[496]

The Standard Oil Company distributed dividends between 40 per cent and 50 per cent. However, Liefmann comments about this: 'The profits of the Standard Oil Company, which has a capital of $100 million, are enormous, much higher than the dividends. In 1907 they should have been around 350 million', 83 per cent of the capital.[497]

493 Levy 1928. [Levy emphasised 'massive boom'.]
494 *Berliner Tageblatt* 1927. [Grossman's emphasis.]
495 Hegemann 1908, p. 63.
496 Mendel 1922, pp. 118, 120. [According to Mendel, the Royal Dutch dividend fell below 40 to 38 per cent in 1916. Grossman mistakenly wrote that the Shell dividend was consistently 39 per cent.]
497 Liefmann 1922, p. 159. [This passage, not in the English edition, Liefmann 2001, is therefore translated from the German edition of 1922.] Also see Boven 1924, p. 199.

Burmah Oil Company distributed a dividend of over 50 per cent for the year 1926. The dividends of British American Tobacco were 25 per cent in 1926, excluding 'special reserves'.[498]

Under such circumstances, the efforts by individual national economies to create their own monopolies and ward off those of other countries are understandable.

To make itself independent of the US, the grand idea arose in England of converting the British cotton industry from American to African and Asian supplies – to 'Empire Cotton'.[499] Since England controlled Egypt, the wheat fields of the Nile Valley, which were once among the most fertile of granaries, had to retreat in favour of cotton.[500] Of Egypt's total exports of 59.85 million Egyptian pounds, the value of cotton exports alone came to 49.51 million Egyptian pounds, i.e. 84.8 per cent. But Lancashire hopes that the strongest inflows of the better sorts of cotton will come from Sudan. 'In January 1926 the massive Makwar Dam was commissioned and 300,000 acres of the best cotton land was suddenly opened up at one stroke. The hope is that eventually the dam will help to irrigate one million acres of black cotton soil on the Gezira plain between the Blue and White Nile.'[501]

Conversely, we have heard of repeated attempts by the US to free itself of British control over rubber by investing in its own rubber plantations in Africa (Ford) and Cuba.[502]

There is also a tendency for Japan to make itself independent of the North American and especially the Indian raw material market, by controlling cotton cultivation itself. In 1925 a fund was established there to encourage the cultivation of cotton in Manchuria, the South Sea Islands, and China. Japanese spinners wanted to take their raw material in hand and also to use this vertical integration as a weapon against Indian cotton producers. 'From Manchuria there have been reports in the last few years of brisk activity on the part of newly founded cotton-spinning mills, in Mukden, Liaojang, Changchun[503] and other places, that are trying to stimulate the peasants to expand the cultivation of cotton. High-quality cotton seed is distributed free of charge to peasants and the expectation is that the harvest in this region will rise to over 300,000

498 *Wirtschaftsleben* (Hamburg) 1926, p. 1793.
499 Reichwein 1928, p. 243. Burmester 1923.
500 Pyritz 1912, p. 19.
501 Reichwein 1928, p. 254.
502 [This table has been redrawn and translated.]
503 [Grossman wrote 'Chintschu'.]

bales.'[504] In the same way attempts are being made to expand cultivation in Korea, where 136,000 bales were already harvested in 1924. Over the past few years, Japanese spinners have, moreover, acquired extensive estates in Peru and southern Brazil, to be devoted to cotton cultivation.[505] Similar motives have prompted France to encourage cotton cultivation in its African colonies, in Senegal, French Sudan, Togo, Dahomey, Algeria, Madagascar, and above all in the French part of the Niger Valley. 'In 1923 France harvested a total of … 55,000 bales of cotton in its various colonial possessions.'[506]

Even bourgeois theorists concede that the monopoly profits of particular interest groups are extracted at the expense of others. 'Cartels left to themselves by public authorities', writes Schüller, 'are not in the public interest but are understandably conducted exclusively in the interests of their members and strive for the *largest possible pure profits*, not the development of domestic production.' These pure profits of particular industries are obtained at the expense of others. 'The grievances of the machine manufacturers and other iron processing industries against the iron cartel, of the cotton weavers against the spinners' cartel, of glass manufacturers against the soda cartel etc. always return to the justifiable complaint that the exactions imposed by cartels lead to higher prices than would be the case if no cartel existed.' Yet Schüller goes on to write 'such unfavourable consequences must always occur *when only specific interest groups are organised and not economic life as a whole*'.[507] Schüller fails to see that monopoly profits are only possible so long as it is a matter of the advantages of one section of producers gained at the expense of another, that they must disappear once the monopoly principle is extended *to all* branches of production. For commodity producers are not only sellers of their own commodities but simultaneously buyers of others' commodities, which enter into their own production as the elements of production. What they are likely to earn as sellers by means of monopoly surcharges on prices they must lose again when they are buyers. 'In fact', Marx writes, 'the net result is that all owners of commodities sell their goods to each other at 10 per cent *above* their value, which is exactly the same as if they sold them *at* their true value.'[508] Such a general surcharge on prices would cancel itself out. The true aim of the trusts and concerns – monopoly profits – would be lost if the monopoly principle was generalised.

Nevertheless, plans for joint international control of raw materials have appeared again and again in bourgeois circles. In 1908 President Roosevelt still

504 Reichwein 1928, p. 259.
505 Reichwein 1928, p. 264.
506 Reichwein 1928, p. 256.
507 Schüller 1905, pp. 292, 296. [Grossman's emphasis.]
508 Marx 1976b, p. 263. [Grossman's emphasis.]

planned to convene an international conference to this end. In August 1920, at the International Congress of Miners, a resolution was even formulated which called for the creation, under the League of Nations, of a central, international raw materials office, whose task it would not only be to keep an inventory of raw materials and to assemble statistics about raw materials but also to 'distribute fuels, ores and other raw materials'. After what has been stated, the utopian character of such proposals is readily apparent. At the Vienna Conference of the Verein für Sozialpolitik in 1926, Professor Harms, in his report on 'Structural Changes in the World Economy', spoke about the world economy's, i.e. capitalism's, 'international solidarity of interests'! 'The thesis of the struggle of each against all would only be true if this earth's potential to feed all people were too small and *one* nation could truly only rise to a higher form of life at the expense of another. There is no greater misconception than this.'[509] That is probably true. But why in this case is an implacable and ever more intense struggle conducted among individual capitalist states? How does this palpable *fact* square with *Harms's theory* of the solidarity of interests? Expressions of harmony will not rid the world of the fact of conflicts of interests. These have, rather, to be *explained*. But here Harms's conception completely fails.

Harms confuses entirely different phenomena: the economy in general with the *capitalist* economy. And this distinction is what matters! Of course, there is enough room on the planet for hundreds of millions more humans. In this work, however, we have shown that the conflicts within the world economy do not arise from an insufficient scope for feeding people, from a scarcity of means of subsistence but rather their deepest cause is to be sought in insufficient valorisation as capital accumulation advances. Insufficient valorisation in an economic unit can, however, only be offset at the expense of another economic unit. Hence the antagonisms of the capitalist economic system are immanent in it. Harms's discussion serves to obscure the actual economic relations.[510]

Repeated attempts to create *shared* world monopolies have also been made, only to fail due to irreconcilable conflicts of interests among the participants, as is apparent in the breakdown of British rubber controls (May 1928). Precisely because the function of a world monopoly – as has been demonstrated – consists of enriching one's own national economy by impoverishing the world economy, of pumping additional surplus value into a country's own economy at the expense of the other states, the essential feature here is the conflict of interests. The recurrent *projects for shared, lasting international control and distribution*

509 Harms 1927, p. 56. [Grossman's emphasis.]
510 See Burmester 1923.

of raw materials are and must remain *pious wishes*. Marx's insight was therefore correct and genuinely prophetic when he emphasised that the entrepreneur's efforts to regulate production, which are often discernible during crises, disappear '[a]s soon as the immediate impulse has gone by and the general principle of competition ('buying in the cheapest market') reigns sovereign once more … All ideas of a common, all-embracing and far-sighted *control* over the production of raw materials – *a control that is in fact incompatible, by and large, with the laws of capitalist production*, and hence remains forever a pious wish, or is at most confined to exceptional common steps in moments of great and pressing danger and perplexity – all such ideas give way to the belief [in free competition].'[511]

In Germany, for example, these changes are apparent in a general strengthening of the raw materials sector, which is characteristic of the current situation on the world market. 'This changed balance of power has turned import merchants into mere commission agents for overseas consigners and brokers into their permanent representatives … The relations of importers in coastal cities with German consumers have not therefore shifted as markedly as their relations with countries that supply raw materials.'[512] The 'general tendency in the world economy' is further reinforced in Germany by the reduction of German importers' capital because of inflation.

c *The Function of Capital Exports under Capitalism. The Overaccumulation of Capital and the Struggle for Investment Spheres. The Role of Speculation in Capitalism*

i Previous Discussions of the Problem

The export of capital is a *fact* as old as modern capitalism itself. The scientific task is to *explain* this fact, that is to identify the function of this fact in the mechanism of capitalist production.

Sombart is the best example of how superficially the prevailing theory deals with these problems. According to Sombart, the essence of imperialist expan-

511 Marx 1981, p. 215. [Grossman's emphasis. Grossman included 'in free competition' in the quotation, whereas Marx's sentence ends with 'that supply and demand will mutually regulate each other'.] Cf. Feiler: 'Industries miss cartels in periods of depression, when a sharp struggle of each against all over markets threaten to tumble prices into the abyss; industries enter into cartels when market conditions make improved returns seem possible and it only requires a cartel for producers to realise this improvement. Industries flaunt cartels in boom periods, when brilliant orders and brilliant prices are to be had without restriction and cartels are felt to be nothing more than troublesome fetters, bourn only by the large and favouring the weak …' (Feiler 1914, p. 100).

512 Rosenbaum 1929, p. 133.

sion is not that colonies are sales outlets or sources of raw materials. 'There can be no doubt [!] that the principal significance of economic imperialism is that extending their spheres of political influence provides capitalist countries with the possibility of *expanding spheres for the investment of their excess capital*.'[513]

We disregard the mistaken account of the relationship between the expansion of capital and the drive for political power, according to which Sombart makes this drive for power a *precondition* for the expansion of capital. In fact, the opposite is true: the expansion of capital, 'peaceful financial permeation', *penetration pacifique*, is a precursor to subsequent political domination or, as Waltershausen writes, 'capital is the political pioneer'.[514] But from a purely economic point of view Sombart fails to explain *why the expansion of capital into foreign territories occurs at all*. He regards that as something self-evident, about which 'there can be no doubt'. Without proof or analysis, Sombart assumes that what needs to be explained theoretically is self-evident. In fact, however, the export of capital is by no means so self-evident. 'Just as it was normal in the past, so too today it is most obvious that the capitals newly acquired or available in a country should be applied *in it*.' Whether for the expansion of productive enterprises or, insofar as money capitalists are involved, 'they happily allow themselves to be influenced by the transparency of investments in their productive activity, by ready availability, by the ease of collecting profits or interest; for all of which the best opportunity is generally that available to them *domestically*'.[515] Only here does the economy reckon with known, predictable factors. So why are capitals not invested in the capitalist home country itself? Because they are 'excess' there? But what does excess mean? Under what conditions can a capital be excess?[516] Sombart simply uses journalistic clichés without the faintest attempt to clarify concepts scientifically. Yet there has been a theoretical debate about precisely this issue for a century. Ricardo already raised the

513 Sombart 1927, 1, p. 71. [Grossman's emphasis.]

514 Waltershausen 1907, p. 51. ['*Penetration pacifique*' means 'peaceful penetration'.] 'This', writes Waltershausen, 'is how France proceeded systematically in Tunisia. That country is today its protectorate, after trade, railways, banking, and mining all fell into French hands'. 'The economic influence achieved over the importing country is then transformed into a political one … which can even finally lead to territorial annexation' (Waltershausen 1907, p. 50).

515 Waltershausen 1907, p. 42. [Grossman's emphasis.]

516 Ricardo thought there was a contradiction, when Jean-Baptiste Say defended the view that any amount of capital can be invested in a country but spoke of 'abundant' capitals, and posed the question: 'If capital to *any* extent can be employed by a country, how can it be said to be *abundant*?' (Ricardo 1912, p. 291). [Grossman's emphasis.]

question of whether there is a *compulsion* to export capital, only to deny that there is. 'It is, however, always a matter of choice in what way a capital shall be employed … When merchants engage their capitals in *foreign* trade, or in the carrying trade, it is always *from choice*, and never from *necessity*: it is because in that trade their profits will be somewhat greater than in *domestic* trade.'[517] Sombart simply leaves the essential problem to one side.

Sigmund Schilder's 'scientific discovery' is even more hopeless. 'The interrelations between the export trade and the foreign investments of creditor countries' supposedly 'represent an equilibrating mechanism that … works in a way similar to the mechanism constituted by the relationship between exchange rates and foreign trade'.[518] If, for example, English capital investment abroad falls then there is a growing *excess* of commodity imports into England. 'The more rapid growth of this excess of imports can be regarded as indicating that, for whatever reason, British investment activity abroad has stalled, whereas slower growth … of this excess of imports suggests stronger investment … overseas.'[519]

'But', Schilder complains, 'economic science has … still not taken note of this peculiar play of economic forces.' Schilder wants to claim that he has discovered a peculiar 'equilibrating mechanism' where, in reality, only a normal subtraction has taken place, which has nothing to do with a 'play of economic forces' and still less with economic science.[520] As exports of capital are, in large part, exports of commodities, it is a simple example of subtraction when – a given quantity of imports assumed – every reduction in the export of commodities must increase the excess of imports.

In his book about imperialism, John Atkinson Hobson maintains that foreign investments form 'the most important factor in the economics of imperialism' and are becoming more and more significant.[521] 'Aggressive imperialism … which is fraught with such grave incalculable peril to the citizen, is a source of great gain to the investor *who cannot find at home the profitable use he seeks for his capital*, and insists that his government should help him to profitable and secure investments abroad.'[522] Why, however, can profitable investments

517 Ricardo 1912, p. 195. [Grossman's emphasis.]
518 Schilder 1912, p. 377.
519 Schilder 1912, p. 383. [Schilder emphasised 'more rapid growth of this excess of imports', 'British overseas investment activity has stalled', 'slower growth' and 'stronger investment'. An 'excess of commodity imports' is another way of expressing a balance of commodity trade deficit.]
520 Schilder 1912, p. 378. [Schilder emphasised 'economic science'.]
521 Hobson 1902, p. 59.
522 Hobson 1902, p. 62. [Grossman's emphasis.]

not be found at home? This decisively important question is not touched on even once by Hobson, just as he avoids all theoretical problems in his book, which is a valuable descriptive work.

Nor in Waltershausen do we find an answer to the question posed, even though he takes up the problem in a special chapter and asks, 'Why Does Domestic Capital Invest Abroad?'[523] 'For *private* investors, the prospects for interest rates, dividends and stock prices, further the security of the investment, its time horizon, the mode of repayment and the like are decisive.' But where does the compulsion lie in terms of the economy *as a whole*? This problem is not resolved. Waltershausen merely states that 'in today's world economy the agrarian countries are long-term recipients of capital, the industrial countries donors'.[524] But why? Waltershausen confines himself to the assertion that in the agrarian countries 'capital formation is at a much lower stage than in countries that have advanced industry'.[525] But why? 'However', he goes on to write, 'the economically advanced countries also have debtor and creditor relationships with one another.'[526] Obviously, the distinction between agrarian and industrial countries cannot account for export of capital. What, then, is the driving force of capital export? Waltershausen writes nothing about this. He just mentions in passing that 'in [countries] that are economically saturated, with much savings to lend out, the class of lenders of capital grows and that of entrepreneurs falls relatively. The rate of interest tends to stay low and perhaps even to decline.' When, under what circumstances, is a country 'economically saturated'? Waltershausen describes the fact instead of explaining it. 'There is the mass of disposable capital to be considered. The more extensively this appears on the market *in relation to the opportunities for investment*, the more the rate of interest falls.' As capital is now exported abroad, 'export capitalism counteracts the fall in the domestic rate of interest'.[527] This whole discussion is underpinned by the notion of 'economic saturation', a superfluity of disposable capital in relation to the opportunities for investment. But this notion is *not* explained. When, under what circumstances are investment opportunities restricted for capital? Waltershausen appears to have a vague feeling that such a state of saturation, thus also of capital export, is connected with a certain, relatively high stage of the capitalist mode of production's development. When citing Japanese expansion in China, he writes: 'To be successful in China what

523 Waltershausen 1907, pp. 42–54.
524 Waltershausen 1907, p. 52.
525 Waltershausen 1907, p. 19.
526 Waltershausen 1907, p. 52.
527 Waltershausen 1907, p. 35. [Grossman's emphasis.]

the Japanese, in any case, currently lack is an important precondition, extensive capital export, *which is only conceivable once the island kingdom has reached a much higher stage of economic development* than is it has at present'.[528] The 'requirement to expand economically', the tendency to invest capital abroad, is therefore bound up with two facts: first 'scarce domestic investment opportunities';[529] and second, a relatively higher stage of capitalist development. No attempt is made to go beyond these empirical statements; in particular Waltershausen does not show why, under these circumstances, a 'state of saturation' must *necessarily* emerge.[530]

The treatment of the problem of capital exports by Scott Nearing and Joseph Freeman, the authors of a book on American imperialism, is just as unsatisfactory.[531] Why is capital exported? Their answer is that, in the leading industrial countries of Europe, the export of capital emerged at a time when 'the economic *surplus* could find a more profitable investment market abroad than it could find at home'. They state the facts without explaining them. Why can capital not be invested as advantageously at home as it can abroad? Is that simply an accident, an accidental configuration of economic relations domestically and abroad? Why do such accidents only occur in the case of certain countries, distinctively capital-exporting countries, while others, e.g. the USA, were capital importing countries for over a century? The authors do themselves write that the industrial countries of Europe only became capital exporters *at a certain point in their development*. The same is true of the USA: 'At the beginning of the present century the United States *had reached this point in its economic development*'. It is not, therefore, the accidental configuration of market relations at home and abroad that are the factors which determine the export of capital but rather the laws that govern a given country's economic development; in other words, the particular stage of that development. The United States had not advanced that far during the whole nineteenth century and only reached this stage at the start of the twentieth century. The trend was accelerated by the War and 'the experiences of the War compressed into a decade a process that would have extended, ordinarily, over a much longer period'.[532] But

528 Waltershausen 1907, p. 52. [Grossman's emphasis.]

529 Waltershausen 1907, p. 54.

530 For Arthur Salz, the export of capital is not a problem at all. The question of why capital is exported does not interest him. He stands things on their head and states: 'Considered empirically, the regular, steady expansion of capital assets in an economy that is not static is necessary … for the spatial expansion of production', i.e. export of capital! (Salz 1925, p. 249).

531 Nearing and Freeman 1926, pp. 10–14.

532 Nearing and Freeman 1926, p. 11. [Grossman's emphasis.]

what were those 'experiences'? The *enrichment* of the US by the War. Enrichment is thus a factor that speeds up the export of capital. Capital exports thus depend on the *extent of a country's wealth* and not accidental circumstances on the world market. The authors show that while there is a '*surplus of capital*' in the USA, in Canada, for example, there is a 'capital … shortage'.[533] 'The United States was still a net debtor to the outside world in 1913 … The War of 1914 greatly expedited the transformation of the United States from a debtor into a creditor nation.'[534] 'The United States has become, and must remain, an exporter of capital so long as *there are surpluses of capital seeking investment* and markets in which such investments can be made.'[535] '[T]he economic developments of the United States provided a large fund of *investible surplus*.'[536] The authors have not demonstrated why there were such surpluses, why they could not find an investment outlet in the domestic economy.[537]

But even in the Marxist literature an explanation of the true function of capital exports cannot be found, even though, precisely in recent years, a great deal of attention has been devoted to the problem of the export and migration of capital. The question of the role and function of capital export in Marx's theoretical system is never posed, still less answered. The *appearances* that present themselves on a surface level have been observed and described but no attempt has been made to integrate them into Marx's whole system. So Varga believes that '[t]he significance of capital exports for monopoly capitalism was analysed in detail [!] by Lenin in *Imperialism*; *hardly anything new can be added*'.[538] In fact, Varga abstains from any theoretical analysis. In an essay called 'Capital

533 Nearing and Freeman 1926, p. 20. [Grossman's emphasis.]

534 Nearing and Freeman 1926, p. 12.

535 Nearing and Freeman 1926, p. 11. [Grossman's emphasis. Grossman translated 'seeking' as 'demanding'.]

536 Nearing and Freeman 1926, p. 12. [Grossman's emphasis. Grossman translated '*investible surplus*' as '*surplus demanding investment*'.]

537 Jaffé also writes about countries with a shortage of capital and others with capital saturation, without specifying on what this shortage or excess depends. '[W]e find the strongest development of economic activity precisely not in the countries that have the greatest capital resources but rather in countries like Germany and the United States which suffer from a relative shortage of capital.' In such undeveloped countries, profits are largest and advances in production strongest. In the most developed capitalist nations, production advances more slowly. 'Capital saturation is, by contrast, the surest sign of an economy in which the prospects for entrepreneurial profits have already been suppressed to a comparatively low level by excessive competition.' A plethora of capital or 'saturation' is the result of 'excessive competition'! What else, however, does 'excessive competition' mean if not the circumstance that there is more capital available than a given economy, at a given moment can profitably employ? (Jaffé 1914, pp. 8, 9).

538 Varga 1928, p. 56. [Grossman's emphasis.]

Export in the World Economy', he adduces empirical evidence on the scale and direction of international capital exports.[539] Yet there is no trace of any theoretical penetration of the issue in this work. 'The rate of profit', he writes, 'regulates not only the flow of capital into individual branches of industry, but also its geographical migrations. Capital is invested abroad if there are prospects of obtaining a higher rate of profit.' A conclusion that can hardly be regarded as new. Ricardo already pointed out that the level of the rate of profit determines the migration of capital not only between different spheres of production domestically but also between countries, so long as there is free competition, i.e. there are no (legal or practical) obstacles.[540] Varga, however, misunderstands the fundamental context of the problem, when he goes on to write that 'Capital is exported not because it is *absolutely* impossible for it to accumulate domestically without "thrusts into non-capitalist markets" but because there is a prospect of *higher profits* elsewhere'.[541] So Varga starts from the false premise that, whatever its total magnitude, capital can find *unlimited possibilities for investment* domestically. He overlooks the elementary truth that in denying the possibility of an *overabundance of capital*, he simultaneously denies the possibility of the *overproduction of commodities*. Varga believes, further, that the assertion that capital accumulation cannot continue without limit and that capital exports must therefore necessarily occur is incompatible with Marx's conception and can only be sustained from the perspective of Luxemburg's thesis of the necessary existence of non-capitalist countries.

In what follows, we want to show that Varga's conception is untenable, that it was precisely Marx who proved that unlimited capital investment in a particular country is impossible and who identified the conditions under which an absolute overaccumulation of capital and therefore also the *compulsion to* export capital arise. Varga does not notice that the assertion of the possibility of unlimited capital investment irresolvably contradicts any labour theory of value and is incompatible with it. Investment of capital requires surplus value. Surplus value is, however, labour. But in every single country labour is of a given extent and only a particular, if somewhat elastic mass of surplus value can be squeezed from a working population of a given size. The assertion that capital can be expanded without limit signifies that surplus value can likewise be increased without limit, that is independently of the size of the population, which means nothing other than *that surplus value does not depend on labour*.

539 Varga 1927.
540 Ricardo 1912, chapter 7 [pp. 76–93].
541 [Varga 1927, p. 363. Grossman's emphasis.]

And what is true of Varga's argument is also literally true of Bukharin's. What are the real causes of capitalist expansion? In Bukharin's conception, it is solely extra profits abroad. Bukharin runs around in circles, when on the one hand he emphasises the absolute necessity for capitalist expansion and therefore imperialism but on the other asserts that capital exports only go abroad because 'concrete development' occurs along the line of least resistance. 'If there was no additional market, that fact alone could not destroy the foundations of the existence of capitalism.'[542] If it is asserted that there is no *compulsion* to export capital, then the path to understanding the economic basis of imperialism is barred.

[Miron Isaakovic] Nachimson (Spectator) contents himself with the statement that 'modern industrial nations possess more capital than they need themselves under the prevailing conditions and therefore export it'.[543] What it means to 'possess more capital than they need' is not explained.

Sternberg conceives of the problem of capital export quite simply, as the ratio of capital C to labour supply L, that is C/L, where the denominator must always be greater, that is, a surplus population of free workers must always be available (e.g. a ratio of 50/60) 'for the valorisation of capital to be possible … If the numerator grows *too large*, the result is expansion of capital'.[544] This is the primitiveness with which a problem that has been at the centre of a theoretical controversy for an entire century is approached! For what does it mean that the numerator grows 'too large'? Where, here, are the scale and limit? How can this limit be determined? Such questions simply do not occur to Sternberg. He does not once mention the circumstance that the conception of growth of capital that is too large necessarily presupposes a certain state of technology, that is also of the organic composition of capital. If the organic composition is 20 c : 80 v then, for every 100 units of capital, 80 are spent on employing a given number of workers and just 20 on means of production. If 25 c is used in the numerator, that is for means of production, so that the ratio becomes 25 C/80 L, then at the *given* level of technology five units of capital are 'superfluous' and capital must be exported. But if the organic composition changes to 60 c : 40 v, then to employ the same number of workers from now on not 20 c but 120 c must be spent. The capital ratio is thus 120 C/80 L. With further advance in the organic composition to 80 c : 20 v, the numerator can expand to 320 c and we end with the fraction 320 C/80 L.

542 Bukharin 1972, p. 243.
543 Nachimson 1917, p. 81.
544 Sternberg 1971, p. 35. [Sternberg emphasised all words after the ellipsis.]

What does it mean, then, to state that the numerator grows 'too large'? What is *too large* at a lower organic composition is *not large enough* at a higher one.

On the other hand, does it not seem to follow that to create *unlimited* possibilities for capital investment all that is needed is technological progress, a progressively higher organic composition of capital? *Why do capital exports occur*, then? What compels the entrepreneur to do this? Sternberg's answer is simple: the expansion of capital is the most powerful *determinant of surplus population*. Reinforcement of the reserve army, resulting from the expansion of capital, depresses wages and enables surplus value to arise! The expansion of capital 'is therefore one of the strongest pillars supporting the capital relation',[545] because surplus value can arise 'only if there is … a surplus population'.[546]

The *export* of capital is supposed to be the strongest determinant of surplus population. Yet in Germany in the period 1926–27 we saw the exact opposite; strong *inflow* of foreign capital was the condition for the rationalisation of plants and contributed very largely to setting workers free, to creating surplus population. If the export of capital was, moreover, simply a matter of reducing the 'numerator', so as to reduce the demand for labour, then a simple transfer of capital would be enough for this purpose. For example, if German capitalists emigrate to Canada with their capital and never return home. That is, however, not an export of capital but rather a change in its nationality, loss of capital. If that is only understood as 'reducing the denominator' then the most essential aspect of capital export is misconstrued. As Hilferding has already correctly explained,

> By "export of capital" I mean the export of value which is intended to breed surplus value *abroad*. It is essential from this point of view that the surplus value should remain at the disposal of the domestic capital … The export of capital reduces *pro tanto* the domestic stock of capital and *increases the national income by the amount of surplus value produced*.[547]

If it were simply a matter of reducing the 'numerator' then this essential determinant of capital exports would cease to apply.

It is, besides, superfluous to waste more time in criticising Sternberg's formula. Sternberg also seeks to explain the fact of capital export, like all other

545 Sternberg 1971, p. 36.
546 Sternberg 1971, pp. 16, 585.
547 Hilferding 1981, pp. 314–15. [Grossman's emphasis. '*Pro tanto*' means 'to that extent'.]

capitalist phenomena, only in terms of the cure-all of vulgar economics, in terms of competition.[548] We know, however, that the problem is precisely that of being able to explain basic capitalist phenomena – one of which is the export of capital – even when abstraction is made from all competition and thus also from the existence of a surplus population, and a state of capitalist equilibrium is used *as the starting point* of the analysis. What compels the entrepreneur to export capital if there is no reserve army, if therefore the commodity labour power is sold *at* its value?

Hilferding has likewise failed to achieve conceptual clarity here. We do know that he denies the possibility and necessity of *generalised* overproduction of commodities and derives crises solely from disproportionality. Moreover, he thinks that Marx's reproduction schema shows that '*any expansion of production* allowed by the available productive forces appears *possible*'.[549] So, according to Hilferding, every capital can find application, without any kind of restriction, in a given country's production. Export of capital only occurs because a higher rate of profit is expected abroad. 'The precondition for the export of capital is the variation in rates of profit, and the export of capital is the means of equalising national rates of profit.'[550]

What is true of Hilferding is also literally true of Otto Bauer, who likewise defends the view that with a proportional distribution of capital between the different branches of production there are no limits to the investment outlets available to *any* capital in a capitalist country. Inequality of profit rates then remains the sole reason why capital is exported. 'The rate of profit in the less developed countries that are the object of the expansionist policy of capitalism is initially higher than in Europe', writes Bauer. 'Now, capitalist competition always strives to equalise rates of profit; capital always flows to where the rate of profit is highest.'[551] The export of capital is a matter of the 'tendency for the rate of profit to equalise'. But Bauer feels that this explanation absolutely fails when it is a matter of understanding the phenomena of modern imperialism. For the tendency for the rate of profit to equalise is a concomitant phenomenon of the capitalist mechanism. So how can it explain the fact that there has only been an enormous surge in capital exports from all the advanced capitalist countries in the last few decades and that the struggle for spheres for investment is becoming more and more ferocious, and is a characteristic feature of modern imperialism? Bauer himself writes: 'The aspiration to new spheres

548 Grossman 2019e, p. 169.
549 Hilferding 1981, p. 256. [Grossman's emphasis.]
550 Hilferding 1981, p. 315.
551 Bauer 2000, p. 377.

of investment and new markets is as old as capitalism itself; it existed in the capitalist city republics of Italy during the Renaissance just as it does in England and in Germany today. *But the force of this tendency has grown enormously in recent decades*.'[552] Great Britain's 'investments abroad appear to grow *more rapidly than at home*'.[553] So how is the increasing force of this tendency to be explained?

Bauer answers: the precondition for migrations of capital is its mobility; however, this depends on orderly administrative and judicial systems. 'Through the agency of modern armies and navies, the legal conditions are being created in the countries not yet subjected to capitalism to enable capital to seek spheres of investment there, too.'[554] A lovely, 'orderly' judicial and administrative system that is 'created' by modern militarism and navalism! Yet this sentence says nothing other than the opposite of what Bauer wanted to prove, namely that capitalism can lend capital even to countries that do *not* have orderly administrative and judicial systems, because the military and diplomatic pressure of its state stands behind the capitalists of the exporting country and, if need be, the army and fleet can employ force. Thus the aggressive character of modern imperialism as a characteristic feature of the latest era of capitalism, which is itself to be explained, Bauer adduces as the explanation for rising exports of capital![555] Apart from this, however, if higher rates of profit do actually account for the flow of capital into the less developed countries of Asia, Africa, America etc. then it is impossible to understand why any capital is ever invested – despite low rates of profit – in the industries of the advanced capitalist countries of Europe and the USA, why their productive apparatus is constantly being expanded. Why is the whole surplus value not destined for capital export? But we already know that the tendency for rates of profit to equalise means that the rate of profit in the highly developed capitalist countries is *not lower* than the rate of profit in undeveloped territories, that the *average rate of profit* is established on the world market just as it is within capitalist countries themselves, because countries with a higher organic composition of capital do sell their commodities at prices of production that are *above* their values. In this way the capital of the more developed countries appropriates a part of the sur-

552 Bauer 2000, p. 378. [Grossman's emphasis.]
553 Bauer 2000, p. 385. [Grossman's emphasis.]
554 Bauer 2000, p. 377.
555 As a matter of fact, Bauer too writes not about 'legal conditions' but about the fact that '[p]rotected by the *instruments of state power*, the capital of the dominant country in the first place flows into these colonial territories' (Bauer 2000, p. 376). [Grossman's emphasis.]

plus value produced in less developed countries. Bauer knows this on page 200 of his book but forgets it on page 386, when he comes to deal with the roots of capital export and the policy of capitalist expansion. If, earlier, he proved that when two countries at different stages of development deal with each other on the world market, 'the surplus value created by the workers of both regions is divided between the capitalists of both regions, not according to the amount of labour carried out in both regions, but *according to the amount of capital that is active in each of the two regions*',[556] he then falls back into the banal conception that the *higher rate of profit* in the less developed country is the cause of capital exports. It is not the rate of profit but the *mass of surplus value* appropriated *pro rata* that is higher in these countries.[557] But there is more! Let us recall what was established earlier: just as in a conceptually isolated capitalism entrepreneurs who are equipped with technologies that are *more* advanced than the social average and who sell their commodities at socially average prices gain *extra profits* at the expense of other entrepreneurs, whose technologies lag behind the social average, so on the world market *countries with the most advanced technologies gain superprofits at the expense of countries whose organic composition is lower, whose technical and economic development is more backward.* This is precisely what stimulates and at the same time compels capital to keep developing technology, to push through continuous increases in the organic composition of capital in the most developed capitalist countries. This means, however, that parallel with the development of technology, with ever higher levels of the organic composition of capital, a field simultaneously emerges for *more advantageous* capital investments. However high profits may be in colonial countries, it appears that the extra profits of capitalist magnates in heavy industries, like the chemical industry, in the metropolitan country, i.e. in branches that have a higher organic composition of capital, are not only not lower but are even higher. Why then is capital exported? This whole pattern simply cannot be explained by the theory that higher rates of profit tempt capital to migrate.

On the other hand, it is not true that the organic composition of capital is always lower in the countries that have only recently been opened up for capitalist production. If western European countries needed 150 years to develop from the organisational forms of the period of manufacture to the advanced capitalist world trust, the colonial countries of Asia, Africa and South America do not need to repeat this long process. They take over the capital flowing from Europe in its most mature form, as it has emerged in the womb of

556 [Bauer 2000, p. 200. Bauer only emphasised the first instance of 'both'.]

557 ['*Pro rata*' means 'proportionately'.]

the advanced capitalist countries. In this way, they skip over a whole series of historical stages of development and the indigenous Black populations of South Africa are uprooted from their primeval forests and hurled straight into gold and diamond mines, dominated by capitalist trusts, with their highly developed technological and financial forms of organisation.[558] When drilling for oil is undertaken in Ecuador, Sumatra, Venezuela or Trinidad, from the start the most modern technical methods and equipment at that point in time are used: pipelines and storage tanks are laid out, refineries constructed etc. For example, in Ecuador three refineries, storage tanks in Ancón and La Liberdad and a pipeline between Ancón and La Liberdad are in operation.[559]

In British India, there are refineries at Rawalpindi that have a 70 kilometre long pipeline; in Rangoon there are tanks for nine million barrels of oil; and in Sarawak there is an underwater pipeline.[560] In the Dutch East Indies, the large refinery at Pankalan-Brandan in Sumatra can process around 10,000 barrels of crude oil a day and store over one million barrels. Pipelines lead from Perlak to the refineries at Plaju [in Palembang], Pangkalan Susu etc. The refinery at Balikpapan in Borneo is the world's second largest.[561] The existing storage tanks (excluding those under construction) have a capacity of 1.2 million cubic metres. On the islands of the Dutch East Indies hydroelectric power stations with a capacity of three million horsepower were constructed before 1923, for the electrification of the railways and the paper, quinine and rubber industries. (In 1920 the whole of Europe only had a capacity of 8.8 million horsepower.)[562] In Palestine an entirely new type of hydroelectric power station will be built. A system of canals and pumps will bring water from the Mediterranean up to 87 metres above the Mediterranean's sea-level, and 380 metres above the Jordan, which means 510 metres above the level of the Dead Sea. The power generated by the water's fall will be used for the pumping stations as well as the electrification of all industries, railways and agriculture.[563] Does Bauer seriously believe that the construction of railways in Africa or South America by English capitalists happens because the railways in colonial countries have a lower organic composition of capital than those in England? Argentina's meat industry is

558 Already in his day Marx, in a letter to Nikolai Danielson, dated 15 November 1878, said of the United States of America: 'Transformations – which to be elaborated did require in England centuries – were here realised in a few years' (Marx 1991b, p. 344).

559 Krüger and Poschard 1926, p. 237.

560 Krüger and Poschard 1926, p. 466.

561 Krüger and Poschard 1926, pp. 472–3.

562 Reichwein 1928, pp. 572, 527.

563 Reichwein 1928, p. 569.

not ancillary to agriculture, based on craft principles, but operates large freezing plants equipped with the most modern technology, in which large sums of capital were invested by Chicago meat firms. This is an industry that could only have arisen on the basis of revolutions in transport and freezing technology (refrigerated wagons and ships with refrigeration), which presume a high organic composition of capital.

The quebracho industry of Argentina's forests has long ceased to saw the timber into blocks and export it. Today tannin production operates on a large-scale, capitalist basis. The system for obtaining the tannin extract is based on diffusion. The blocks are first pulverised in machines and the wood powder is then placed in extractors that separate the tannin from the cellulose. The tannin is then concentrated in pneumatic equipment. The average yield of tannin extract from quebracho wood is 25 per cent, from which, however, coloured and resinous material still has to be removed. From the kind of technology involved, it is already evident that tannin can only be extracted by large chemical enterprises, which operate on an advanced capitalist basis. The same is true of the milk industry. It is equipped with the most modern equipment for milking and sterilisation, separators, condensers etc. In all these branches of production, set up with the latest technology, the organic composition of capital is certainly no lower than in analogous enterprises in the advanced capitalist countries of western Europe.

Bauer also feels that there is no factual basis for the assertion that capital in advanced capitalist countries is tempted to migrate by higher rates of profit in newly opened countries. So he seeks to bolster his assertion on other grounds, apparently in the belief that piling up several doubtful arguments can substitute for *one* correct explanation of the actual pattern. He writes, 'In the capitalist economy of a country, a portion of the *monetary capital* of society is always removed from the circulation of industrial capital. To be sure, this released money capital flows into the banks and is from there directed into the sphere of production again.' Until that happens, however, there is 'always a certain lapse of time'. If matters are considered in the course of the reproduction process, it follows that 'at any one time a portion of the *monetary capital* of the society is brought to a standstill and lies fallow'. 'If a great deal of monetary capital is brought to a standstill', Bauer continues, the consequences are disastrous for capitalist production: 'the turnover time for capital increases … within the turnover time of capital, the production time constitutes the lesser part, the circulation time the greater part'. As, however, value and thus surplus value are only created in production, the shortening of production time entails a reduction of surplus value and profit. Capitalist economic policy, therefore, pursues spheres for the investment of idle money capital. To this end, capital deploys a series of measures such as tariff barriers to 'tempt' the inert money capital 'into the sphere of production' by promising extra profits. The ultimate aim of these efforts 'is to better structure the relationship between idle and productive capital, between the production time and the circulation time of capital'.[564]

Capital exports are thus another means to guide idle *money capital*, excluded from the circulation of industrial capital, back into the sphere of production. 'The subjection of economically backward countries to exploitation by the capitalist class of a European country has two series of effects [creating]: *direct spheres for investment* of capital in the colonised country and thereby increased sales opportunities for the industry of the colonising country; in *indirect* terms, new spheres of investment for capital also in the colonising land itself … *The quantity of capital brought to a standstill in the country at any one moment is thereby reduced*.'[565]

In this way Bauer proposes a second theory to explain the export of capital, alongside the one mentioned above. According to the first conception, it was a matter of productive capital which was faced with the choice of either going into the productive spheres of the capitalist country or to a colonial country. The export of capital to a colonial country is preferred because the rate of profit is higher there than it is in the metropolitan country. Now, however, we are told that it is not a matter of the capital that is active in the metropolitan country's production but of idle money capital that yields not a lower rate of profit but *no* profit at all. Capital exports find new investment opportunities for this *unemployed money capital*. So Bauer muddles up two totally different explanations of capital exports.

How correct is his [second] 'theory'? Bauer sees the *fact* that unemployed capital, seeking investment, is exported abroad, that wherever large sums of investment-seeking money capital have been amassed, the rate of interest falls. 'The banks quite directly perceive the relationship of unproductive to invested capital … in the movement of the interest rate.'[566] But he confuses the money capital that lies idle in the banks with capital seeking investment.

A part of total social capital and indeed a part that is growing absolutely (even as it constantly shrinks as a share of total sales) *must always remain in the form of money, as money capital* and, if the continuity of the reproduction process is to be maintained, this money capital cannot be reduced at all. In the second volume of *Capital* Marx showed this in his analysis of the circuit

564 Bauer 2000, pp. 371–3. [The final sentence has been modified to better reflect the original sense, in Bauer 1907, p. 402. Grossman's emphasis.]

565 Bauer 2000, pp. 376–7. [Grossman's emphasis. Editor's interpolation.]

566 Bauer 2000, p. 378.

of money capital. He also distinguishes, in addition, commodity capital and productive capital, and writes of the three forms, three circuits, three figures of the circulation process. All three forms of capital are necessary and condition each other. 'If we take all three forms together, then all the premises of the process appear as its result.'[567] It is apparent that 'every particular circuit (implicitly) presuppose[s] the others'. An individual capital, like social capital, passes through all three phases in succession. 'In reality … each individual industrial capital is involved in all three at the same time … Here, therefore, the entire circuit is the real *unity* of its three forms.'[568] The time that capital spends in each of the three phases is not arbitrarily determined by the will of the banker or the industrial capitalists; it is *objectively given*, both by the nature of the particular branch of production and the social organisation of the whole circulation process. 'It lies in the nature of the case … that the circuit itself *determines that capital is tied up for certain intervals in the particular sections of the cycle* … Only after it has *fulfilled the function corresponding to* the particular form it is in' can the capital assume the next form of the circuit.[569] A part of the circulating capital, indeed a part which is growing absolutely, must therefore always take the form of money capital, as a fund for purchases and sales with fixed deadlines.[570] Precisely because the size of money capital (like that of commodity capital and productive capital) cannot be arbitrarily determined, individual capitals, like social capital, must be allocated in *definite proportions* to all three of the forms that capital takes. Or, as Marx writes, 'definite numerical ratios must obtain in its division into parts', if the reproduction process is to carry on without interruption. 'The size of the capital involved determines the scale *of the production process, and this determines the volume of commodity capital and money capital*, in so far as these function alongside the production process.'[571] And Marx recapitulates the results of his investigation in the following way: 'Certain *laws* were discovered, according to which major components of a given capital, varying according to the conditions of the turnover, must *constantly be advanced* and renewed *in the form of money capital*, in order to keep a productive capital of a given size in constant functioning'.[572] 'According to the length of the turnover period, a greater or lesser quantity of money capital is

567 Marx 1978, p. 180.
568 Marx 1978, p. 181. [Grossman's emphasis. Editor's interpolation.]
569 Marx 1978, p. 133. [Grossman's emphasis.]
570 Marx 1978, p. 165.
571 Marx 1978, p. 183. [Grossman's emphasis.]
572 Marx 1978, p. 429. [Grossman's emphasis.]

needed to set the productive capital in motion.'[573] So, even though money capital creates no value and thus no surplus value, since it belongs to the sphere of circulation, even though it restricts the functioning of the productive part of capital[574] but is itself unproductive and idle, it cannot, on the basis of the capitalist mode of production, either be eliminated or arbitrarily reduced, because it does fulfil *necessary functions*, even though it is unproductive and idle, and 'because the reproduction process itself includes unproductive functions'.[575] Even if the quantity of the money capital that is required varies according to the structure of the social exchange mechanism, at any given moment it is an *exactly determined magnitude* that can be calculated according to the law formulated by Marx. 'If the velocity of circulation of money … is given then the aggregate amount of money in circulation in a particular period is determined by the total amount of commodity prices to be realised plus the total amount of payments falling due during this period minus the payments that balance each other.'[576]

Bauer turns all of this on its head. If, according to Marx, idle money capital is only a part of the functioning industrial capital completing its circuit, which constitutes the unity of commodity, money and productive capital, according to *Bauer* idle capital is 'money capital … removed from the circuit of capital'.[577] According to *Marx* the size of the money capital is determined by the length of the turnover period; if the turnover period is shortened, a smaller sum of money capital is required. According to Bauer, the opposite is the case: the length of the turnover period depends on the size of the money capital. 'If a great deal of monetary capital is brought to a standstill, the reflux of the released fragments of capital into the sphere of production proceeds only slowly.'[578] So instead of a slower turnover tying up much money capital, the amassing of much money capital slows down the turnover! The sphere of production does not determine what happens in the sphere of circulation but the reverse, what happens in circulation is decisive for production. 'Every change in the relationship of idle capital to invested capital, of productive capital and capital in circulation … completely transforms the face of capitalist society.'[579]

573 Marx 1978, p. 433.
574 Marx 1978, p. 430.
575 Marx 1978, p. 209.
576 Marx 1987b, p. 379.
577 Bauer 2000, p. 381.
578 Bauer 2000, p. 371.
579 Bauer 2000, p. 372. [The translator has modified the sentence to better reflect the original sense, in Bauer 1907, p. 402.]

And this magical power of completely transforming the face of bourgeois society, by means of changes in the proportion of idle to invested capital, lies in the hands of the banks.

> [T]hey quite consciously make a more favourable structuring of this relationship the goal of all economic policy … [T]hey can easily *impose their will*. But it is also they who first make expansionism possible in that, thanks to the quantity of capital available to them at any one moment, *they are able to plan and direct* the emigration of capital into the subjugated regions.[580]

So now we finally know why capital is exported to the colonial countries! Modern banks want this and they can easily get their way. They consciously work to reduce money capital and by doing so they transform the whole face of capitalist society … And the objective laws of capitalist circulation? Obviously, these belong to the realm of fables; in the best case, they were only valid during the period before the rise of the big, modern banks.

Despite the astounding simplicity of Bauer's explanation, we cannot suppress certain doubts about its validity. For, in the first place, even if today it appears to be agreed that the laws of circulation formulated by Marx have been 'overcome', we still cannot follow Bauer completely; not least because on the issue that interests us bourgeois economists, despite their enormous admiration for bankers, themselves side with Marx's obsolete viewpoint in opposition to Bauer. They simply deny that the banks can arbitrarily influence the export of capital! 'But "directing" the flow of capital', writes Adolf Weber,

> is not so easy. It should not be forgotten that the allocation of capital occurs '*according to laws that are intrinsic to business*' not only in national economies but self-evidently in the world economy too. If an attempt is made to artificially channel resources, which the domestic market cannot do without, into foreign countries, there will soon be a reflux that will frustrate it.[581]

So there is no question of conscious direction and of the banks getting their way. Only *superfluous* capitals can be exported. Secondly, however, if for a moment we accept Bauer's assumption that the struggle over spheres for invest-

580 Bauer 2000, p. 378. [Grossman's emphasis.]
581 Weber 1915, p. 213. [Grossman's emphasis.]

ment serves the purpose of 'the reduction of idle capital, the acceleration of its flow into the sphere of production', so that 'modern capitalist expansionism ultimately aims … to achieve nothing other than the transformation of the relationship between productive and idle capital',[582] then why this transformation could be achieved by exporting capital to the colonies is still unexplained. For Bauer does assure us that the exported capital could *also* be employed in *domestic* spheres of production. 'It may be', we read,

> that the capital that flows into foreign regions would have temporarily remained unproductive if this outlet had not been provided. But no capital remains permanently unproductive, the exported capital would ultimately *have found its way into the sphere of production at home, too*.[583]

It seems truly astonishing that banks prefer capital investment in distant continents, where they can only find security for their capital 'with the protection of military force', when they can just as well find spheres for investment at home and thus bring about the transformation of the relationship between productive and idle capital in territories that are far closer and better known to them, without recourse to military force and simply under the protection of the domestic, 'orderly judicial system'. Finally, Bauer refers to idle 'money capital' which has fallen out of the circulation of industrial capital and is then directed back into production by the export of capital. From the international trade statistics of all countries, however, Bauer knows that international capital movements almost never occur in money form, as money capital, but essentially in the *form of commodities*. It was precisely Marx who showed that, behind the veil of money, the real processes have to be observed from the viewpoint of commodities. Obviously, Bauer regards even this insight of Marx as outdated and no longer current. So again we would like to cite a good bourgeois reporter from one of the business newspapers, who even today defends that outdated idea.

> The most important precondition for an export of capital is always the *economic, commodity processes that lie behind the movement of money*. America's large export of capital in 1924–1927 was ultimately the export of *cotton* (to rebuild Central European stocks), *foodstuffs* (to satisfy increased European demand) and finally [to a lesser degree] actual *export*

582 Bauer 2000, p. 381. [The editor has replaced 'unproductive' with 'idle', to improve the accuracy of the translation of Bauer 1907, p. 413.]

583 Bauer 2000, p. 385. [Grossman's emphasis.]

> *of gold* (partly to replenish Europe's gold reserves). Holland's capital exports arise from the *raw material exports* of her colonial empire (rubber) … Sweden's capacity to export capital has a background in a different commodity: it is based on a rise in timber exports.[584]

And, we can add, the *export of iron ore* as well.

It is not money capital but commodity capital that leaves the circuit of industrial capital, which means nothing other than that there is an *overproduction of commodity capital*, which cannot be sold and therefore cannot find its way back into the sphere of production. Bauer himself writes that the export of capital creates an outlet for the sale of *commodities*. The confused idea about money capital which has exited the circuit of industrial capital and therefore flows to distant colonial countries by means of capital exports, leaves the whole problem of capital export just as unexplained as the theory that capital emigrates as a consequence of differences in the levels of profitability. But: *satis supraque!*[585]

ii Overaccumulation and Export of Capital according to Marx's Conception

Marx starts by citing the views of the classical economists, namely Jean-Baptiste Say and Ricardo. The latter defended the view that *any* amount of capital can be invested in a capitalist country without any limit at all. 'There cannot, then, be accumulated in a country any amount of capital which cannot be employed productively.'[586] This is where Marx's critique begins. The assertion, Marx writes, 'that *any* amount of capital can be employed productively in any country' is simply 'the form [in] which Ricardo liked particularly' to express Say's proposition that 'demand and offer are identical'.[587]

This view of Say and Ricardo is now torn to shreds, with implacable logic and biting scorn, in the chapter 'Overproduction of Commodities and the Overabundance of Capital'.[588]

'Ricardo', Marx writes, 'is always consistent. For him, therefore, the statement that no overproduction (of commodities) is possible is synonymous with the

584 Herrmann 1927. [As cited by Grossman. Not in the morning edition of the newspaper.]
585 ['*Satis supraque*' means '(that is) enough and more than enough'.]
586 Ricardo 1912, p. 193.
587 Marx 1989c, p. 125. [Grossman's emphasis. Editor's interpolation.]
588 [The editor, Kautsky was responsible for the chapter title, Marx 1910b, p. 269.] Marx 1989c, p. 128 et seq.

statement that no … super abundance of *capital* is possible.'[589] The 'stupidity of his successors' is expressed in the fact that they 'deny overproduction in *one* form (as a general glut of commodities in the market) and not only admit its existence in *another* form, as overproduction of capital … superabundance of capital, but actually turn it into an essential point in their doctrines'.[590]

The difference between [John Ramsay] McCulloch and the rest of the vulgar economists, and Marx's epigones, e.g. Varga, lies solely in the reversed order of their contradictory assertions, namely that they concede the overproduction of *commodities* and even 'turn it into an essential point in their doctrine' but deny the overproduction of *capital*, while Ricardo's epigones conceded the overproduction of capital but denied it for commodities.

For Marx there could be no essential distinction between these, for he never stuck to the surface appearances of phenomena but sought to penetrate to their core. He therefore writes, 'The only remaining question is thus: *what is the relation between these two forms of overproduction*, i.e. between the form in which it is denied and the form in which it is asserted?' Where then is 'the nice distinction between plethora of capital and overproduction' of commodities?[591]

'The question is, therefore, what is the plethora of capital and how does it differ from overproduction' of commodities? Here Marx critically tackles Ricardo's epigones, with a mighty grip:

> According to the same economists, capital is equivalent to money or commodities. Overproduction of capital is thus overproduction of money or of commodities. And yet these two phenomena are supposed to have nothing in common with each other?

'[T]he entire phenomenon resolves into one of overproduction of commodities, which they admit under *one* name and deny under *another*.'[592] '[A] thoughtlessness which admits the existence and necessity of a *particular phenomenon* when it is called *a* but denies it as soon as it is called *b*, in fact therefore showing scruples and doubts only about the *name* of the phenomenon …'[593] In contrast to them, Marx emphasises that with overproduction it is not simply

589 Marx 1989c, p. 128. [Marx emphasised 'overproduction'.]

590 Marx 1989c, p. 128. [Grossman's emphasis.] Elsewhere Marx refers to 'the singular phenomenon that the same economists who deny overproduction of commodities admit overproduction of capital' (Marx 1981, p. 365).

591 Marx 1989c, pp. 128–9. [Grossman's emphasis. Marx emphasised 'plethora of capital' and 'overproduction'.]

592 Marx 1989c, pp. 129–30. [Grossman's emphasis.]

593 Marx 1989c, p. 130. [Grossman emphasised '*particular phenomenon*'.]

a matter of the overproduction of commodities as commodities but with the 'fact that commodities are here no longer considered in this *simple* form, but in their designation *as capital* … it is a question not only of the simple relationship in which the product appears … *as commodity* but of its designation within the social framework; it thereby becomes something *more* than, and also different from, a commodity', i.e. it is capital.[594] Precisely in every case of overproduction, understood in this way, 'the producers confront one another not *purely as owners of commodities*, but *as capitalists*'.[595] But this only means that in the crisis it is the *valorisation function of capital* that is disrupted; a capital that does not valorise itself is a superfluous, overproduced capital. Overproduction of commodities and overproduction of capital are 'the *same phenomenon*'. 'Overproduction of capital and not of individual *commodities* – though this overproduction of capital always involves overproduction of commodities – is nothing more than *overaccumulation of capital*.'[596] An overaccumulation of capital for which there is no possibility of valorisation.

When does such an overaccumulation occur? Under what conditions? In the existing Marxist literature, this question was never posed, let alone answered.

Lenin also fails to bring sufficient theoretical clarity to the problem of capital exports, even though he makes several acute observations about the subject. 'Typical of the old capitalism, when free competition held undivided sway', writes Lenin 'was the *export of goods*.'

> Typical of the latest stage of capitalism, when monopolies rule, is the *export of capital* … On the threshold of the twentieth century we see the formation of a new type of monopoly: firstly, monopolist associations of capitalists in all capitalistically developed countries; secondly, the monopolist position of a few very rich countries, in which *the accumulation of capital has reached gigantic proportions. An enormous 'surplus of capital' has arisen in the advanced countries*.[597]

Here, the fact of the export of capital is related to the wealth and enormous amassing of capital in the advanced capitalist countries. This seems to be confirmed by empirical observations. With great insight, Lenin goes on to emphasise that close connections between governments, on one side, and high finance

594 Marx 1989c, p. 130. [Marx only emphasised the first instance of 'commodity' and '*more*'.]
595 Marx 1989c, p. 130. [Grossman emphasis.]
596 Marx 1981, p. 359. [Grossman's emphasis.]
597 Lenin 1964b, pp. 240–1. [Lenin only emphasised '*goods*' and '*capital*'.]

and large-scale industry, concentrated in trusts and cartels, on the other, are characteristic of the latest expansion of capital. He points to firms like Armstrong in England, Schneider in France and (before the War) Krupp in Germany, which 'have close connections with powerful banks and governments and which cannot easily be "ignored" when a loan is being arranged', and which dominate certain territories as their exclusive spheres of influence, by using loans and the creation of colonial banks and their branches. In this way '[t]he capital exporting countries have divided the world among themselves in the figurative sense of the term'.[598]

This interesting description does not, however, move beyond the connections that can be empirically established. In particular we find in Lenin no theoretical analysis of the facts that would demonstrate the *necessity* of capital export under advanced capitalism. This is perhaps due to the popular character of this work, which set out 'to show briefly, and as *simply* as possible, the connection and relationships between the principal economic features of imperialism'.[599] Lenin simply confines himself to indicating that '[t]he need to export capital arises from the fact that in a few countries capitalism has become "overripe" and (owing to the backward state of agriculture and the poverty of the masses) capital cannot find *a field for "profitable" investment*'.[600] What this 'overripeness' consists of and how it is expressed Lenin does not tell us.

Proving the necessity of capital exports and the conditions under which they arise constitutes the actual heart of the problem; doing this was exactly the merit of Marx's research and an expression of his theoretical advance over Ricardo.

That the migration of capital is governed by the level of the rate of profit precisely presupposes differences in the level of profitability. Marx demonstrated the circumstances which determine and bring about the tendency for the rate of profit to fall in the course of accumulation. The question arises, how far can this fall go? Can the rate of profit *fall to zero*? *Only* in such a case is it appropriate – according to the conception of numerous theorists – to refer to the absolute overaccumulation of capital. So long as capital yields a profit, however small, it is not appropriate to refer to absolute overaccumulation, because the capitalist would rather be content with a small profit than have no profit at all and will therefore continue production so long as any profit at all results. 'It fol-

598 Lenin 1964b, pp. 244 and 245.

599 Lenin 1964b, p. 195. [Grossman's emphasis. Lenin emphasised 'principal'.]

600 Lenin 1964b, p. 242. [Grossman's emphasis.]

lows, then, from these admissions', writes Ricardo, 'that there is … no limit to the application of capital *while it yields any profit*.'[601]

I will show that this conception is fundamentally wrong, that there is a limit to the accumulation of capital and that it is reached long *before* the point mentioned, that is absolute overaccumulation can occur even with relatively high returns on capital. It is not a matter of the absolute level of those returns but of the ratio between the mass of surplus value and the mass of the capital to be accumulated.

What are the conditions on which the limit to the accumulation of capital depends?

Empiricism is useless in the face of questions like this. It fails completely here, as it does in other areas of science. For example, in the use of fuels, e.g. coal, the experience of almost a century has shown that it has always been possible to obtain a *greater amount of heat* from a given quantity of coal. Empiricism based on the practice of several decades could easily come to the conclusion that there is no limit to the quantity of heat that can be obtained through such increases. Only theory can answer the question of whether this is actually true or whether there is a maximum limit here, beyond which further increases in the quantity of heat obtained are precluded. It does this by calculating the absolute quantity of energy in a unit of coal. Increases in yield cannot exceed 100 per cent of the available amount of energy. Whether this maximal point can be reached in practice is of no concern to theory. The determination of that limit has great significance for knowledge about the actual processes. In the area of the economy the determination of such points which define the limit beyond which the actual tendencies of development cannot pass is also of the greatest significance: only they allow us to have an overview of the forces at work in the mechanism.

Starting from considerations of this sort, Marx asks, what is 'overaccumulation' of capital? And answers: 'To understand what this overaccumulation is … we have only to take it as *absolute*. *When* would the overproduction of capital be absolute?' According to Marx, it would occur when an enlarged capital yields *no more* surplus value than the smaller capital did. 'Thus as soon as capital has *grown in such proportion to the working population* that neither the absolute labour time that this working population supplies nor its relative surplus labour time can be extended (the latter would not be possible in any case in a situation where the demand for labour was so strong, and there was thus a tendency for wages to rise); *where, therefore, the expanded capital produces only*

601 Ricardo 1912, p. 197. [Grossman's emphasis.]

the same mass of surplus value as before, there will be an absolute overproduction of capital ...'[602] 'There would be an absolute overproduction of capital as soon as the *additional* capital that could be employed for the purpose of capitalist production = 0.'[603] 'The *valorisation* of the old capital would have experienced an absolute *decline*.'[604]

To identify the conditions under which such a situation must arise, we will study the phenomena in stages and, with Marx, analyse the simplest case, where population and the productivity of labour (technology) is *constant*, first, before examining the more complicated case of absolute overaccumulation, with population and labour productivity growing.

1 *Absolute Overaccumulation of Capital with Constant Population and Technology*

'If we take a *given* working population, of 2 million for example, and further *assume* that the length and intensity of the average working day is given, as well as wages, and hence also the relationship between necessary and surplus labour, then the total labour of these 2 million workers *always produces the same magnitude of value*, and the same thing is true of their surplus labour, as expressed in surplus value.'[605] 'With this presupposition, the *rate* of surplus value directly gives us the *mass* of surplus value.'[606] Under these assumptions, a maximal limit to capital accumulation, which can be calculated exactly, is established, because the maximum amount of the mass of surplus value obtainable is exactly given. It would therefore make no sense to continue accumulation beyond this limit, because the larger capital would deliver the *same* mass of surplus value as the smaller capital did before. Continued accumulation would necessarily lead to a devaluation of the capital and a steep fall in the rate of profit. 'In actual fact', Marx writes,

---

602 Marx 1981, p. 360. [Grossman's emphasis.]

603 Marx 1981, pp. 359–60. [The sentence has been modified in accord with the original German text, Marx 2004, p. 248. Grossman's emphasis.] According to Marx's definition of the concept of absolute overaccumulation, it is entirely unnecessary that profits on the total capital should disappear. In a theoretical sense, it disappears only for the additional accumulated capital. In a practical sense, matters are quite different. The additional accumulated capital will displace a part of the old capital from previous spheres of investment, which will result in a lower rate of profit on the total capital than was previously the case. While, however, the falling rate of profit is otherwise bound up with a growing mass of profit, it is characteristic of absolute overaccumulation that here the mass of profit on the expanded total capital remains *the same*.

604 Marx 1981, p. 361. [Grossman's emphasis.]

605 Marx 1981, p. 323. [Grossman's emphasis.]

606 Marx 1976b, p. 417. [Grossman's emphasis.]

> the situation would take the form that *one portion of the capital would lie completely or partially idle* (since it would first have to expel the capital already functioning from its position, to be valorised at all), while the other portion would be valorised at a *lower rate* of profit ... The fall in the rate of profit would be accompanied this time *by an absolute decline in the mass of profit* ... And the reduced mass of profit would have to be calculated on an enlarged total capital.[607]

This would therefore happen without 'actual *devaluation of the old capital*'.[608] This would be a case of the overaccumulation of capital 'since the capital is unable to exploit labour ... at a level of exploitation that at least increases the mass of profit along with the growing mass of capital applied'.[609] Thus, according to Marx, this would be 'the case in which *more capital is accumulated than can be invested in production ... This results in loans abroad etc., in short, speculative investments*'.[610]

11 *Absolute Overaccumulation of Capital with Growing Population and Technological Progress* (*Rising Organic Composition of Capital*)

It would be a mistake to conclude, from what has just been stated, that absolute overaccumulation can only occur when population and technology are constant. Using Otto Bauer's schema, we showed that it can and must arise, despite the assumptions underlying the schema: of a) a progressively higher organic composition of capital (technological advance) and of b) annual increases in population (of five per cent) including the assumption that [constant] capital, c, grows *faster* than population, expressed by v. Given these constraints, absolute overaccumulation does not occur immediately but only after a certain period, at a particular stage in the accumulation of capital. It was apparent

607 Marx 1981, p. 360. [Grossman's emphasis. Grossman also used this quotation out of context above, p. 141. Marx's observation was made in the course of a discussion which was not entirely coherent and included the possibility of a fall in the rate of surplus value as wages were bidded up.]

608 [Marx 1981, p. 361. Grossman's emphasis. Although Grossman's account of Marx's position is sound, the context of this quotation is the effect of devaluation on competitive struggle among capitalists, rather than the impact of overaccumulation on the rate and mass of profit. If the quotation is discounted, the substantive argument that, if there is no increase in the size of the workforce, the level of technology and the rate of exploitation, absolute overaccumulation occurs when the whole workforce is employed and hence the mass of surplus value cannot be increased, is still valid.]

609 Marx 1981, p. 364.

610 Marx 1989c, p. 116. [Grossman's emphasis.]

(Table 2 on page 136) that from year 21 capitalists can have no interest at all in accumulating the surplus value of 252,695 obtained in year 20, at the previous rate (10 per cent for *c* and five per cent for *v*), because a capital which has grown to this extent would be too large to be valorised to the same degree, with a working population of the given size. Their personal share of surplus value, the *k* part, would *fall* (from 117,742 to 117,513). So instead of accumulating the surplus value, i.e. adding it to the principal capital, *they will make it available for capital exports*. So this is the moment that Marx has in mind when he writes 'More capital is accumulated than can be invested in production … This results in loans abroad, etc.' Since entrepreneurs are not inclined to give up their own consumption, there will be a shortage of *a*, the part destined for accumulation. In year 36, there must be a reserve army of 11,885 workers and at the same time an excess capital of 121,101. The situation described earlier (page 143 above) will occur: superfluous capital coupled with superfluous population. Marx illustrates this with the case of England at the start of 1867: 'At this moment, while English workmen with their wives and children are dying of cold and hunger, there are millions of English gold … being invested in Russian, Spanish, Italian and other foreign enterprises'.[611]

From this moment on, accumulation, i.e. the reconversion of a part of profit into additional capital, runs into obstacles. The profit destined for accumulation 'cannot be directly used to expand business in the sphere of production in which the profit was made'. And this can happen '*because this sphere is saturated with capital*'. And soon after that Marx adds, *'if this new accumulation comes up against difficulties of application, against a lack of spheres of investment*, i.e. if branches of production are saturated and loan capital is over-supplied, this plethora of loanable money-capital proves nothing more than *the barriers of capitalist production* … an obstacle set up by its own *laws of valorisation*, by the barriers within which capital can valorise itself as capital.' Certainly, that is only a *capitalist* barrier, a barrier to valorisation and not a barrier in general. Social needs remain massively unsatisfied, and '[t]he resulting credit swindling demonstrates that there is no positive obstacle to the use of this *excess* capital'.[612] From the capitalist standpoint, however, this is 'excess' capital because it is not valorised.

611 *Reynolds' Newspaper*, 20 January 1867, cited in Marx 1976b, p. 823, n. 71.

612 Marx 1981, p. 639. [Marx only emphasised '*capitalist*'.] This is also the sense in which another passage, where it is stated that 'If capital is sent abroad, this is not because it absolutely could not be employed at home' (Marx 1981, pp. 364–5), is to be understood. When Bukharin emphasises that, according to Marx, 'one can only speak of a *relative* overproduction' (Bukharin 1972, p. 224), this is wrong and rests on two senses of the word 'absolute'.

A *structural transformation of capitalism* gradually sets in from the moment just described. The more the class of entrepreneurs relies on capital exports, the more the bourgeoisie is 'becoming separated from productive activity', the more it develops into a parasitic rentier class, 'becoming more and more *superfluous* … like the nobility in the past, becoming more and more *a class merely drawing revenue*'.[613]

It is, therefore, absolutely false for Luxemburg, with reference to the passage cited earlier from *Theories of Surplus Value*,[614] to claim: 'However, it is important to note that his [Marx's] schema directly excludes the formation of such an additional capital'.[615] It is false to argue as she does that Marx's 'schema contradicts the conception of the total capitalist process and its trajectory laid out by Marx in the third volume of *Capital*'.[616] The fundamental idea underlying *this* conception is the *immanent contradiction* between the unlimited capacity for the forces of production to expand and the *restricted possibilities for valorisation* of the overaccumulated capital. Precisely this necessarily results from Marx's reproduction and accumulation schema. As Luxemburg turned the restricted possibilities for valorisation into a *restricted capacity to consume*, she certainly could not rediscover the immanent contradiction, to which Marx refers, in the schema. Marx shows, on the contrary that 'the *valorisation* of capital founded on the antithetical character of capitalist production *permits* actual free development *only up to a certain point*, thus an immanent fetter on and barrier to production forms, which is constantly *broken through by the credit system*'.[617] The barrier of overaccumulation, insufficient valorisation, is broken through by the credit system, that is, by capital exports and the *additional surplus value* obtained by means of them. In this sense, the export of capital is necessary for and characteristic of the late phase of capital accumulation: 'Typical of the old capitalism, when free competition held undivided sway, was the export of *goods*. *Typical* of the latest stage of capitalism, when

In relation to social needs, overproduction is naturally not absolute, it is only relative. But the capitalist crisis that flows from overaccumulation is an *absolute* crisis, because the maximal limit of accumulation is given by the magnitude of the available mass of surplus value.

613 Engels 1987a, p. 153.

614 [see above p. 440.]

615 Luxemburg 2015a, p. 245.

616 Luxemburg 2015a, p. 246.

617 Marx 1981, p. 572. [Grossman's emphasis. The phrase 'thus an immanent fetter on and barrier to production forms' is not in the English edition and is translated here from the original (Marx 2004, p. 432).]

monopolies rule, *is the export of capital*'.[618] The characteristic difference that Lenin emphasised between the old and the newest capitalism does, in fact, exist but it has no necessary causal relationship with either competitive or monopoly capitalism but is explained by differences between the early and late phases of capital accumulation in any given capitalist country, at a given stage of technological development.

In addition, the circumstance that the issue of foreign loans is used to obtain orders for industry at *exaggeratedly high monopoly prices*[619] also comes into consideration, since the states that grant loans eliminate the competition of foreign contenders. So foreign loans also serve the purpose of injecting additional surplus value into the domestic economy from abroad and thus surmounting insufficient valorisation within the capitalist state.

How, then, is the export of capital to be reconciled with Luxemburg's theory that surplus value cannot be realised within capitalism? She devotes a special chapter, 'International Credit', to this question.[620] Over 20 pages we learn how the old European capitalist countries export capital to the non-capitalist countries, how they build factories there, construct the capitalist system and gradually draw these countries into their 'spheres of influence'. Eight pages of this chapter are devoted to 'the history of international borrowing in Egypt'.[621] And what is proved by this whole discussion? Does it demonstrate how surplus value produced in the fully capitalist countries is '*realised*' in the non-capitalist countries? Not a trace of that! We learn, on the contrary, how *fellaheen*[622] and other Asian, African etc., peoples have to work long hours for low wages and how they are drawn into the capitalist nexus. In a word, we learn not how surplus value produced under capitalism is *realised*, but how, with the help of capital exports, *additional surplus value* is produced in non-capitalist coun-

618 Lenin 1964b, p. 240 [Grossman's emphasis, Lenin only emphasised '*goods*' and '*capital*'] or, as Schulze-Gaevernitz writes, Engand

> thus took on the characteristics of a creditor state … The creditor state gradually came into the foreground, compared with the industrial state. In any case, Great Britain's income from loans is already many times greater than its net revenue from total foreign trade. In 1899 Giffen estimated … that the net revenue from imports and exports was £18 million, whereas a careful estimate of interest from foreign loans was already £90 to £100 million. Furthermore, the latter has been growing rapidly … (Schulze-Gaevernitz 1906, p. 321) [Schulze-Gaevernitz emphasised 'took on the characteristics a creditor state'.]

619 Examples of this can be found in Schilder 1912, pp. 345 et seq.

620 Luxemburg 2015a, pp. 304–24.

621 Luxemburg 2015a, pp. 312–20.

622 ['*Fellaheen*' is Arabic for 'peasants'.]

tries and brought to the old capitalist countries. The fact of capital exports is not only incompatible with Luxemburg's theory but directly contradicts it. It has no relationship with the realisation of surplus value and therefore is not a problem in the sphere of circulation but is, on the contrary, a problem in the sphere of production, the production of additional surplus value abroad.

Had the export of capital been a means of realising the surplus value produced under capitalism in non-capitalist countries then the fact that capital is exported from one capitalist country to another *capitalist* country, such as Germany, would be an inexplicable mystery. Meanwhile capital imports into Germany do occur because this fact has nothing to do with the 'realisation' of surplus value. Capital in the US, Holland or Sweden, which is excess and seeking outlets for investment, is exported to Germany because the German working class produces the surplus value that pays the interest on this capital.

Apart from the other advantages of capital expansion already mentioned, e.g. securing raw materials, advantageous concessions etc., the true meaning of capital export lies in the forced tribute payments of debtors to creditors. This is precisely what American financial expansion into Europe means. Scott Nearing and Joseph Freeman glimpse its essential core in that 'the great nations of Europe are actual or potential tribute payers to the United States for at least two generations'. Hence it is a matter of complete indifference whether, in the World War, these countries were victors, which raised loans in the US during the War – officially there are 16 European countries that are debtors to the US – or countries like Germany which were defeated and have fallen prey to the same fate, even if in a different form, through the Dawes Plan. These authors title the relevant section of their book 'Stripping Economic Rivals' and go on to write: 'This is the most complete modern system of exploitation ever devised and applied in the relations between great powers'.[623] The tremendous accumulation of capital in the US can only secure its own valorisation and thereby weaken the breakdown tendency through lavish, gigantic methods of transferring surplus value from abroad.

iii Inductive Verification

If the theory propounded here is correct, it should not be difficult to test it by looking at actual phenomena. It would go too far, in this context, to provide extensive historical or statistical descriptions. We must, rather, confine ourselves to pointing out the most important patterns by briefly adducing a few examples.

623 Nearing and Freeman 1926, pp. 225, 231.

Our arguments had two points. First, that the valorisation of capital is the driving force of the capitalist mode of production and dominates all the movements of the capitalist mechanism, both its expansion and its contraction. Production initially expands because in the early stages of accumulation profit grows; accumulation comes to a standstill because, at higher stages of accumulation and indeed due to the very process of accumulation, without the intervention of any other moments, profit necessarily falls.

With reference to the facts that are crucial for the validity of our theory, we are in the fortunate position of not having to adduce any [primary] empirical material. We simply rely on the works already mentioned, by Wesley Clair Mitchell on the USA, Jean Lescure on France and Stamp on Great Britain. From them it emerges that periods of upswing and downswing are functionally connected with the level of profits, that booms are periods of rising profits, depressions periods of deficient profitability.

Secondly, however, our arguments embrace rather more than a mere attempt to explain business cycle fluctuations. We have tried to establish the law of motion of the capitalist mode of production, its secular trend line or, in Marx's words, the *general tendency* of capitalist accumulation. We have shown how absolute overaccumulation, which is expressed periodically but only temporarily in crises, asserts itself to a progressively stronger degree in the course of capital accumulation, in the fluctuations of the economic cycle from one crisis to the next. Finally, at the higher stages of capital accumulation it reaches a state of 'oversaturation of capital', in which there are insufficient opportunities to invest the overaccumulated capital, in which overcoming this 'saturation' is more and more difficult and the capitalist mechanism therefore approaches the final catastrophe, with the inexorability of a natural process. Superfluous and idle capitals can for the moment defend themselves from the complete breakdown of their profitability, for the time being, only through the export of capital or interim 'employment' on the stock exchange.

Just as the real movement of the earth around the sun cannot be proved by direct observation but is negated by the apparent motion of the sun and was therefore unrecognised and disputed for centuries by the kind of science that is accustomed to holding fast to surface appearances, so too is capitalism's general tendency to break down disputed with reference to the 'facts', by all those who see precisely only the 'facts' but not their inner connections. For a century after [Nicolaus] Copernicus various scholars disputed the rotation of the earth with the argument that if true the resulting vibration would be immediately perceptible. And, sixty years after the appearance of Marx's *Capital*, the breakdown tendency is contested with similar sorts of arguments, namely that the breakdown tendency has still not been perceived directly. This ignores the true function of science: the moment the breakdown tendency becomes directly perceptible, its prior determination in theory becomes superfluous.

In the course of capitalism's historical development, the 'state of saturation', described above, was not reached simultaneously by individual countries, as many countries were still more or less far removed from it. We see this stage of development earliest in Holland, already in the eighteenth century. England then reached this stage in the 1820s and France too in the 1860s. The USA joined this group after the World War. In the following we will briefly summarise the essential features of this development.

Holland, for example, evolved from a medieval agrarian and fishing state into a manufacturing and commercial state of the first order. In its heyday around the middle of the seventeenth century, it possessed an enormous shipbuilding industry and flourishing linen and wool manufactures based on perfected technologies. (Windmills played a major role at the time: they were used to saw wood, mill corn, extract oil, rub tobacco and make paper.) 'Weavers of wool, linen and silk, and paper and hat manufacturers settled in Leiden, Haarlem and Dordrecht.'[624] But the Netherlands were too small in area to create a sufficient field of activity for the capital it amassed. In the course of the eighteenth century, it developed into a rentier state.

> Great inherited wealth [entailed] *growing problems in allowing available capitals to be active in the country itself*. In Holland's great days it had been the rule to invest money capital only in domestic undertakings. *Now it lay unemployed* on the market, depressing interest rates until foreigners borrowed it.[625]

As always and everywhere, idle, disposable capital compels speculation, so in seventeenth century Holland we already see an enormous development of stock-market speculation, whose ruses and swindles have been described for us, with spirit and humour, by Don Joseph de la Vega in his book *Confusion of Confusions* published in 1688.[626] On the other hand, 'the Dutch had become Europe's creditors'.[627] Already in works of the late seventeenth century, there is the 'eternal complaint … that no one is willing to invest money in trade, business and agriculture, "that they all want to grow rich in indolent idleness and

624 Waltershausen 1907, p. 368.
625 Waltershausen 1907, p. 373. [Grossman's emphasis. Translator's interpolation.]
626 Ehrenberg 1892, pp. 809–10. [Vega 2015.]
627 Waltershausen 1907, p. 367.

therefore *invest their money abroad*" '.[628] 'The sums lent to foreign governments, namely the English and the French, and to plantation owners in the English, French and Danish colonies during the eighteenth century have been calculated to be more than six billion marks.'[629] In 1778 the Dutch still had 1500 million livres in foreign government paper, mainly French and English; in 1781 800 million guilders of loans in Europe. 'The *Nieuwe Nederlandsche Jaerboek* of 1789 estimated that the interest payments flowing from abroad, disregarding payments from England and France, were 50 to 60 million guilders.'[630] We see the amassing of 'wealth in foreign values for the purpose of effortless enjoyment of interest',[631] while, at the same time, a whole series of symptoms of a rentier state become apparent: during the eighteenth century, interest rates fall to as low as two per cent. '[W]ith productive activity stable, business *profits were small*; by contrast the supply of loan capital into which a part of the returns that accrued were converted became ever more abundant *without being able to find anywhere near sufficient investment outlets domestically*.'[632] This spread a mindless luxury which the moralists blamed as the cause of Holland's decline.

Given the undeveloped technology of the time, unskilled labour and likewise the labour of women and children could not find the kind of employment in the production process as happened towards the end of the eighteenth century, after the introduction of machinery. So industry's basis for valorisation was extraordinarily narrow and therefore opportunities to invest capital were slight. Large-scale capital exports therefore began at that time.

England's development into a capital-exporting country is by no means of recent date. Adam Smith already states that British subjects often preferred to invest their capital in France, where profits from business were higher than they were in England.[633] From [James William] Gilbart's well-known book, we

---

628 Anonymous 1694, cited in Laspeyres 1863, p. 254. [Grossman's emphasis.]

629 Waltershausen 1907, p. 374. Büchele 1867, p. 157. About Dutch exports of capital, Adam Smith writes:

> The great property which they possess both in the French and English funds, about forty millions, it is said, in the latter … the great sums which they lend to private people in countries where the rate of interest is higher than in their own, are circumstances which no doubt demonstrate *the redundancy of their stock, or that it has increased beyond what they can employ with tolerable profit in the proper business of their own country* … As the capital of a private man, though acquired by a particular trade, may increase beyond what he can employ in it, and yet that trade continue to increase too; so may likewise the capital of a great nation. (Smith 1910, p. 82) [Grossman's emphasis.]

630 Waltershausen 1907, p. 374. [Editor's interpolation.]

631 Waltershausen 1907, p. 380.

632 Waltershausen 1907, p. 375. [Grossman's emphasis.]

633 Smith 1910, pp. 81.

know that in England, as early as 1822–25, that is in four years, foreign and especially exotic loans with a total value of £ 52,994,571 were issued *as a result of an overabundance of available capital*. (The export of capital, apart from going to several European countries like Denmark, Prussia, Portugal, Spain and Greece, principally went to Austria, Brazil, Chile, Colombia, Guatemala, Mexico, Peru etc.)[634]

Already in 1836, George Ramsay could state on the basis of English experience that the class of rentiers living off interest was very considerable. 'Great Britain's position as the world's premier creditor was firmly established by the 1840s and 1850s',[635] in other words, precisely *when England made the transition to fully free trade*. So Marx states, with reference to a work by Henry Fawcett, 'The greater part of the yearly accruing surplus product … is thus used as capital, not in England, but in foreign countries … The additional capital annually transported abroad to be put out at interest is a much greater proportion of the annual accumulation than the yearly emigration is of the yearly increase of population.'[636] British pre-war capital exports were:

	Million £
1855–64	235
1865–69	196
1870–76	288
1877–83	94
1884–90	430
1891–97	223
1898–1904	107
1905–11	792
1912	211
1913	197

Again and again, overaccumulation of capital, the lack of investment possibilities, periodically sets in. Marx illustrates this with the example of the autumn of 1862, when the London money market was *dominated by* '*the difficulty of finding*

634 Gilbart 1901, p. 64. [Grossman mistook a loan to *Austria*, which Gilbart lists, for one to *Australia*. In Gilbart's book Australia is only mentioned once, as a source of gold.]

635 Schilder 1912, p. 382. [Schilder emphasised 'world's premier creditor'.]

636 Marx 1976b, p. 761. [Fawcett 1865.]

employment for money', which 'almost made necessary the formation of fraudulent companies, since it is difficult to obtain two per cent for money'.[637] This is precisely why, in theoretical discussion of the role and significance of capital exports, 'every … capital investment abroad was to some degree applauded *as a patriotic act*'. Schilder even refers to 'those who enunciate the theory of the only true capital investment [being that made] abroad'.[638]

Earlier, in a different context, we saw (pages 245–246 above) that further accumulation of capital in England led to the 'saturation' of economic life, i.e. to economic stagnation, that England continued to evolve into a 'rentier state', because the possibility of investing domestically was limited.

This is also the place for a detailed illustration of the *function of speculation under capitalism*, in connection with the export of capital.

Hilferding devotes a special chapter to the securities exchange and speculation. Yet all we learn there is that speculation is unproductive, that it is it has the characteristics of gambling and betting, that the mood on the exchange is driven by big speculators and similar other banalities. Because Hilferding denies that overaccumulation of capital is possible and necessary, thus the failure of any possibility for valorisation at a particular stage of accumulation of capital, he has blocked the path to understanding the most essential function of the securities exchange and speculation. In his discussion the exchange is the market for the circulation of mere titles of ownership, divorced from and rendered independent of the circulation of goods. The function of the securities exchange is to mobilise capital. It is the means by which industrial capital becomes money capital for individual capitalists, by being transformed into fictitious capital. This gives them the option of withdrawing their invested capital at any time in the money form. The mobilisation of capital in the form of shares, in the form of fictitious capital opens the possibility of capitalising dividends as promoter's profit; in the money form these function as new capital, through which large, new sums of money are concentrated in the hands of the big money powers. In order to fulfil these functions, according to Hilferding, speculation is essential to capitalist society. He refers, however, to the 'demise of speculation'.[639]

There is no consideration of the function of speculation in the course of the business cycle in this entire discussion! The ebb and flow of economic life that is so characteristic of capitalism remains totally unexplained by Hilferding.

637 Marx 1989c, pp. 204–5. [Grossman's emphasis.]

638 Schilder 1912, pp. 379, 380. [Grossman emphasised 'as'. Schilder was making a metaphorical reference to 'the only true religion'. Editor's interpolation.]

639 Hilferding 1981, p. 220.

We pointed out earlier that superfluous capital in the economy – people refer to the 'unemployment of money capitals' – looks for spheres where it can invest. Because no application is possible in the sphere of production, capital is exported abroad or – when regarded from the viewpoint of production – there is 'internal export of capital', the flow of unemployed money into speculation. The export of capital abroad and domestic speculation are parallel phenomena and stem from a common root.

The first foreign loans from Germany, the so-called 'exotic securities', appeared in the second half of the 1880s, when the depression prevailing since the mid 1880s 'had brought about a general overabundance of money and downward pressure on interest rates'.[640] The fact that, during a depression, there is brisk speculation on the securities exchange is well known and undisputed. The business cycle model of the Harvard University Committee on Economic Research even notes this as a feature of its two first phases (depression, recovery). About the depression phase, Hahn also writes, '[a]s a consequence of growing monetary liquidity, the banks are in a position to meet credit applications for the purchase of securities and soon *a sharp increase in the number of current account advances for the purchase of securities and … current advances for the purchase of securities and collateral loans for the purchase of securities* can be observed'.[641] But Hahn tries to downplay the significance of this fact, when he writes that 'current account advances and sums standing to the credit of others in banks' books arising from share transactions are only a relatively *minor* part of the banks' total business'.[642] That this assurance is incorrect is apparent in the level of the fees that accrue to the banks from the disbursement of loans for the purchase of securities. 'It can be assumed', Adolf Weber tells us, 'that a quarter of the German deposit and merchant banks' total profits derive from fees'.[643] Profits from this source have shown a tendency to rise. [The next table below shows] what they amounted to as a proportion of the banks' gross profit.

When it is taken into consideration that the fees involved here are calculated for periods of several years, while speculation in securities thrives only during the depression phase and, in contrast, comes to a standstill during the upswing, for reasons expounded earlier, it follows that fees must constitute a much larger share of total bank profits in periods of speculation. The banks' balance sheets demonstrate the enormity of the flow of funds onto the exchange at the start

640 Weber 1915, p. 208.
641 Hahn 1926, pp. 55–6. [Grossman extended Hahn's emphasis.]
642 Hahn 1926, p. 56. [Grossman's emphasis.]
643 Weber 1915, p. 187.

	Per cent
1885–90	23.7
1900–05	24.0
1905–10	25.0
1911	26.2
1912	26.6

of the upswing. For example, at the start 1909, the eight big Berlin banks had assets of about 4.4 billion marks in foreign currency deposits and acceptances, of which 522.3 million comprised repurchase and collateral funds. At the end of October, the latter had risen by almost half a billion, to 986.3 million marks, almost 20 per cent of the 4.9 billion marks total of foreign currency deposits and acceptances.[644] The speculative movement is reflected in the level of the excise levied on the exchange's turnover. In Germany, before the War, this yielded:

	Million marks
1907	11.0
1908	10.6
1909	20.0
1910	22.6
1911	24.8
1912	25.7
1913	19.2

These figures show how much weight should be attached to the assurances of Hilferding, Hahn etc. about the declining significance of speculation. According to the balance sheets of *all* German banks for the years 1900–11, taken from the *Deutsche Ökonomist*, the total value of bills of exchange increased from 1,583 million marks in 1900 to 3,062 million marks in 1911: an increase of 93 per cent. In the same period, repurchase and collateral loans grew from 598 million marks to 2,504 million marks, i.e. by 318 per cent. This fact is even more

644 Feiler 1914, p. 61.

striking when we only consider the balances of the nine largest Berlin banks. In this period, bills of exchange rose from 747 million marks to 1,657 million marks, i.e. by 121 per cent, by contrast the increase in repurchase and collateral loans was 524 per cent, from 242 million marks to 1,517 million marks. At the bankers' conference of 1912, even Helfferich asserted, with the usual clichés, that 'on the whole, the stock exchange … has become much less speculative …'; naturally he had to conceded the *fact* of 'the certainly very substantial increase in the German banks' repurchase and collateral loans over recent years'. 'In a certain sense', Helfferich adds in justification, 'the repurchase business constitutes, to an extent, the digestive system of the capital market. It functions *if the supply of new values temporarily exceeds the momentarily available absorptive capacity of the market*.'[645] How poetic bank directors become when faced with awkward questions!

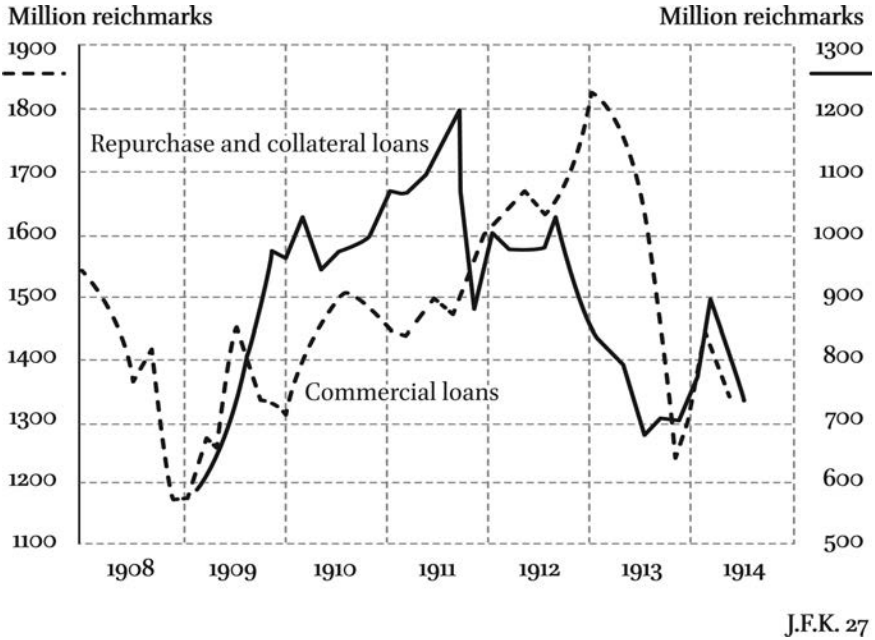

FIGURE 5 Repurchase loans of the largest banks and commercial loans of banks of issue, 1908–14[646]

645 Helfferich 1912, p. 75 and the appendix of tables. [Grossman's emphasis.]
646 [This table has been redrawn and translated.]

The connections between speculation and the economy are also confirmed by Figure 5, [facing] reproduced from the Institut für Konjunkturforschung, for the pre-war period 1908–14.[647] It shows how, in slack periods, repurchase and collateral loans experience stronger growth than commercial loans.

The same regularities in the shift between different kinds of loans are also apparent in Germany in the post-war period, since the stabilisation of the reichsmark. During the recession of 1925/26, repurchase and collateral loan funds, which shrank in volume during the upswing, begin to flow onto the exchange. The increase in the period from 28 February 1925 to 31 August 1926 was 686 per cent, whereas the increase in bills of exchange was just 48 per cent, and in advances to customers 33 per cent.[648]

The balances of 10 large banks, in millions of reichsmarks were:[649]

	28/2/1925	31/10/1925	28/2/1926	30/6/1926	31/8/1926
Repurchase & collateral loans	66.0	115.5	207.0	341.8	518.7
Bills of exchange	1,069.7	1,320.7	1,451.0	1,654.0	1,588.0
Advances to customers	2,247.5	2,825.9	2,831.9	2,853.3	2,989.7

As the situation in production improved at the end of 1926 and start of 1927, credit shifted from the stock exchange into the economic process, and the Institut commented: 'The earlier rises in share prices on the market were accompanied by a strong increase in repurchase loans fuelling speculation in securities. Repurchase loans are now in decline, while bills of exchange from investment banks of issue, which are fundamentally for *commodity* business have swelled considerably.'[650] And the *Frankfurter Zeitung*, in an article about the 1926 balance sheets of the big banks, wrote particularly of their investment policy that

> *In periods of stagnation and initial recovery, the flow of bank credit seems to turn inevitably to the stock exchange*. A glance at our financial table [of the seven large Berlin banks] shows that this shift left its mark on bank balance sheets of the previous year [1926]. The expansion of sums to the

647 *Vierteljahrshefte zur Konjunkturforschung* 1927a, p. 20.

648 [Grossman's faulty calculations of these percentages have been corrected.]

649 *Vierteljahrshefte zur Konjunkturforschung* 1926a, p. 43; and *Vierteljahrshefte zur Konjunkturforschung* 1926b, p. 22.

650 *Vierteljahrshefte zur Konjunkturforschung* 1927a, p. 20.

> credit of others in banks' books by around 1,621 million marks or by an ample 33 per cent is nearly of the same extent as the expansion of loans for the purchase of securities.[651]

Sums to the credit of others in banks' books grew from 4,906 million marks at the end of 1925 to 6,527 million marks, while in the same period repurchase and collateral loans rose from 133 million marks to 820 million marks, that is, by 687 million marks or 517 per cent.[652]

Securities speculation is, however, just *one* channel for the flow of excess capital that seeks an investment. *Land speculation* is another outlet. 'It is striking to see the strong participation of many of our banks in the real estate business', although the vagueness of banks' balance sheets makes it difficult to obtain a more accurate picture of the real situation. 'Occasionally', Adolf Weber continues, 'facts become known which reinforce apprehension that the provincial banks as well as the big Berlin banks are more deeply implicated in the construction and real estate business than would be supposed on the basis of their annual reports.'[653] He therefore instructs the banks that 'the risks

651 *Frankfurter Zeitung* 1927a.

652 [Grossman's faulty rounding of the percentage has been corrected.] The *Frankfurter Zeitung*'s polemic (1927b) against the Reichsbank [Germany's central bank] is very amusing: 'The assertion, for example by the Reichsbank, that loans for purchases on the exchange are granted at the expense of providing capital to the economy, is of course invalid'. This false 'impression' only arises if the propagation of credit is not followed beyond the first creditor. If sellers [of credit] at subsequent stages are considered, 'then it is apparent that loans for the purchase of securities can likewise benefit the provision of capital to the economy'. And the article's author comes to the conclusion that 'therefore there need not be any difference *in principle* between loans for the purchase of securities and economic loans, as is usually assumed'. This is the crux of the matter … Only it is a shame the author has not explained exactly *how* loans for the purchase of securities can benefit the economy.

653 Weber 1915, pp. 231, 232. A contributor to the commercial supplement of the *Berliner Tageblatt* complains that every period of economic upswing creates 'crisis symptoms' on the real estate market, i.e. *makes* the exchange lethargic.

> While in other sectors of the economy a state of depression still dominated or only the first signs of recovery were apparent, the mortgage market and, connected with it, the real estate market were dominated by lively activity from the last third of 1926 until about the middle of February 1927. The *exchange, which otherwise also absorbed resources not required by industry* to a large extent, directed substantial amounts of capital to the real estate market in two ways: first, by the buying up … mortgage bonds, which enjoyed ever renewed upside potential, and further by investing in gains from speculation in housing market profits. This development was shattered in one blow … when, as a consequence of the cyclical revival of industry and commerce, available resources were increasingly claimed by those sectors. Interest rates immediately …

inherent in real estate and building speculation are so extraordinarily high that a deposit bank … should absolutely exclude such businesses from the sphere of its activity'.[654] Another form for the 'investment' of liquid capital is the periodic *promotion fever*, establishment of dubious joint stock companies, in which the issuing banks are interested only because of the large profits from share issues and company flotations.[655] Finally, the banks' *own* speculation in securities, share trading with the goal of making 'differential profits', on the margin between the purchase and sale prices of securities, comes into consideration.[656] Weber, who is a great advocate of speculative trading and talks about the 'economic functions' of speculation, thinks that 'speculation by banks should by no means be condemned *a limine*', since it should be regarded as a 'price regulating activity'.[657] Little is known about the speculative activities of the banks; they themselves are quiet about it. That is, however, no reason to talk about 'the lack of stock market speculation by our large banks', as Weber does, although he points out that American[658] and English[659] banks engage in speculation on their own account and then engages in sharp criticism of the 'outrageous swindles'[660] in the field of company flotations that have been tranquilly tolerated for decades in England. We are not interested, however, in criticising speculation but in understanding its economic function. Against all those who believe that speculation is merely an 'excrescence' that has nothing to do with a healthy upswing, we advocate the view – and here we agree with Weber – that speculation fulfils *necessary* functions. Only, we see these functions in other areas than those Weber identifies. It makes profitable 'invest-

---

showed a strong tendency to move upwards and it was all over for mortgage bonds' upside potential. (Friedlaender 1927) [Grossman's emphasis. Friedlaender emphasised 'signs', 'lively activity', 'exchange', 'two ways', the first mention of 'upside potential', 'speculation', 'housing', 'revival', 'interest rates' and 'tendency'.]

654 Weber 1915, p. 233.

655 It is well known that investment banks promised journalists in France an option to purchase new issues at the original lower price within a stipulated deadline, so long as the press reports succeeded in raising prices to a certain level (see Honheißer 1925, p. 93).

656 Weber 1915, p. 242.

657 Weber 1915, p. 246. ['*A limine*' means 'from the outset'.] As Fritz Schmidt states, this 'price regulation' consists of speculators 'using … stock market reports and the financial press, as well as credit policy … to generate a lasting shift in opinion and thus to *keep prices moving*'. 'Speculators have an interest in *fluctuations in value*' (Fritz Schmidt 1922, pp. 95–6). [Grossman's emphasis in the first quotation. The third quotation is a heading in Schmidt.]

658 Weber 1915, p. 248.

659 Weber 1915, p. 250.

660 Weber 1915, p. 256.

ment' possible for overaccumulated capital; we have already seen that these profits do not flow from yields [from productive capital] but are transfers of capital.

Bourgeois economists do not want to see these connections. They only notice appearances as they manifest themselves on the surface and therefore lose their way in contingencies. Why is capital exported? Why are foreign securities sought after in increasing numbers? According to Feiler, the explanation is to be found in the 'distressed situation of the middle class'. Small savers, who with the low interest they earn can no longer make ends meet as the cost of living rises, turn from domestic securities to foreign paper with much higher returns.[661] And Feiler similarly explains the fact that 'wide circles of the German capitalist public are turning more than previously to speculative investments'. 'The rising cost of living, due to tariffs and … taxes … makes it impossible … for the smaller and middling capitalists who depend on the *yield* of their securities … to be satisfied with low returns from first class paper and … immediately forces them to acquire speculative securities.'[662] When he argues like this, Feiler forgets that both capital export and speculation are not local German phenomena of recent years, that on the contrary there is abundant factual evidence of both phenomena in Britain and then in France over the past hundred years, which shows that they characterise periods of inflation as much as periods of deflation, as much behind protective tariffs as under free trade, *that they assert themselves with great regularity in particular phases of the economic cycle*.[663] In fact, Feiler's claim that for small capitalists it is a matter of higher *yields* is in direct conflict with the facts. He himself concedes that share price increases driven by investors with a strong preference for dividend payments 'found *no support at all* in the latest dividends declared by industrial enterprises … It was clear that it was *not current returns* … that drove speculation'.[664] It was, then, a matter of *differential profits*! In Feiler's euphemisms this is expressed by writing that it was not indeed a matter of 'current returns' but of those 'hoped-for in the future'. 'Speculation already cast the present into the past and made a future that it dreamed of into a most rapidly discounted present.' So much poetry just to express a simple truth like differential profits! Speculators are not concerned with yields but with gains from differential profits, which is

661 Feiler 1914, p. 114.
662 Feiler 1914, p. 61.
663 Fritz Schmidt therefore correctly states that '[t]he business of speculation … largely depends on the location of the economy as a whole in the cycle' (Fritz Schmidt 1922, pp. 20–1).
664 Feiler 1914, pp. 61–2. [Grossman's emphasis.]

why they were strongly involved in the American stock markets as well and 'brought home great profits from there'.[665] The capitals that lie idle in a depression must still find profitable investment in slack periods. This explains the importance of speculation for capitalism. The revised securities law of 1908 was designed to revitalise the securities business[666] and yet, a few years later, Feiler complains about 'the widespread misunderstanding of the nature and significance of speculation in the economic cycle'.[667] He deplores that, because of the reform of securities law, 'the entire *composition* of speculation has changed: much more than before the securities law, *private speculation* predominates, while *trading outside official markets* has been decimated'.[668] Which only shows that he misunderstands the real role of stock market speculation.

With the advance of capital accumulation and growth in the mass of larger and smaller capitalists, it becomes *necessary to extend securities speculation* to broad layers of capitalists, because the mass of capital that lies idle and seeks investment in the crisis and depression grows ever greater. At the 1912 bankers' conference, [Paul] Schwabach, the chief of the Berlin bank *Bleichröder*, said of bank advances for the securities business that 'only through active participation of wider circles can the requisite capitals be employed. The banks alone would never have been capable of that'. The connection between banks and speculation, as it becomes visible here in the cycle's periods of upswing and depression, is also apparent in smaller fluctuations during each year: when banks deploy their funds in other ways the exchanges are quiet and only become lively again when resources deployed elsewhere are freed up.[669] Speculation is a means of replacing the insufficient valorisation in productive activity with profits made from the stock market losses of broad layers of smaller capitalists, with a 'weak hand',[670] and it is therefore a powerful means of concentrating money capital.

In this way, idle capital creates a series of outlets that can secure its valorisation, whether through stock market speculation or the export of capital.

---

665 Feiler 1914, p. 60.

666 Feiler 1914, p. 61.

667 Feiler 1914, p. 55.

668 Feiler 1914, p. 119.

669 'For it is a notorious fact that stock market speculators try all the harder to reduce their involvement the closer the end of a quarter approaches, that is in the days when scrutiny by the Reichsbank is closest, and that they are accustomed to resume lively activity after the new quarter has begun, that is in periods when disclosures to banks are commonly easiest' (Schwabach to the bankers' conference of 1912, cited in Feiler 1914, p. 91).

670 [A metaphor from card games: 'less able to succeed in competition'.]

That these efforts to invest overaccumulated capital are especially strong during periods of depression is well known and uncontested. That they are not *exclusively* confined to such periods is not an argument against the conception presented here. It depends on the specific situation of individual branches of production and individuals' foresight whether and to what extent they find timely, profitable application for their capitals, just as in industry itself the expansion and improvement of productive capacity takes place most strongly precisely in periods of depression, when the demand for commodities is at its lowest.

It is particularly instructive to look into this problem in *France*. If the conception presented here is correct then France, with population growth that slowed from the middle of the nineteenth century and has almost stagnated since the 1880s, should exhibit the limits to accumulation earlier and more intensely than countries with stronger growth of population.[671]

In fact, we see that in the 1850s and 1860s, when capital accumulation in French industry was at a relatively low level, there was still considerable scope for industrial development: 'interest rates were significantly higher than they are today … the application of capital was extraordinarily large compared with the country's available savings'.[672] The circumstance has to be taken into account that, so long as retail banking was still far from achieving dominance, 'despite the great need for capital, private coffers contained very substantial sums of money that remained without use from time to time'.[673] French deposit banking then took off. One of its tasks was to gather these unproductive capitals and make them 'useful'. What followed was the heyday of the second period of rapid growth, during the outwardly so brilliant reign of Napoleon III. Railway construction (in 1852, 3,685 kilometres; in 1870 17,440 kilometres), the laying of 41,000 kilometres of telegraph lines, the construction of waterways and harbour facilities, bridges, public and private building activity in cities (financed by mortgages from Crédit foncier, established in 1852) – all this devoured huge

671 During the first half of the nineteenth century, France's population grew at a relatively faster rate than it did later. It grew from 26.9 million, at the end of 1800, to 34.9 million, at the end of 1850, and was then almost equal to the population of Germany, which increased from 24.5 million to 35.4 million over the same period. In the decades that followed the absolute size of the two populations began to diverge in Germany's favour. In Germany, the population grew from 37.7 million to 64.9 million between 1860 and 1910; in France it rose from 35.7 million to just 39.1 million, during the same period. The average annual increase over the whole period 1800–1910 was 8.9 per thousand in Germany, as against 3.4 in France (Elster 1924, pp. 688–9).

672 Mehrens 1911, p. 19.

673 Mehrens 1911, pp. 74–5.

amounts of capital. The conclusion of the trade treaty with England in 1860 and the transition to free trade forced technologically backward French industry to rationalise operations, implement higher organic compositions of capital, if it was to hold its own against foreign competition.[674] This again required large sums of capital. Production experienced an extraordinary upsurge. From 1852 to 1864, the volume of discounted bills of exchange grew fivefold in Paris and by three times in the provinces. A well organised banking system assembled the country's splintered savings and placed them at the disposal of industry. The consequence was a huge expansion of French deposit banks which delivered ever larger masses of capital to industry. But soon France's fortunes turned. It is most interesting to study [Bernhard] Mehrens's account of the French monetary and banking systems. Without being in the least clear about the real relationships, on almost every page of his book he adduces facts that brilliantly confirm the conception presented here.

The symptoms of an oversupply of capital are already evident in the last years of the Second Empire. Foreign enterprises' shares and debentures were very extensively represented on the Paris stock exchange, and foreign securities were mainly purchased by payments in French commodities. Léon Say at the time estimated France's receipts from foreign securities in the last years of the Empire at a minimum of 600–700 million francs.[675] The [Franco-Prussian] War, with its, for its time, huge reparations of 5.3 billion francs in capital and interest payments to Germany, initially meant that the situation eased. The period was, furthermore, very favourable for the banks because of the government's large financial operations. This was 'the blossoming of the issue, stock market and arbitrage business, as a result of the billions of francs in borrowings for the payment of reparations'.[676] To some extent even foreign capital flowed into France, to participate in this business, e.g. through the Banque Franco-Hollandaise, founded in 1872. But these foreign promotions 'only played an insignificant and temporary role'. That bank already went under in 1877, because of its director's speculative investments. Once the great borrowing operations were completed, 'a renewed period of unsatisfied entrepreneurial passion and *extraordinary glut of money* occurred'.[677] The expanded capital lacked profitable avenues for investment. Bank of France data provide an idea of the money market's liquidity and the low levels of economic activity. Its cash holdings, which had already climbed back to 1,130 million francs in 1874, rose to 2,115 million francs in 1879,

674 Mehrens 1911, p. 60.
675 Mehrens 1911, p. 88.
676 Mehrens 1911, p. 161.
677 Mehrens 1911, p. 164. [Grossman's emphasis.]

despite the resumption of cash payments (on 1 January 1878) and, for a while, even equalled the notes in circulation. In 1879 the average note coverage was 96.1 per cent. The lack of suitable investment opportunities led to severe competition over *discountable bills of exchange*, which naturally pushed the discount rate down. Crédit Lyonnais discounted at 1.5–2.0 per cent. The Bank of France's official rate between 1871 and 1880 was,

> on average: 5.71 per cent; 5.11 per cent; 5.14 per cent; 4.31 per cent; 4.00 per cent; 3.38 per cent; 2.26 per cent; 2.21 per cent; 2.55 per cent; and 2.84 per cent. From 26 May 1876 until 14 October 1880 it did not once rise above 3 per cent. By contrast, it stood at 2 per cent for a whole one and a half years, from 5 April 1876 to 16 October 1878, and for a further five and a half months in 1879.

Thus discount rates only brought the banks very modest profits.[678] Obviously they could only pay still lower rates on the deposits they held. The rate paid by Société générale on deposits which could be withdrawn at any time and had been 3–4 per cent in 1870–72, was 2 per cent from July 1873, 1.5 per cent from May 1875, 1 per cent from June 1876, and down to 0.5 per cent between 15 September 1876 and November 1878.[679] 'It is natural that the banks looked around for more lucrative businesses.'[680] As, however, none were available and even 'irregular' banking activities (issues etc.) were almost completely lacking in 1874–78, they turned to – the stock exchange. Large sums were funnelled into the exchange and the repurchase business began to blossom. Investments in collateral loan and repurchase funds by the four most important banks grew much faster in the 1870s than those in bills of exchange and, in the case of Crédit Lyonnais, were also larger in absolute terms. [Bank investments in millions of francs are shown in the next table below.][681]

The big banks were accused of speculating almost entirely on their own account, in secret.[682] According to Edmond Théry's calculations, the face value of French paper on the Paris exchange rose from 25.6 million francs to 42.3 million francs between 1 January 1870 and 1 July 1880, that is by 16,662 million francs. The market value of this paper even rose from 21.6 million to 43.0 million francs.[683]

678 Mehrens 1911, p. 165.
679 Mehrens 1911, p. 164.
680 Mehrens 1911, p. 166.
681 Mehrens 1911, p. 161. [Grossman's transcription errors corrected.]
682 See the essay by Eugène Petit cited by Mehrens 1911, p. 167. [Petit 1877.]
683 Mehrens 1911, p. 166.

Bank	1872		1875		1878		1880	
	Bills	Collateral and repurchase loans	Bills	Collateral and repurchase loans	Bills	Collateral and repurchase loans	Bills	Collateral and repurchase loans
Comptoir d'escompte	55.9	14.9	82.6	2.3	119.1	27.3	136.0	39.1
Crédit industriel	57.1	7.8	80.1	10.9	89.6	16.3	77.2	18.4
Crédit Lyonnais	54.4	41.9	99.6	117.3	108.1	138.6	138.3	170.7
Société générale	65.0	8.0	96.4	49.2	127.4	44.0	107.7	85.0

Capital exports are another outlet for overaccumulated capital. Already in the years after the [Franco-Prussian] War, attempts were made to issue some international loans and 'loans were made to various foreign governments but soon the bankruptcy of the principal debtor states put an end to this business. The public was so horrified by its great losses in loans to Turkey, Egypt, Spain and Peru that for several years it wished to have nothing to do with new foreign issues'. But, already in 1875, the *Banque de l'Indochine* was established. Soon after the war the Société Générale founded the Société minière et industrielle de Russie (with concessions for tugboats on the Neva, sewer construction in Moscow, exploitation of several coal mines in the Donetz region). In *Belgium*, it set up the Banque belge pour le commerce et l'industrie and transferred the rights to exploit a number of mining concessions in *Lorraine* to this subsidiary. In 1875 it participated in a construction company in Brussels. It issued loans for the construction of *Turkish* railways. Together with other large Paris banks it participated in setting up the Banque hypothécaire d'Espagne in 1872; this involved granting a loan of 100 million francs to the Spanish government as the price for the concession. In Spain it also participated in lead and silver mines. The Société financière de *Roumanie* was another creation. Crédit Lyonnais also proceeded to export capital, if in a different form. It established numerous branches around the Mediterranean and in Algeria, which it 'designated for more lucrative investment of its liquid assets'.[684] This happened in Alexandria and Constantinople in 1875, in Madrid and Geneva 1876, and in St Petersburg and New York in 1878.

Business life in France itself was dominated by quiescence. No-one was clear about the causes. It was believed that 'domestic political struggles and the east-

684 Mehrens 1911, pp. 166, 169 and 169.

ern question were holding back an upswing in economic life', that the high tax on bills of exchange of 1871 was causing an insufficient supply of them.[685] In an 1876 essay in *L'Économiste français*, Paul Leroy-Beaulieu wanted to encourage French banks to more vigorously support industry as, in his view, there were no other channels for investing liquid capital.

> The quantity of good quality bills of exchange … is limited and *not sufficient at all to absorb even the greater part, let alone all of the operating funds of our credit institutions* … As with bills of exchange, the quantity of repurchase loans will remain limited. It would be regrettable if they were developed too far, as this would provoke excessive bank speculation … If the credit institutions do not intervene to incubate … emerging enterprises … *we do not know … what they will do with their capital.*[686]

It initially seemed that developments would, in fact, move in the direction Leroy-Beaulieu suggested. International influences revived the economy in the period from 1879 to 1881. But the upsurge was weak and of short duration, and rapidly led to a bout of wild speculation that ended in a crash. According to Crédit Lyonnais's report for 1881, its inventory of bills was 178 million francs, of repurchase and collateral loans 195 million francs.[687] Large sums were invested in land speculation and the establishment of hotels on the Riviera, which subsequently led to a crisis.[688]

As well as the 16 banks established between 1800 and 1872, another 10 emerged between 1874 and 1878, and a further 25 between 1879 and 1881. 'At the end of 1881, apart from the Bank of France, another 50 financial institutions were listed on the Paris stock exchange, with a total paid-up capital of 1.25 billion francs against half a billion at the end of 1878.'[689]

What could be done with these huge sums, for which there were no possibilities for productive investment in the country itself? There were no other outlets than speculation and capital export. In 1880/81 a series of flotations followed: the Panama Company, a company for railways in northern Spain, the

685 Mehrens 1911, pp. 164, 165.

686 Mehrens 1911, pp. 172–3 [quoting from Leroy-Beaulieu 1876, pp. 774–5. Translation modified to accord with the French original. Grossman's emphasis.]

687 Mehrens 1911, p. 184.

688 Mehrens 1911, p. 179.

689 Mehrens 1911, p. 188.

Banque Générale d'Egypte, Crédit Foncier Egyptien, Crédit Foncier Franco-Canadien,[690] two ironworks in Russia, a shipping company for the route between Canada and Brazil,[691] national banks in Haiti and Mexico, Compagnie des mines d'Aguilas in northern Spain, a company to finance Peru's guano etc.[692]

Above all, the new banks sought to seduce the public into speculation. Their boards were composed of well-known politicians, ex-Ministers, Senators of all parties. The profits of these companies 'derived almost exclusively from the business of flotation and the issue of shares, and playing the market. The greatest abuses occurred'.[693] A consequence of the economic standstill and excess liquidity was a rapid decline in the average rate of interest, which elicited a persistent upward movement in the price of securities. This attracted the attention of capital-owners to profits to be made on the stock exchange. A frenzy of speculation was aroused, securities were purchased not for their yield but for differential profits.[694] There was a huge rise in the price of securities. Suez Canal shares rose from 1,320 francs at the end of 1880 to 1,800 francs at the end of June 1881, 2,095 francs at the end of September and 3,450 francs at the end of December 1881! Speculation claimed ever greater resources, so that 10–15 per cent and sometimes 20 per cent and more was paid for repurchase loans, for the best paper, in 1881. For speculative paper the rates were even higher – up to 118! Under these circumstances 'several repurchase banks were established offering high rates of interest for short-term investments'.[695] But panic soon broke out and one of the worst crises in French economic history occurred. Painful restructuring followed, almost all speculative banks disappeared in the prolonged depression after the crash of 1882, up to the great Panama crash of 1888. The effect of these experiences was that 'the capitals, which soon again accumulated' turned overwhelmingly 'to fixed-interest and, wherever possible, government-backed paper'.[696] Economic life was stagnant. From 1881 to 1894 revenues from the tax on bills declined from 15.1 million to 13.2 million francs and then started to rise slowly. Only on the basis of the experiences of 1882 and after was it recognised that France was economically 'saturated' and attempts were then made to adapt to the new situation. Crédit

690 Mehrens 1911, p. 181.
691 Mehrens 1911, p. 182.
692 Mehrens 1911, p. 183.
693 Mehrens 1911, p. 190.
694 Mehrens 1911, p. 191.
695 Mehrens 1911, p. 192.
696 Mehrens 1911, p. 199.

Lyonnais took the lead; its President, Henri Germain, '[i]nsightfully recognised that the age of establishing large undertakings was over for France and that continued amassing of capital must lead to a fall in interest rates and hefty competition among banks …'[697] The opportunities for profitable application of foreign funds redeemable at any time – mainly bill discounting and repurchase business – are very limited for French banks.[698] Therefore the banks face '*great difficulties … in finding investment opportunities for the … monies entrusted … to them*', all the more so as the period of economic stagnation after 1882 persisted for a decade and a half, with a short break in 1890–91, and, next to the banks, other large enterprises like railway and insurance companies etc., sought short-term investments for their liquid funds. Rates on the Paris money market now fell so low that 'they yielded almost nothing to the banks; often available funds could scarcely be placed'.[699]

Thus 'a fierce hunt for discount investments' arose.[700]

Under these circumstances, a decisive turn to the export of capital occurrs. From now on, capital export is not merely occasional, as before, but is systematically fostered. It takes four main forms. 1) The most active is the discounting of trade and financial agreements, and granting short-term funds to foreign banks, for repurchase loans, collateral loans and money for monthly clearances.[701] 2) Setting up branches abroad, mainly by Crédit Lyonnais and the Comptoir national d'escompte, which spanned the whole world with their branch networks, established between 1871 and 1910.[702] 3) The establishment of subsidiaries and, as a variant of those, of joint ventures.

> The distribution of branches and subsidiaries makes it clear that for the banks this was a matter *mainly of creating outlets for the excess part of their capital* … [T]his … is already apparent in France's rather negligible trade relations with the countries concerned. The banks opened for business there to invest their resources at a profit.[703]

4) The final form consists of loan issues to foreign governments, municipalities and industries. To assess these, Crédit Lyonnais set up the *Bureau des*

---

697 Mehrens 1911, p. 211.
698 Mehrens 1911, p. 219.
699 Mehrens 1911, pp. 224–5.
700 Mehrens 1911, p. 225. [Grossman's emphasis.]
701 Mehrens 1911, p. 231.
702 Mehrens 1911, pp. 227–8.
703 Mehrens 1911, p. 230. [Grossman's emphasis.]

études financiers, 'with an extensive staff of trained specialists who collected and organised information relating to industry, banking, railways and public finance all over the world', to cater to the needs of the bank's management.[704]

French banks are accused of indifference to the needs of industry. Yet the same banks that are indifferent to domestic industry display great entrepreneurial passion abroad, where French capital participates in grandiose enterprises. The banks maintain, however, that 'there were seldom opportunities for the establishment of good [i.e. profit-making] enterprises in France'.[705] Here, in other words, the *limits to valorisation* are apparent.

To round out the picture, we must briefly mention the situation of the French market after the World War. Naturally, we have to ignore the periods of the War and inflation, because periods of monetary devaluation are governed by completely different laws; during them it is not a matter of *problems with valorising* the accumulated capital but of *preserving it*. This explains the flight of capital from the devalued currency either into physical assets which hold their value or abroad. So we can only follow the problem of valorisation from the moment when the franc was temporarily stabilised. The return of the gigantic sums of capital which had fled the country and France's balance of payments surplus caused *extraordinary liquidity* on the Paris money market. (Careful estimates put this total inflow at 35 billion francs, which is roughly equivalent to six billion gold francs.) Deposits with the four big deposit banks almost reached their pre-war level. 'In the French economy there were *no profitable investments to be found* for this enormous sum, once economic stagnation had reduced private demand for credit and freed up further capital.'[706] Customers for credit declined, bills of exchange were in short supply and the 'hunt for good commercial paper', familiar to us before the War, soon began. The private discount rate fell from 6 to 1.875 per cent within a few months. All this was followed by exceptional growth of the banks' involuntary *cash holdings* and balances. At the end of June 1927 these were around 38 per cent of sums standing to the credit of others in banks' books and deposits. After the trough of late June, the conjuncture revived and there was an expansion in the bill portfolio. At the end of 1927, the private discount rate fluctuated between 2.625 per cent and 2.75 per cent. But this recovery was largely thanks to the intervention of the Bank of France, which, in order to avoid or reduce credit inflation (overaccumulation) by allowing foreign currency repurchases, made it possible for the banks to discount *foreign* bills of exchange. The share of foreign items in the bill portfolio

---

704 Mehrens 1911, p. 233.

705 Mehrens 1911, p. 236.

706 *Frankfurter Zeitung* 1928a.

was estimated to be half the total growth in the second half of 1927. On the other hand, the expected rise in the market price of securities increased activity on the exchange and and triggered an 'increase in advances, namely repurchase loans'. In this state of affairs, it is not surprising that annual reports register a decline in income from regular business and that the *Frankfurter Zeitung*'s reporter comes to the conclusion that 'The abundance of capital in France and its balance of payments surplus, entirely of themselves, drive *capital investment abroad*' as the '*inevitable outlet*'. France is thus about to reconquer its pre-War status as a capital-exporting country. 'So long as that has not happened, the French banks too will *be unable to enjoy normal business conditions*.'

∴

The current economic situation in the *United States of America* provides a further illustration and confirmation of the conception presented here. Despite the optimism of several bourgeois writers who believe that the Americans have succeeded in solving the problem of crises and stabilising the economy,[707] there are enough signs to suggest that America is fast approaching a state of overaccumulation. We encounter here all the phenomena that we established were characteristic symptoms of overaccumulation in France. A report of June 1926 already notes that

> Since the War the capital formation process has advanced very rapidly. *This capital seeks investment outlets and due to its overabundance can only find them at falling rates of interest*. Naturally this has meant an increase in all … *real estate values*. They adapt to the low interest rates … and this has led to a *frenzy of speculation* in real estate.[708]

707 So Dr [Walter] Greiling (*Wirtschaftsdienst* 1926g, p. 1494) expresses the conviction that the American economic experiment has succeeded in adapting consumption to uninterrupted production, expanding to the limits of its capacity. 'The constant expectation of all European observers that production driven to ever higher levels by speculation will find no consumers, that the whole structure of overproduction erected on credit will break down in an enormous crisis, has been repeatedly disappointed'. These words are a typical example of that shallow optimism about business which has for the past 100 years always reassured that business is doing better than ever. The real situation in America is completely different from the one depicted by Dr Greiling. Dr [Paul] Silverberg, the leader of heavy industry, for example, warns of the danger that threatens Germany if, in the United States, 'there were sufficient signs of imminent saturation' (*Frankfurter Zeitung* 1928j).

708 *Wirtschaftsdienst* 1926a, p. 792.

The essential feature of the financial year 1927 is that industry and trade have both seen their production decline, their sales fall and their profits contract.[709] Reduced turnover and lower production release a part of the capital which flows into the banks in the form of deposits, savings accounts etc. The industrial profits for which there are no openings in industry and commerce flow there. At the end of 1927, the invested funds of the US Federal Reserve System's member banks were $1.7 billion more than a year earlier. While an increase of five per cent is considered normal, in 1927 it was eight per cent. 'By contrast with the reversals in industry and trade, there is an excess of available credit, cheap money.' The discount policy of the Federal Reserve Board is conditioned by this situation. Capital is not flowing to Europe because interest rates are higher there but because *rates in the United States are being eased so that there is an outflow of capital*! Thus one expert reports that 'There were two reasons why, in August 1927, the central bank reduced the discount rate from 4 per cent to 3.5 per cent: to stimulate the outflow of gold to capital poor Europe and simultaneously … to revive domestic business activity'.[710] Yet this discount policy failed. Despite the outflow of gold (amounting from 1 September to 31 December to the substantial sum of $209 million), US interest rates on the open market continued to remain low, so that gigantic sums could flow *into channels of stock market speculation* or at the very least into the overcapitalisation of numerous enterprises, because money could be procured so easily. The depressed state of industry is apparent in a multiplication of speculative loans for playing the market and share prices ramped up by speculation.[711] According to estimates of the US Department of Commerce, in 1927 new US capital investment abroad was $1.648 billion. True, according to the same source, investments worth $919 million came into the US from abroad,[712] however, it is hardly a question of capital flowing in this direction for purposes of real investment. The bulk of the money was for speculation on the New York stock exchange. The Institut für Konjunkturforschung stated that

> Bank returns show a sharp increase in loans for the purchase of securities; loans to trade and industry remained low until the middle of February

709 For the corresponding figures for railway goods-wagons, number of spindles in cotton mills, reduced usage of cotton, growing number of bankruptcies in the period from April 1927 to March 1928, see the report on the United States of America in the *Vierteljahrshefte zur Konjunkturforschung* 1928b, p. 49.

710 Halfeld 1928a.

711 Halfeld 1928b and 1928c.

712 Stein 1928.

> … Advances by member banks in New York to New York stock exchange brokers totalled $4.282 billion at the start of May, an increase of $1.36 billion [over 46 per cent] compared to the previous year. In contrast, the drawdown of loans for actual economic purposes by trade and industry remained low until the middle of February.

In addition, towards the end of March there was a 'vast outflow of capital abroad (including large-scale buying of foreign securities)'. To counteract speculation, the Federal Reserve banks decided on a discount policy which was the opposite of that pursued during the second half of 1927. All 12 Federal Reserve banks raised their discount rates from 3.5 per cent to 4.0 per cent. On 19 April 1928 the Federal Reserve Banks of Chicago and Boston increased their rates a second time to 4.5 per cent, a policy to which other banks adhered, in April and May. The discount rate thus returned to a level not seen by American money markets since the spring of 1924.[713] This discount policy appears to have failed to have any effect, when the speculative frenzy on the New York stock exchange during the last weeks of the first quarter of 1928 is considered.[714] In March, 85 million shares turned over. The previous peak was 62 million shares in December 1927. The Index Number Institute calculates the real return on *50 leading securities* was 2.8 per cent at the end of April, compared with an average of five per cent in 1926.[715] Despite all the Clearing House Association's measures against the extension of speculative credits, to take effect on 1 September 1928, a new flood of speculation unfolded on the New York stock exchange in the last two weeks of August, as the table of share turnovers, overnight rates and share prices [below] shows.

The withdrawal on 1 September of bank loans for purchases of securities which do not reach the established minimal size of $100,000 per loan, is estimated to have involved total loans of barely $75 million. A substantial reduction in the level of stock market speculation is still less to be expected when in New York credit for purchases of securities, which flows through channels other than those of member banks, is being obtained from abroad.[716] 'Buy' orders

713 *Vierteljahrshefte zur Konjunkturforschung* 1928b, pp. 51–2.

714 Halfeld 1928c.

715 *Vierteljahrshefte zur Konjunkturforschung* 1928b, p. 52.

716 *Neue Zürcher Zeitung* 1928. 'At the American Bankers Association convention in Philadelphia, Representative McFadden, who chairs the House of Representatives' Committee on Banking, directed a sharp attack on the policy of the American central bank. The Federal Reserve System bears serious responsibility, he said, for its handling of speculation in shares and real estate … *The scale of bank loans for purposes of speculation* is today [1 October 1928] greater than loans to agriculture, foreign trade and the automobile industry

	Week ending			
	01/09/27	18/08/28	24/08/28	31/08/28
Overnight rate (per cent)	3.50	6.10	7.20	7.40
Share turnover (,000)	10,844	13,120	16,628	20,454
Index of industrial shares (per cent)	119.7	134.6	141.6	146.1
Railway shares index (per cent)	132.2	134.5	138.1	139.8
Brokers' loans ($ million)	3,184	4,223	4,201	4,235

even come in from transatlantic steamers still on the high seas. The high speculative fever is just a measure of the lack of productive investment opportunities. In *Bankarchiv*, Dr Flemming therefore correctly writes of the USA that, 'If the forces of production grow further, *yields* will also rise. The granting of loans to foreign countries offers a possibility of eliminating *difficulties*, as income from production *cannot be accommodated on the domestic market*'.

It is not higher profits abroad but the lack of possibilities for investment at home that is the *ultimate cause of capital exports*. The seriousness of the crisis that confronts the United States can therefore be imagined. Sombart could already write about the previous crisis that,

> Here upward movements but also reversals are of an extravagance which in Europe already lies some time in the past. Indeed, it almost seems as if disequilibrium is increasing, that the swings of the pendulum are becoming greater. The maddest witches' sabbath that the capitalist era has ever experienced, took place in America during the years 1920 and 1921, compared with which the ups and downs of 1840s and 1850s in England and of the 1870s in Germany and Austria were child's play.[717]

The great crash that is coming already casts its shadow. On 8 December 1928, stock prices already plummeted sharply and there was panic selling on the New York Stock Exchange.[718] By forcing up the volume of exports an effort has

taken together.' (*Frankfurter Zeitung* 1928k) [Member banks refers to membership of the Federal Reserve System.]

717 Sombart 1927, 2, pp. 705–6.

718 *Frankfurter Zeitung* 1928e.

been made to avert the coming storm. The establishment of Copper Exporters Incorporated followed that of the Steel Export Association of America, as the common export organisation of both American concerns, namely, US Steel Corporation and Bethlehem Steel Corporation.[719] If these efforts are matched by analogous steps in Germany and England, the crisis will become even more acute.

iv The Result. Intensification of the International Struggle over Profitable Spheres for Investment. Transformations of the Relationship between Finance Capital and Industrial Capital

We can only assess the accuracy of Lenin's characterisation of monopoly capitalism on the basis of the theoretical insight previously attained. 'Typical of the old capitalism, when free competition held undivided sway, was the export of goods. Typical of the latest stage of capitalism, when monopolies rule, is the export of capital.'[720] Does this account correspond with the facts? We have shown that Holland already developed into a capital-exporting country by the end of the seventeenth century and that England's capital exports already assumed a larger scale at the end of the eighteenth and start of the nineteenth century, which is when Britain made the transition to free competition. And the same is true of France after 1860. And yet Lenin with his acute formulation is correct. There is a great difference between capital export under today's monopoly capitalism and that under early capitalism. Of course, the export of capital has been known since capitalism began. But it was not 'typical' of the capitalism of the eighteenth and early nineteenth centuries, when the accumulation of capital was at a low level. It was only a transient, periodic phenomenon, sooner or later interrupted and replaced by a new upswing. In addition, there is the circumstance that, from the standpoint of individual entrepreneurs there was still the possibility, under competitive capitalism, of accumulating capital, expanding their enterprises, because this could occur *at the expense of their competitors*. So individual entrepreneurs had greater freedom of movement in the investment of their capital in the domestic economy, without being compelled to export capital. Matters are different today. The most important capitalist countries (Britain, France, Belgium, Holland, Switzerland, USA) have already reached an advanced stage of capital accumulation at which the valorisation of the accumulated capital encounters greater and greater difficulties. Overaccumulation, plethora of capital, ceases to be a merely passing phenomenon and starts more and more to dominate the whole

719 *Frankfurter Zeitung* 1928b.
720 Lenin 1964b, p. 240. [Lenin emphasised 'goods' and 'capital'.]

of economic life, as we have seen in the case of France. 'France has an almost permanent excess of money.'[721] The overabundance of capital is, of course, punctuated by periods of upswing. But these phases of upswing are becoming shorter and shorter. The revival that started in Germany in 1910 already ended in 1912. Describing Germany in 1911 Feiler refers to the 'short windedness of the cyclical development'.[722] The cycle passed so quickly that he had to ask, melancholically, 'Now was that a boom or were we already in the cleansing process of a depression?'[723] The Institut für Konjunkturforschung has also repeatedly remarked on the shortening of the cycle during the period since the War. This is completely understandable in connection with the conception presented here. As rationalisation advanced after the War, capital accumulation took enormous strides forward. That a substantial part of the expanded investment took place with the help of capital borrowed from abroad does not change the economic fact that *c* grew enormously and that therefore the valorisation of this expanded capital became more difficult. The valorisation was, however, made more difficult for a second reason: because part of the surplus value now had to be transferred to America, in the form of interest payments. At the same time, at advanced stages of accumulation booms have become less intense. Feiler writes ironically about how liberally the term 'boom' is extended to them. Their character has completely changed. 'It is no longer expected that booms will bring increased prosperity to all aspects of the economic life … It is sufficient if industry by and large prospers, if the leading industries and enterprises exhibit increased prosperity and it is accepted that, in addition … an uninterrupted, quiet decline of weaker entities occurs.'[724] Under these circumstances, the excess of capital can only be overcome through capital exports. The export of capital is no longer an incidental feature but has become *typical* and *essential* for the advanced capitalist countries. All the more so, when under monopoly capitalism the path to accumulating capital at the expense of competitors is ruled out in advance: within branches of production dominated by monopolies, there are no competitors. Capital rapidly runs into the limits to valorisation,

721 Mehrens 1911, p. 230.

722 Feiler 1914, p. 99. How mistakenly Feiler identified the causes of this short-windedness is apparent in his worry about a *shortage of capital* in the future. Straining credit will not be able to overcome this shortage. 'The further we go, the closer we come to the limit that will be insurmountable, even with a new cyclical upturn; the closer we come, therefore, to the possibility that *one day the means to finance a new upturn will no longer be available*' (Feiler 1914, pp. 172–3). [Grossman's emphasis.]

723 Feiler 1914, p. 109.

724 Feiler 1914, pp. 106–7.

demonstrated above, and can only create a breathing space for itself either by selling its products to domestic and foreign customers at excessive prices or by way of capital export and the injection of additional surplus value from abroad.

We have seen how in France systematic and organised fostering of capital exports relieved economic life. *So the export of capital became a means to weaken the breakdown tendency, to prolong capitalism's life-span*. This effect of capital exports was observed without the true connections involved being grasped: bourgeois economics triumphantly cried out that Marx's theory of breakdown and crisis was false and refuted by actual developments. At most it was generously conceded that Marx's theory, when it first emerged, did correspond to the 'temporal circumstances' of the 1840s but that the ground fell away from under the theory's feet, once these circumstances changed.

> When Marx laid out his theory of crises … it could in fact be concluded that recessions, following upswings, would become progressively worse. It was always possible to extrapolate the series 1825–1836–1847 and come up with precisely the theory of catastrophe that Marx set out. Even the crisis of 1857 still matched this picture. We know from their correspondence how both Marx and Engels, in the collapse of the boom in 1857, … found confirmation for their theory of crises.[725]

But that was now in the past. According to Sombart, the last classic, catastrophic crisis that England experienced was that of 1857. Germany and Austria still experienced a crisis in 1873. After that time, 'there was a clear propensity in European economic life for antagonisms to be neutralised, moderated and disappear; a tendency which persisted until the World War. The War itself and what followed did *not* weaken or reverse that tendency.' 'What emerged in this way, out of capitalism left to itself, was the opposite of the prophesised intensification of crises; it was, in a word that has impressed itself upon the recent period, the stabilisation of cyclical fluctuations.'[726]

The facts prove that this description is a one-sided exaggeration. Bourgeois economists do not want so much to convince others as themselves that crises are things of the past. According to Sombart's assurances, in England severe crises disappeared after 1857 and in Europe after 1873. Yet we know that the French crash of 1882 was among 'the worst crises in French economic history'

725 Sombart 1927, 2, p. 702.
726 Sombart 1927, 2, p. 702. [Grossman's emphasis.]

and that it was the starting point of a depression, which burdened the country for over one and a half decades.[727] According to Sombart's assurances, in England

> the complete wildness of unbridled capitalism actually came to light for the last time in the 1840s … Already in the 1850s the obsession with expansion is weaker and therefore setbacks are also weaker. By contrast, in the 1870s and 1890s the pace is very moderate.[728]

The facts prove the opposite. About the crisis of 1880s Marx himself could state: 'The present crisis was the greatest England has passed through with regard to duration, extent and intensiveness', even if, on the other hand, he emphasises the changed character of the crisis, namely the absence of a financial panic on the London market.[729] The crisis of 1895 was even more serious and preceded by an intense wave of speculative company flotations, especially of South African gold shares. (At the start of September 1895, the market-value of mining shares was £151.7 million, as against a face-value of £34.3 million.)

> The real boom did not arrive until 1895 and there can be no question as to how it should be classified. Of all the gambling manias the City has ever known, this was *the rankest, the wildest, and the most disastrous*. More money was made and lost in it than in any half dozen previous booms and panics. It ruined 10 times as many people as the South Seas bubble, and no doubt it had an indirect share in precipitating the Boer War.[730]

The changed character of crises has been explained by the success of banks in regulating economic life.

> They can systematically withhold credit and stop capital issues when the drawdown is economically unsound. And, in this way, they can ensure

727 Mehrens 1911, p. 197.

728 Sombart 1927, 2, p. 703.

729 Marx 1992b, p. 31. To explain this phenomenon Marx adduces the fact that crises in different countries do not break out at the same time, hence cooperation with the Bank of France and the German Reichsbank could offset the strain on the London money market and the hard-pressed situation of the Bank of England. On the other hand, the recovery that occurred in the USA in early 1879 likewise 'reacted on England like a *deus ex machina*', i.e. moderated the crisis (Marx 1992b, p. 31).

730 Weber 1915, p. 270, quoting Lawson 1909. [Grossman's emphasis.]

> that the provision of capital proceeds rationally … They can thus inhibit stock market speculation and also contain excessive optimism in industry.

'More and more, our economic life is, in major areas of activity, *subordinated to centralised management* … So in leading sectors of large-scale industry fixing the price of manufactured goods is … more or less completely removed from speculation.'[731] While earlier economic losses were often only revealed during the downturn itself and accumulated losses then had a severely depressing effect, 'now it is easier *to tackle them purposefully and voluntarily*, to remedy them and hence remove the danger of contagion'. Now 'much of the rot is dealt with quietly' and, consequently, the public is not disturbed.[732] Thus the changed character of crises is traced back to increased planning and conscious regulation of the economy! Phenomena that are the result of a quite different set of causes are credited as earnings to another account. Diversity in the character of crises must naturally differ according to the level of capital accumulation in different countries, so capital accumulation within the sphere of production must be strictly distinguished from the accumulation of securities. The presence of *two groups of people* is essential for stock exchange speculation: '*members of the stock exchange*', i.e. initiates who are better informed and instantly convert their 'information' into trades; and the great mass of *outsiders*, the 'public', who need more time before their orders are executed on the market. There cannot be speculation among members of the exchange, 'because its individual members are roughly equally cautious and well informed, and their prospects for gains and losses from price differences would therefore be equally distributed, so that on average no profit could be made … indeed losses must result', due to turnover tax. But it is in the nature of speculation, as [Fritz] Schmidt writes, that '*one* of the parties is unavoidably devoured', 'so the counterparty, who makes the sacrifices, must be the public of outsiders'.[733] It follows from this that the greatest orgies of speculation can be celebrated when, with the transition from individual forms of property to its social form as shares, assets accumulated over many decades are thrown onto the market and fall victim to the stock exchange. These are the periods of company flotations which are associated with the enormous restructuring of *assets* and their concentration in a few hands. Hence the wildness of speculation during these periods. However, to the extent that this process of concentration of share capital in

731 Feiler 1914, pp. 168–9. [Feiler also emphasised 'economic life'.]
732 Feiler 1914, p. 170.
733 Fritz Schmidt 1922, pp. 96, 97. [Grossman's emphasis.]

the hands of a small number of powerful industrial and financial magnates has already reached an advanced stage, with the progress of accumulation and through the mediation of the stock market, the exchange can only pick up the residual shares that lie in the hands of the broad public. But it is essentially restricted to the mass of shares which is purchased anew every year *from the incomes* of wide circles of small rentiers, workers, higher public servants etc. Under these circumstances, speculation loses colour and is debilitated, not, however, due to the 'purposeful and voluntary intervention' by centralised bank management, as is asserted, but because there is not enough material for the 'digestive system' [of the capital market], to use Helfferich's pretty expression. When the concentration of shares is very advanced, stock market speculation with its tendency to draw ever greater masses of the public into the game must lose impetus, as a consequence of the advanced exhaustion of these broad masses of the middle class. Idle money capital, however, surges all the more into the other outlet, into capital export, as the sole remaining major possibility for investment. For this reason, struggles on the world market for spheres for investment certainly become more and more fierce. The character of crises in England has, however, temporarily changed for a second reason. If an isolated capitalism is considered initially, the result, as our analysis has shown, is that the most severe and wildest crises, with a propensity for boundless speculation, must occur at the most advanced stages of capital accumulation, that their course at the early stages of accumulation must be, relatively, the most peaceful. During the first 50 years after 1825, when England's relations with the world economy were in their early days, compared to later periods, and England could thus, to a certain extent, be regarded as an 'isolated capitalism', the youthful crises of this early period of accumulation were already enough to precipitate wild panics and breakdowns. Their character then changed the more England succeeded in extending its relations with the world economy, developing foreign trade and finding an outlet for overaccumulated capital by means of capital exports. But, with the advance of capital accumulation, there is a growing number of countries in which the absolute limit of accumulation is approached. If Britain and France were initially the world's creditors, there is now the formidable capital power of the USA, along with a series of smaller providers of capital like Belgium, Switzerland, Holland and Sweden. Germany's imports of capital are merely a temporary phenomenon, until its own capital formation fills the gaps caused by the War and Inflation. Given the technological perfection of its productive apparatus, the high productivity of labour and simultaneously very low wage rates, the rate of surplus value is very high in Germany and therefore the tempo of accumulation is accelerated, so that Germany will pay off its foreign debts sooner than is often assumed and will emerge onto the world market as an exporter of capital.[734] To the extent that the number of capital-exporting countries and the mass of their capitals grow larger, however, their competition on the world market, the *struggle for profitable investment outlets, must increase in intensity*. That this fact must react back on the domestic crisis process, intensifying it, is clear. If the youthful crises of the early period of capital accumulation could lead to wild outbreaks, the form crises take under the mounting pressure of capital accumulation, when the capital-exporting countries are forced to wage ever sharper struggles over spheres for investment on the world market, can be imagined.

On Europe's horizon, Harms therefore sees a cloud, 'that is already clearly visible' and has formed because 'the United States unmistakably finds itself in a dilemma'. Obviously Harms senses that the US is already approaching the absolute limits to accumulation and that further capital investments there have to struggle with growing difficulties. For this is the only sense in which he can be understood when he writes, 'The capital that will flow as enormous debt servicing payments to America in the coming decades *will have to be invested abroad again in some form*'. The industrial expansion of the economically new countries will mainly occur in this way, with American capital. But a consequence of this industrialisation is that European countries' exports to those markets will have to undergo a complete transformation. Instead of consumer goods, in future it will only be possible to export means of production. The development of American industry is driving the United States in the same direction. 'It

734 The available statistics about foreign and domestic loans, share issues or capital raisings only provide a deficient overview of the extent of capital formation, as a considerable component of capital formation, so-called 'invisible capital formation' or self-financing, is not reflected in them. This is the part of profits which is immediately employed again in the original enterprises, without detouring through a financial institution. According to a calculation published in the *Berliner Börsen-Courier* (1927), the total savings in financial institutions, savings banks, employee savings banks, cooperative banks, life insurance companies, consumer societies, etc. at the end of 1927 was 10.5 billion marks or an increase of around 3.5 billion compared to the previous year. Hans Harney likewise quoted a figure of 3.5 billion marks, adjusted for inflation, at the seventh bankers' convention in Cologne (*Frankfurter Zeitung* 1928c). On the other hand, according to the Reichs-Kredit-Gesellschaft capital formation at end 1927 was 7.5 billion marks and, according to the figures provided by the *Frankfurter Zeitung* (1927c) in its annual survey of 1927, it was even nine billion. By comparison it may be worth mentioning that, according to Helfferich, capital formation in 1913, in the then German Empire, was 8.5 billion, but this included one billion of interest income from capital exports, while the opposite was the case in 1927, with interest still being paid [on American loans] under the Dawes Plan (FP 1928). [The information comes from a speech by Leopold Merzbach.]

has to be taken into account that the time is not distant when the United States will emerge as a supplier of means of production on the grandest scale. The well known enquiries of the Balfour Report and the proceedings of the last Imperial Conference have provided instructive evidence for this assumption.'[735] Should the US really start exporting means of production, 'this must eventually lead to a situation in which the European debtor states will *not be in a position to sustain their interest payments and capital repayments to the United States at all*' and Europe will not be able to pay for imports of raw materials and foodstuffs from overseas. In other words, Harms foresees the approach of one of the most frightful crises, indeed of the bankruptcy of European capitalism,[736] but consoles himself with the hope that the US will voluntarily desist from the export of capital goods so as not to shatter the solvency of her European debtors. What this assumption is based on, Harms does not say.

So it is also clear that the struggle over spheres for investment is the greatest source of threats to world peace. That this is not some prognosis about the future should be clear to anyone who studies the methods of 'dollar diplomacy' with the attention it deserves. Even though bourgeois economics is still wedded to the illusion that economic life can be regulated on the basis of capitalism and still shuts its eyes to the burning problems of the world economy, the further advance of capital accumulation will force them to ask: what next?!

∴

Only now is it possible for us to form a satisfactory idea of the relationship of bank capital to industrial capital, which Hilferding calls 'finance capital'.[737] It is well known that Hilferding regards the dominant role of finance capital in contrast with industry as characteristic of the latest development of capitalism and that, to the extent that concentration in banking proceeds, 'the banks acquire an increasing control over the capital invested in industry'.[738] With the develop-

735 Harms 1929, p. 8.

736 Harms 1929, p. 8. [Grossman's emphasis.] Only Hilferding is averse to seeing this 'already clearly visible cloud' and assured the Conference of the Verein für Sozialpolitik in Vienna, in 1926, that what was now unfolding was not the decline of western capitalism but the 'preliminary stage in its reconstruction' (Hilferding 1926, p. 115). [Hilferding was playing on the title of the fascist Oswald Spengler's famous and apocalyptic book, *The Decline of the West* (1927).]

737 'I call bank capital, that is, capital in money form which is actually transformed in this way into industrial capital, finance capital' (Hilferding 1981, p. 225).

738 Hilferding 1981, p. 224.

ment of capitalism there is constant growth in the amount of money which the non-productive classes place at the disposal of the banks and, through them, at the disposal of industry. The control of these funds, which are indispensable to industry, rests with the banks. With the development of capitalism and its organisation of credit, the dependence of industry on the banks increases. The dependence of industry on the banks is thus the consequence of property relationships. An ever-increasing part of the capital in industry is finance capital, i.e. it does not belong to the industrialists who use it. They are able to command capital only through the banks, which represent its owners. The power of the banks grows with the increasing concentration of money capital and bank capital. '[T]hey become founders and eventually rulers of industry.'[739] With the development of banking, the tendency to increasingly eliminate competition amongst the banks grows. 'If this trend were to continue, it would finally result in a single bank or a group of banks establishing control over the entire money capital. Such a "*central bank*" would then exercise control over social production as a whole.'[740]

Hilferding needs this construct of a 'central bank' if his painless, peaceful road to socialism, to his 'regulated' economy, is to succeed. 'The socializing function of finance capital *facilitates* the task of overcoming capitalism. Once finance capital has brought the most important branches of production under its control, it is enough for society, through its conscious executive organ – the state conquered by the working class – to seize finance capital in order to gain immediate control of these branches of production.' 'Even today, taking possession of six large Berlin banks would mean taking possession of the most important spheres of large-scale industry.'[741]

Hilferding's exposition here contradicts capitalism's real developmental tendencies. It is also incompatible with the fundamental ideas of Marx's theory. For, if Hilferding's argument about the domination of industry by the banks were true, then Marx's theory of the crucial significance of production for the structure of capitalism would be shattered. For, according to Hilferding, this crucial significance would then have to be attributed not to the production process, to industry, but to finance capital, thus to the configurations of the sphere of circulation!

That the preponderance of the banks, which Hilferding describes, is valid for a certain epoch in capitalism's development need not be contested. But it

739 Hilferding 1981, p. 226.
740 Hilferding 1981, p. 180. [Grossman's emphasis.]
741 Hilferding 1981, pp. 367, 368. [Grossman's emphasis.]

corresponds precisely only to a certain phase of capitalist development and is in no way characteristic of the 'historical tendency' of capital, as Hilferding maintains.[742]

From the law of capital accumulation developed here, it follows directly that in the course of history changes in the reciprocal relations between bank and industrial capital necessarily occur. In this context, three distinct phases must be distinguished. At low levels of capital accumulation, when the possibilities for industrial development are almost unlimited, industry's own capital formation is insufficient. Industry therefore relies on the flow of credit from the outside, i.e. from non-industrial strata. The extension of the credit system centralises small, fragmented amounts of capital; banks as intermediators and granters of credit acquire enormous power as against industry, which is still young, starting to blossom and in need of capital. We saw earlier that this was the state of affairs in France in the 1850s and 1860s and that demand for capital was therefore extraordinarily large in comparison with 'disposable savings'. In Germany, this phase also characterised the last two decades before the World War, during which constant complaints about the inadequacy of capital formation could be heard. In an essay, Mombert tries to uncover the causes of this state of affairs. Among other things, he refers to growing unproductive payments by the central state, for military purposes, to the states of the federation and to cities. 'As this does not involve reproductive consumption, the income applied in this way is lost to capital formation.'[743] Another cause of insufficient capital formation, despite the very high level of incomes lies in the excessive prices paid of imported raw materials, in relation to which Germany 'does not enjoy sufficient offsetting advantages'. This is the period of 'finance capital' that Hilferding has in mind. It is, however, only peculiar to the epoch of a capitalism that is just starting to bloom, and Marx even refers to 'the modern bankocracy' as typical of this period.[744] But, with the further advance of capital accumulation, the relationship between the banks and industry changes and we have shown how in France the shortage of capital gave way to a permanent excess of money. In this way industry became self-sufficient. In each country and each branch of a country's industry, relations differ, according to the degree of their economic development. As far as large-scale industry goes, in 1905 [Emil] Kirdorf already said of Germany, 'Never has the power of the banks over us been *as weak* as it is today'.[745] [Jakob] Riesser could likewise in 1905 already state

742 Hilferding 1981, p. 227.
743 Mombert 1916, pp. 389–90.
744 Marx 1976b, p. 919.
745 Weber 1915, p. 81. [Grossman's emphasis.]

that the chemical industry, strengthened by enormous concentration, 'was at its most independent from bank credit'.[746] The independence of these industries from banks could not be expressed in the banks' balance sheets, as it was still offset by the dependence of other, less advanced industries. A decade later, Adolf Weber wrote that, 'By and large, the frequently expressed fear that industry, including large-scale industry, is managed according to the wishes of bank directors is not correct. On the contrary, concentration and the formation of industry associations have made industry far more independent of the banks than was previously the case.'[747]

At more advanced levels of accumulation, industry becomes independent of infusions of capital from outside to an increasing extent, because it makes the transition to 'self-financing', i.e. provision from its own resources, which it makes sure to raise through depreciation and reserves. Thus Feiler cites the example of Bochumer Verein, an enterprise which has never ranked among the industrial giants and which, with a share capital of 30 million marks, in the space of nine years paid out dividends equal to the entire face value of its share capital and at the same time spent over 40 million on new investments![748]

Nachimson (Spectator) has established that over the period from 1907/08 to 1913/14, the share capital of German joint stock banks declined from 29 per cent of the total capital of all joint stock companies to 26.8 per cent. In the same period their foreign holdings declined from 90 per cent of the total liabilities of all joint stock companies to almost half. He concludes, 'In any case, these figures indicate that the role of the banks has declined'.[749] Nachimson does share Hilferding's conception of the domination of industry by the banks. But he writes, 'However, it must be stated that, compared with the start of the twentieth century, *a process* of industry *becoming independent* of the banks has become evident'. 'While the banks rely on external capital flows, that is basically from industry, industrial concerns' *own capital* has been rising more and more, which creates a self-sufficient position for them.' 'Industrial magnates are more and more conducting themselves self-reliantly and setting the tone even against the banks. Industrialists like [Fritz] Thyssen, [Carl Friedrich] Siemens, [Walther] Rathenau, [Hugo] Stinnes … do not come from banking circles but from industrial circles and to a larger extent dominate the banks, just as the banks once dominated them.'[750]

746 Riesser 1905, pp. 253–4.
747 Weber 1915, p. 343.
748 Feiler 1914, p. 112.
749 Nachimson 1922, p. 85.
750 Nachimson 1922, p. 87. [Grossman's emphasis. Editor's interpolations.]

[Wilhelm] Prion states that, as far as large enterprises, like I.G. Farben are concerned, there has been a complete change in their relationship with bank credit.

> Today's great trust can no longer take its chances with the greater or lesser contingencies of bank credit or even the good will of bankers. Financial security requires it to stand on its own feet. This is the purpose of a long-term financial plan: the Farben trust estimates all the expansions and extensions that will be necessary in coming years and then decides how much capital will be needed. So too with the Stahlverein. The necessary capital is generated in advance, in instalments through the issue of shares and bonds, and the capital sums are deposited into bank accounts, until they are needed.[751]

Finally, in the third phase of capital accumulation, industry encounters ever greater difficulties in investing even its own returns profitably in the original enterprises. They use their profits to draw other industries into their spheres of influence. For example, about the top executives of the Standard Oil Company Liefmann states, 'they have devoted part of the profits from the petroleum business to the acquisition of extensive holdings in other industries'. To the extent that the overaccumulated capital of an industry is not invested in this way in other industries with lower levels of accumulation, it is deployed 'to play a decisive role on the New York money market'.[752] As a matter of fact, in Britain and France and even less so in the USA, it is not a question of industry being dependent on the banks. On the contrary, in the US it is rather industry that dominates the banks. Industry holds large sums in the banks or even establishes its own financial institutions whose purpose is and increasingly will be to find profitable investments for their money. In the USA, the Ministry of Commerce functions as the official advisory board for capital investment abroad. Nothing is more characteristic of the current situation in the United States than the appearance of books such as Henry S. Sturgis's *Investment: A New Profession*[753] and nothing is more common than the various kinds of 'investment trust'. In Germany enterprises, like AEG, are not only independent of the banks but 'constantly have an unusually secure position as against financial circles on

751 Prion in 1929, p. 342. [The Vereinigte Stahlwerke conglomerate was colloquially known as the Stahlverein.]

752 Liefmann 1922, p. 160. [These passages, not in the English edition, Liefmann 2001, are therefore translated from Liefmann 1922.]

753 Sturgis 1924.

the basis of their large bank accounts'. In a chapter on 'international trends' in industrial financing in the lastest period, Vogelstein also states that the typical balance sheet of large-scale industry today presents a completely different picture from the past. The tendency is for the share of equity capital to increase and for bank debt to decline or even for large bank deposits to be owned. Vogelstein also sees in this a reason for the banks' *increasing* recourse to the stock market for the investment of their funds. 'The more industry finances itself with equity and long-term debt', the more the banks 'substitute credit to industrial companies with repurchase and collateral loans'.[754]

The historical tendency of capital is not in the direction of a 'central bank' that controls it through the general cartel and dominates 'regulated' economic life, but a tendency that leads, through industrial concentration and advancing accumulation, to the final breakdown as a consequence of overaccumulation.

754 Vogelstein 1923, p. 396.

Concluding Observations

1 The Breakdown Tendency and the Class Struggle (Marx's Theory of Wages. The Factors That Determine Wages. The Historical Tendency of Wage Levels. The Class Struggle and the Final Goal)

There is nothing more depressing and unsatisfying than the present state of concepts and criticism in the area of Marx's theory of wages, whether in bourgeois economics or the Marxist literature itself.

Although wage theory does not appear to be one of the strongest aspects of bourgeois economics,[1] it is precisely here that we encounter an astonishingly arrogant attitude to Marx's theory of wages, an arrogance that in most cases is in inverse proportion to the critics' understanding of Marx. There is scarcely a conceivable distortion that has not been proffered in attempts to 'critically overcome' Marx's theory. Thus that luminary of European science, the Stockholm Professor Gustav Cassel argues that socialism does not try to *explain* facts (the level of wages) but judges them on moral grounds and advances mere *postulates* in relation to the level of wages. In particular, the programme of socialists consists of realising the 'right to the full product of … labour'![2]

> Socialism condemns the whole present wage system as immoral, because it treats workers as a commodity on the market … In contradistinction to this regulation of wages according to the state of the market, socialism demands [!] for the worker an income fixed on objective ethical grounds. The principles whereby this income from work is to be determined are,

1 According to Schumpeter's devastating assessment of the present state of bourgeois wage theory, 'This field belongs to those deadlocks of the social sciences where the entire progress seems to stagnate … And almost every author emphasises this in order to then still present essentially the same again, if he does not prefer to ignore the *theory* altogether and to turn [to] *socio-political* discussions' (Schumpeter 2010, p. 236). [Grossman's emphasis. Editor's interpolation.]

2 Cassel 1967, p. 301; similarly, Schmoller 1914, p. 11; and Schmoller 1918, p. 281; also Adolf Weber 1921, p. 374. In Ottmar Spann's exposition (Spann 1918, p. 120), Marx's theory of wages posits that the existence of an industrial reserve army 'brings about a *steadily increasing impoverishment of the masses* in the course of economic development. To the accumulation of capital corresponds an accumulation of poverty'. Yves Guyot also claims that socialists defend 'la … loi d'airain des salaires, inventée par Lassalle *et conservée … par les marxistes*, en dépit de l'évidence des faits'. ['The … iron law of wages, invented by *Lassalle and … retained by the Marxists*, despite the evidence of the facts'. Guyot only emphasised 'iron law of wages'.] Guyot 1927, p. 12.

 | doi:10 1163/9789004449978 007

> for the most part, very vague and uncertain … It is directly opposed to the fundamental tenets of socialists that any considerations whatever of the supply of, and demand for, labour of a particular kind should bear any weight in the determination of wages.[3]

Otherwise, however, Marx's theory of wages is also portrayed as a *theory of impoverishment*, grounded in classical political economy's iron law of wages. This theory does allow for a worsening in the condition of the working class but rules out the possibility that wages may improve, because, as Julius Wolf assures us, according to Marx's theory of wages,

> the worker does not receive anything more than what is absolutely essential for physical survival … As workers are confronted by the threat of starvation … they are always willing to work for a pittance, which does still ward off starvation. This is the iron law of wages, derived *by Marx* in his own way but *no differently from earlier formulations of the iron law of wages in its result*.[4]

At the same time, Schulze-Gaevernitz remarked that for radical socialism 'the proposition that the workers can never experience upward mobility of any sort but are *irretrievably tied to a subsistence standard of living at* is indispensable'.[5] Radical socialism relies on the fundamental conception 'that the development of a modern economy binds workers to the level of subsistence and that a *progressive improvement in their situation*, in particular wage increases, is impossible'.[6] Schulze-Gaevernitz sets out to demonstrate the untenability of that theory of social pessimism, 'which supposes that modern economic development leads to social breakdown or to an impasse that can only be resolved with powder and lead'.[7]

We have already shown that other theorists defend the same position, e.g. Simkhovitch, Sombart, Masaryk, Oppenheimer,[8] and therefore declare that Marx's theory of wages is incompatible with the facts and thus false, by invoking the actual *improvements* in the condition of the European working class that emerged from the middle of the nineteenth century.

---

3 Cassel 1967, p. 302.
4 Wolf 1892, pp. 125, 131.
5 Schulze-Gaevernitz 1892, p. 13. [Grossman's emphasis.]
6 Schulze-Gaevernitz 1892, p. 16. [Grossman's emphasis.]
7 Schulze-Gaevernitz 1892, p. 23.
8 See above, pp. 68, 72, 75, 166.

Karl Diehl is only an apparent exception to all this. Admittedly, he concedes that Marx's wage theory does allow for wage increases. But, he argues, such increases are purely temporary, a deviation of the price of labour power from its value or its centre of gravity, resulting from momentary market situations. This centre of gravity, value, around which those oscillations occur, is for Diehl the 'physical minimum'. So if Marx, 'despite his theory of the value of labour power, can reject the iron law of wages', Diehl claims, this is only true of transitory price increases.[9] In the long-term, according to Marx's system, it is merely the value that corresponds to the minimum living standard that prevails and Marx's system rules out any long-term improvement in the position of workers.

Yet even within the Marxist literature the views about the content and concepts of Marx's law of wages are among the most depressing chapters penned by his epigones. The lofty, self-contained structure of Marx's thought has, to use an expression of Luxemburg's, been reduced to a dust-heap in which the fragments of all systems, splinters of thought from great and small minds have found their collective tomb. This is true of all Marxist exponents of the law of wages: Kautsky as much as Bernstein, Hilferding as well as Eckstein, Boudin as well as Charasoff, not excluding Luxemburg herself!

It would take us too far to present an exhaustive critique of these ideas. A few examples should suffice to characterise the level and present state of the theory of wages found in the Marxist literature.

Thus Conrad Schmidt claims in his dissertation, *The Natural Wage*, that by developing the concept of surplus value Marx 'condemned' the latter as 'unjust exploitation of labour power, and the logically necessary conclusion is that the *wage which conforms with nature*, in Marx's sense, has to equal the unabridged product of his labour. The characteristic of this theory of wages is that it denies any *justification* for profit on capital'![10] Even more astonishing are Bernstein's ideas. He flatly denies the possibility of a wage theory.

> The mass of consumer goods produced every year is constantly on the rise; *there is no economic law of nature* that prescribes how much of this should accrue to the social strata that provide goods and services and how much as tribute to the propertied. The distribution of social wealth has *at all times been a question of power and organisation* … The wage problem is a sociological problem that can never be explained in purely economic terms.[11]

9 Diehl 1898, p. 35.
10 Conrad Schmidt 1887, p. 43.
11 Bernstein 1904, pp. 71, 75.

We saw above that, in contrast to those writers who have viewed Marx's theory of wages as a theory of impoverishment, Kautsky emphasised an *upward tendency* as the characteristic feature of Marx's theory.[12] The mass of *physical poverty* grows only on the economic and geographical 'margins' of capitalist industry, in those branches of industry and countries that have been *newly conquered* for capitalism, not, however, in branches of business and countries where the capitalist mode of production is highly developed. With the development of the productive forces there is *growth* 'in the mass of products that accrue to workers' and it is only the relative share of the workers in the social product that declines. Therefore we can only really talk about the growth of 'social impoverishment'.[13] With these explanations Kautsky only expressed the fact of *rising* real wages. But how is this fact to be combined with Marx's theory of value and wages and how is it to be derived from Marx's law of wages? It would be in vain to look for even one word of theoretical analysis about this in Kautsky. He confines himself to pointing out that in advanced capitalist countries 'resistance to physical impoverishment, by way of a *strengthening of the proletariat*, has gradually won the upper hand over tendencies that push standards down'.[14]

This whole exposition is basically an abandonment of Marx's theory of wages. For, in it, the value of labour power plays no role in shaping real wages. On the contrary, the idea underlying it is that wage levels depend exclusively on the strength of factors connected with competition and on the power they have in shaping supply and demand. So long as working-class organisations have still not been built, the tendency to impoverishment prevails. Later, as the proletariat gains strength, the rising tendency gains the upper hand. We have already suggested that this account conflicts with the actual history of wages. For Kautsky himself was forced to state that, in all capitalist countries before the World War, these 'upward tendencies' came to a standstill, even in periods of prosperity and despite the growing power and organisation of the proletariat; that the period of rising real wages everywhere came to an end; that, to some extent, there was even a distinct worsening in the working class's conditions of life, as well as complete stagnation in the area of the protection of labour and other social reforms.[15] Kautsky understood the bare facts, but he was baffled by them and incapable of incorporating them into Marx's theory of wages or of demonstrating the deeper causes that govern these changes in the configuration of wages.

12 See above, p. 64.
13 Kautsky 1899b, p. 128. [Kautsky emphasised 'mass'.]
14 Kautsky 1899b, p. 127. [Grossman's emphasis.]
15 See above, pp. 65 and 105.

Even more confused is Luxemburg's exposition of Marx's theory of wages. Overall, it is an unbelievable, barbaric mutilation of the most essential elements of Marx's theory. Luxemburg's argument contains no room for Marx's theory of value, his law of wages or the theory of labour power's reproduction; indeed, they are not even mentioned once.[16]

The level of wages is not determined by the law of value, by the value of labour power, that is an exact, fixed magnitude, but depends on the 'relation of supply and demand, that is, the labour power available to the amount of capital seeking involvement in production' and is thus an elastic, extensible magnitude. So the lower limit of the level of wages is constituted by the physiological minimum required for bare subsistence, the upper limit by the 'particular *rate of profit*' on which, 'as a *given*, the hiring of workers depends'![17]

So many words, so many errors! Marx allows the magnitude of the commodity labour power's value to be determined by competition, by supply and demand! As if Marx did not combat and deride this view a thousand times.[18] The wage is supposed to be an elastic, extensible quantity, whereas according to Marx the value of labour power does vary according to the 'level of civilization attained by a country', but 'in a given country at a given period, the average amount of the means of subsistence necessary for the worker is a known *datum*',[19] hence it has not an elastic but a *fixed magnitude*. The determination of the wage level supposedly 'depends' on a particular rate of profit, as 'a given'! How then is the level of the rate of profit determined? Is that not precisely why Marx raises the objection against Adam Smith that for him a particular rate of profit is 'assumed … as given' and so 'expresses the thoughts of the agent[s] of capitalist production and presents things … as they appear to' them?[20] Had Marx not taught that in determining the *magnitude* of the individual categories of revenue (wages, profit, rent) into which a given mass of value is divided, '[i]n this delimitation wages form the basis',[21] 'the *prius*, the determinant factor

16 Luxemburg 2008b.

17 [Luxemburg 1900, p. 742 is the source of Luxemburg's words. Grossman's emphasis. Grossman mistakenly cited and paraphrased Luxemburg 2008b] 'The concept of "necessary means of subsistence" is very variable and flexible' (Luxemburg 2013, p. 274).

18 Marx 1981, pp. 1003–4. Clearly that still does not prevent Oppenheimer from writing, in the latest edition of his *Theory of Pure and Political Economy*, that 'Marx too … allows wages to be determined *solely by supply and demand* on the capital market relative to the labour market' (Oppenheimer 1964b, p. 1084). [Grossman's emphasis.]

19 Marx 1976b, p. 275.

20 Marx 1989b, p. 442. [Marx emphasised 'assumed … as given'. Editor's interpolation.]

21 Marx 1981, p. 998.

is the movement of wages'; that profit encompasses the residue which 'remains after the working class has received its share of its own annual production'?[22]

The treatment of Marx's theory of wages is not significantly different in Luxemburg's last, posthumous book. True, the concept of the 'value of labour power' is introduced, but no function for the determination of wages is assigned to it within the capitalist mechanism. '[W]ith the flexibility of the concept "necessary means of subsistence," a similar struggle develops over the level of wages as it does over the length of the working day.' It follows that two tendencies come into play in the determination of wages: the tendency of the capitalists 'to reduce the means of subsistence to the physiological minimum, the *animal minimum*, i.e. to regularly pay for labour power *below* its value'. This tendency prevailed under early capitalism. Once workers emerge 'as a social class, i.e. as a whole, as organisation', the tendency of workers to defend the living standards they are used to emerges in opposition to the first tendency. 'Only with the rise of *trade unions* and a workers' party does the worker begin to sell his labour power at its value, i.e. to insist on maintaining his life as a social and cultural necessity.' Since union action rests upon an intellectual, political and cultural awakening, the economic needs of workers increase (!), and therefore the *value* of labour power and consequently real wages also rise![23]

We see that, according to Luxemburg, wage determination depends solely on the power and organisation of the two contending classes, consequently the tendency to impoverishment belongs exclusively in the *past*. By contrast, wages at *present* and in the *future* display a rising trend, thanks to the stimulation of new needs by the trade unions. It has to be asked, in astonishment: is even the smallest trace of Marx's theory of wages apparent here? Against this optimistic, wishful thinking, which simply does not bother to bring the thesis into line with the facts, Kautsky is still a giant, who at the very least saw that the facts contradict such optimism.

Nor could Bukharin extract himself from difficulties arising from Marx's theory of wages. Like Kautsky and Luxemburg, he thinks that Marx's wage theory is comprised of two directly counterposed tendencies: the tendency to impoverishment and the tendency for real wages to rise. What are the reciprocal relations between these tendencies? Kautsky and Luxemburg displace the tendency to impoverishment into the past, while upholding only the tendency for wages to rise in the present. Bukharin also concedes that the position of the

22 Marx 1989c, p. 53. ['*Prius*' means 'primary factor'.]

23 Luxemburg 2013, pp. 274–5 [Grossman's emphasis.]

European and American working class has improved. All the same, he holds fast to the theory of impoverishment, with this difference that, in contrast with Kautsky and Luxemburg, he displaces it not in time but in space. European and American workers form only one section of the world proletariat. 'In Marxist theory, however, Marx analysed capitalist society in the abstract and held that the inherent law of capitalist development leads to a *worsening* position of the working class … Marx considered capitalist society as a whole.' For this, according to Bukharin, Marx's proposition of absolute impoverishment is more correct than Kautsky's notion of mere relative impoverishment, because the improvements in conditions that Kautsky refers to only apply if '"working class"' is 'understood … to refer exclusively to the continental working class'. 'The position of these layers of the proletariat grew better and better, but Kautsky's Marxism overlooked the fact that this improvement was achieved *at a cost of the destruction and pillage of the colonial peoples*.' 'We should consider not only the American-European realm but the *world economy* as a whole. Then we … get an entirely different theoretical picture from that of Kautsky.'[24]

That improvements in the position of the working class in continental Europe were, to some extent, due to the imperialist exploitation of colonial countries by capitalism can be conceded. All the same, Bukharin's interpretation of Marx's wage theory is false, regarding it simply as a theory of impoverishment and denying that, on the basis of Marx's theory of wages, any real improvement in the position of the working class as a whole is possible. And just as false are Kautsky's and Luxemburg's attempts at interpretation, which derive improvements in the working class's condition exclusively from competition, from the more favourable configuration of the labour market, thanks to trade union organisation, and thus from increases in the *price* of labour power.

In terms of our analysis, however, increases in the *price* of labour power, that is fluctuations brought about by a more favourable configuration of the relationship between supply and demand or by what Kautsky calls the 'rising power' of the proletariat, do not come into consideration. This is because Marx's analysis, as we know, assumes that competition is excluded, i.e. that the commodity labour power is sold at its value. On these assumptions, the analysis from the outset eliminates both the efforts of entrepreneurs to push the price of labour power below its value,[25] as well as union action to increase wages,

24 Bukharin 2012, pp. 481–2. [Grossman's emphasis.]

25 'Despite the important part which this method plays in practice, we are excluded from considering it here by our assumption that all commodities, including labour power, are bought and sold at their full value' (Marx 1976b, p. 431).

and this is also the reason why trade union struggles are barely mentioned in the theoretical analysis of wages in Marx's *Capital*. Once this assumption is made, a decline in wages cannot occur because of 'a fall in the worker's wages *below* the value of his labour power, but only by a *fall in this value itself*'.[26] And the reverse is also true: wages can rise not because they rise above the value of labour power but because this *value itself increases*. Thus the problem is precisely this: without contradicting the assumption made but on the basis of it, how to explain the *tendency of wages to rise* in terms of Marx's law of value and simultaneously to show, without engendering accusations of a logical contradiction, that Marx's theory of impoverishment can be valid, in other words the proposition that 'in proportion as capital accumulates, the situation of the worker … must grow worse'.[27] *Hic Rhodus, hic salta!*[28]

All previous distortions of Marx's theory of wages, both within and outside the Marxist tradition, stem, again, from a misunderstanding of the method that Marx used in his analysis. A consequence of this method was that Marx could nowhere present a comprehensive picture of his theory of wages. Rather, in different places he lists the *individual factors* that determine the level of wages. Thus in chapter 6 of *Capital*'s first volume, we have a conceptual definition of the value of labour power and its resolution into the 'reproduction costs of labour power'. Here, too, the analysis is conducted on the simplifying, fictitious assumption of the constancy of this magnitude,[29] which is only possible when the magnitude of the working day is given, both extensively and intensively. The value of labour power is, however, not constant but varies according to the level of labour productivity. Marx therefore lists a series of factors which affect the magnitude of the expenditure of labour and thus the value of labour power. These are: a) increases in the productivity of labour whereby the value of labour power becomes cheaper;[30] b) the greater or lesser costs of education, by virtue of which the skilled worker is more expensive than the unskilled;[31] c) the introduction of machinery, which works in the opposite direction, devaluing skilled labour;[32] d) among the further

26 Marx 1976b, p. 431. [Grossman's emphasis.]

27 [Marx 1976b, p. 799.]

28 ['*Hic Rhodus, hic salta*' means 'Rhodes/the rose is here, dance here', i.e. this is where the point is proved.]

29 'In this chapter, as hitherto, the value of labour power … is assumed to be a given, constant magnitude' (Marx 1976b, p. 417).

30 Marx 1976b, p. 431.

31 Marx 1976b, p. 470.

32 Marx 1976b, p. 545.

factors that determine the cost of reproducing labour power is the intensity of labour;[33] and finally e) the accumulation of capital.[34]

How then is the level of wages configured under the influence of these factors?

Nothing is more false than the claim that Marx's theory of wages lets workers' wages decline to the subsistence minimum, in the sense of the classical theory of the iron law of wages, and thus allows for deterioration in the position of the working class, while ruling out the possibility of any improvement. It is simply impermissible to identify Marx's notion of the reproduction costs of labour power with the subsistence minimum. Those costs, according to Marx, are not tied to any specific standard of living. The high living standards of English workers only represent the *necessary* reproduction costs of English workers, just as the low wages of Chinese coolies represent the same for them.

We have already shown that the assumption of *constant* reproduction costs has the character of a fiction. This fiction was only possible on the further fictitious assumption that the length of the working day and finally the intensity of labour is likewise constant. Under these conditions, when the expenditure of labour is constant, the quantity of means of subsistence required for the reproduction of this expenditure is likewise constant.

In reality, however, these factors vary. In terms of their value, wages must fall as a result of the growing *productivity* of labour. The movement of the wage level is different, when *real wages* are considered. Reproduction costs are not constant and Marx shows how the reproduction costs of labour power necessarily have to increase as the working day expands *extensively*, in terms of its length, or intensively.[35] That is precisely why Marx raises the objection that Ricardo actually ignores the *growing intensity* of labour and conducts his analysis 'only on the assumption that the working day is a *constant* magnitude, both *intensively* and extensively'.[36]

In contrast, Marx shows how the intensification of labour develops into 'a phenomenon *of decisive importance*'[37] and how *increases* in the costs of reproduction and thus in the level of wages necessarily result from the *continuous rise in the intensity of labour* conditioned by the capitalist production process, even when all factors of competition (supply and demand, trade union struggles etc.) are excluded. In chapter 22 of the first volume [of *Capital*], which deals with national differences in wages, it is stated that 'In every country there

33 Marx 1976b, pp. 533–43, 655–67.

34 Marx 1976b, pp. 762–872.

35 Marx 1976b, pp. 526–43.

36 Marx 1981, p. 349. [Grossman's emphasis.]

37 Marx 1976b, p. 533. [Grossman's emphasis.]

is a certain *average intensity* of labour' which 'count[s] as labour of normal quality'.[38] Yet even this average intensity varies according to the stage of capitalist development that a country has reached. 'The average intensity of labour changes from country to country.'[39] The more advanced a country is in capitalist terms, the *greater* its average intensity and therefore also the reproduction costs of labour. 'It is self-evident that in proportion as the use of machinery spreads, and the experience of a special class of worker – the machine-worker – accumulates, the rapidity and *thereby the intensity of labour undergoes a natural increase*.'[40] A condensation, a compression of the labour expended in a given unit of time is the result. From this it follows that '[e]ven with given limits of the working day ... a *rise of wages may become necessary*, if only to keep up the old *standard value* of labour. By increasing the *intensity* of labour, a man may be made to expend as much vital force in one hour as he formerly did in two.'[41] Obviously, *simple* and *intensive* labour represent two completely different magnitudes and their reproduction costs cannot be identical. In cases of intensive labour, 'since more [labour] is expended, more must be received' by way of means of subsistence.[42] Thus it comes about that with the development of capitalist production the intensity of labour also has to grow and with it the level of the real wage. 'The more productive one country is relative to another in the world market, the higher will be its wages as compared with the other. In England, not only nominal wages but real wages are higher than on the Continent. The worker ... satisfies more needs.'[43]

In another place, Marx illustrates this with an example, by pointing out that 'the English working day of 10 hours [can be] equal to an Austrian working day of 14 hours, on account of its higher intensity'.[44] This shows that the *tendency for real wages to rise* (once we abstract from periodic fluctuations of the economic conjuncture and consider only the average level) is a self-evident phenomenon, which flows from the very mechanism of capitalist production,

38 Marx 1976b, pp. 701–2. [Grossman's emphasis. Editor's interpolation.]

39 Marx 1976b, p. 702.

40 Marx 1976b, p. 533. [Grossman's emphasis.]

41 Marx 1985, p. 142. [Marx only emphasised '*standard value*' and '*intensive*'.]

42 Marx 1976b, p. 275. 'In this way it is possible, given increasing productivity of labour, for the price of labour power to fall constantly and for this fall to be accompanied by a *constant growth in the mass of the worker's means of subsistence*' (Marx 1976b, p. 659). [Grossman's emphasis.] 'It is possible that, reckoned in terms of *use values* ... wages rise (as productivity increases) and yet the value of wages may fall' (Marx 1989c, p. 54). [Grossman's emphasis.]

43 Marx 1989b, p. 252.

44 Marx 1981, p. 321.

and that to explain it no other elements need to be introduced, because it can be deduced from Marx's law of wages, when the commodity labour power is always purchased at its full value and the demand for labour constant.[45]

But how does this tendency for real wages to rise square with Marx's other theory, namely his theory of the tendency for the condition of the working class to worsen? Is there a contradiction between these assertions, which ini-

---

45 Bukharin doubtless observed the *fact* that in the longer run the price of labour power steadily increases in connection with changes in this labour power's *qualifications*. The *explanation* he offers is, however, false (Bucharin 1914, pp. 811–12). In Bukharin's explanation, the ultimate cause of wage increases is a higher *customary* standard of living, so that the *impetus* to the whole process of driving up the value of labour power derives from workers' struggles over wages. Higher wages because of which the *price* of labour power temporarily rises *above* its value enable workers to live better. If this situation persists for some time, then the higher living standard now becomes customary for the working class, which drives up the reproduction costs of labour power and therefore also the worker's abilities. 'The process of absolute improvement in the condition of the working class, stimulated by the class struggle, is accompanied by an incessant development of the worker's abilities' (Bucharin 1914, p. 812). The actual causal relationship is the direct opposite of that described by Bukharin. Why should competitive factors (wage struggles) work only in *one* direction, in the direction of higher wages? Bukharin's argument can also be turned on its head and then a persistent fall in wages would result. In other words, if there is a wage cut, following an unsuccessful wage struggle, and this lasts for some period of time, thanks to which a lower standard of living becomes customary for the working class, etc. We see that nothing can be proved by recourse to the factors of competition other than purely temporary deviations of *price* from value. But we have shown that Marx precisely excludes all *price* increases from his analysis and formulates the problem so that wages can rise under the assumption that labour power is sold at its *value*. The intensification of labour is not a *consequence* of higher standards of living, as Bukharin proposes, but is the result of the objective course of capitalist production and *causes* the impulse to wage struggles and higher living standards. For the greater intensity of labour means that the previous wage, which corresponded to the *value* of labour power, automatically falls *below* the value [of labour power under the new circumstances]. Labour power cannot be fully reproduced. This unleashes wage struggles and, if these are successful, wages rise to the *value* of labour power again. It is completely irrelevant whether the new wage level had enough time, thanks to its 'quite long duration', to become customary. In periods of severe rationalisation, hence of a rapid succession of increases in the intensity of labour, wages which yesterday still corresponded to the value of labour power, are today *below* the value [of labour power] and therefore the working class likewise has to engage in repeated struggles for higher wages, in rapid succession, without waiting until the wage increase from any given struggle has had time to become customary. So Marx writes: 'In all the cases I have considered, and they form ninety-nine out of a hundred, you have seen that a struggle for a rise of wages follows only *in the track of previous changes* [in the mode of production], and is the necessary offspring of *previous* changes in … the extent or the *intensity of labour extracted* … in one word, as reactions of labour against the previous actions of capital' (Marx 1985, pp. 143–4). [Marx only emphasised the first use of '*previous*'.]

tially seem to cancel each other out, or can these opposed tendencies still be explained consistently and without contraction? This is the task to which we now have to turn our attention.

For the previous discussion did not exhaust the *entire problem* of Marx's theory of wages. We have only dealt with the factor of growing intensity and likewise that of the growing productivity of labour, without considering the long-term effects of capital accumulation, the aspect that forms the real object of our analysis. Once we take this factor into account, on the basis of the results of our previous analysis of the reproduction process, the following can be stated.

If capital accumulation, at its lower stages, incorporated a steadily *growing mass* of labour power into the production process and thus contributed to rising wage levels, then from a specific stage of accumulation the reverse process, the *displacement of labour power*, takes place and consequently an inevitable decline in wages occurs. Far from contradicting each other, the tendency for wages to rise and the tendency for impoverishment to occur reflect different stages of capital accumulation. This also explains the fact mentioned earlier (on page 97), that the discussion of Marx's theory of impoverishment is not connected with his analysis of the various factors that determine wages but is first anchored in the chapter on the *historical tendencies* of capitalist accumulation.

To test the tendency, expounded here, that governs the evolution of wages with a concrete example, look at Tables 1 and 2 of the reproduction schema (on pages 123 and 136, above). According to Otto Bauer's assumption, nominal money wages *remain constant* in the course of accumulation and always amount to 1 *v* per worker, since there are no changes in the relationship between supply and demand, and the mechanism progresses in a state of equilibrium. In the first year of production, wages amount to 100,000 *v* for the given population; in the following year, with a population growth of five per cent, the sum of wages expands proportionately, that is, by five per cent, to 105,000 *v*, so that nominal wages per worker stays the same.

In reality, i.e. to the extent that the purchasing power of money is taken into account, however, the wage in Bauer's table cannot be constant. In other words, what we see there is a rising level of the organic composition in the course of capital accumulation, consequently *productivity of labour that increases* from year to year or, what amounts to the same thing, a progressive cheapening of commodities from year to year. Under these conditions, a constant value magnitude of 1 *v* would express a steadily growing mass of commodities, that is, *real wages that rise* from year to year.

If these facts are taken into consideration then Bauer's reproduction schema reflects a *rising movement of real wages as capitalist production progresses*, despite the assumption that there is no reserve army and no change in relations between the supply of and demand for labour. It follows that this rise in real wages cannot be the result of a modified balance of power on the labour market. It is rather – on the assumption that the commodity labour power is sold at its full value – an expression of the fact that as the intensification of labour occurs, the reproduction of labour power requires a growing mass of means of subsistence and thus increasing real wages! To this extent, the wage depicted in the schema is in line with the actual evolution of wages in all capitalist states since the middle of the nineteenth century. Not only does Marx's theory of wages not contradict empirical experience, on the contrary it alone is capable of explaining that experience, in accord with the logic of the system as a whole, i.e. entirely on the basis of Marx's law of value, without auxiliary recourse to competitive factors of any sort.

At the same time, a glance at Table 2 should convince us that this rising trend of real wages cannot continue unhindered over time but is of only temporary duration. That is, it only corresponds to a *specific* phase of development, the initial phase of capital accumulation (in our schema the first 34 years). At advanced stages of accumulation there must be an exactly determined point (in our schema year 35) which is a necessary *turning point* in the movement of wages. As a consequence of the capitalist mechanism, from this point on, valorisation can only be sustained *if wages are pushed down*. Thus, from this point, despite the initial rise, wages must periodically continue to sink,[46] 'It follows therefore that in proportion as capital accumulates, the situation of the worker, be his payment high or low, must grow worse.'[47] 'This is the absolute general law of capitalist accumulation.'[48]

The curve in Figure 6, below, portrays the tendencies of wage movements in the course of capital accumulation.

From a specific point, real wages stop increasing and, after temporary stagnation, begin to decline rapidly. As, however, the growing intensity of labour in the course of the capitalist mode of production makes an *ever growing mass* of the means of subsistence essential for the mere reproduction of labour power, even a halt in the upward movement of wages (and more so any fall) already signifies a decline of wages *below the value* of labour power and thus the impossibility of fully reproducing labour power. This, however, is the same as the deterioration of the condition of the working class, not just its social impoverishment but its physical impoverishment as well. The impoverishment of the

46 See above, page 172–173.

47 Marx 1976b, p. 799.

48 Marx 1976b, p. 798.

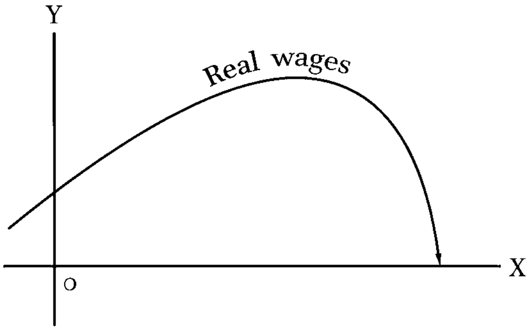

FIGURE 6

working class is thus by no means a phenomenon confined to the *past* of the workers' movement, as Kautsky and Luxemburg claim in their interpretations of Marx's wage theory. Impoverishment does not only appear in the period of capitalism when there were still no workers' organisations (trade unions). On the contrary, it can and must to be a consequence of the *late phase* of capital accumulation.

It is the *necessary end point* of the whole evolution which capitalist accumulation inexorably approaches; one that no trade union resistance, however strong, is in a position to impede in the context of the capitalist mode of production. *This is the objective limit of trade union intervention*. From a certain point in accumulation, the available surplus value is no longer sufficient for accumulation to proceed at the *given* level of wages. Either existing *wages* have to be pushed below their previous level or accumulation simply must come to a standstill, and thus the capitalist mechanism must break down. So the whole evolution drives towards the unfolding and sharpening of the inner antagonisms between capital and labour, until their *struggle* brings about a solution.

Earlier we saw how Kautsky stated that, during the last decade before the World War, the upward movement of wages actually came to a halt in all the older capitalist countries and there was, in part, even a decline in real wages. That, during the period after the War, the working class in Germany, Britain, France etc. could not improve its situation; that, on the contrary, it had to struggle with enormous energy just to retain its previous standard of living and ward off repeated attacks by capital is a notorious fact that requires no evidence here. Precisely the ever renewed offensive which capital has mounted, with exceptional vigour, against the working class is a symptom of and demonstrates the fact that capitalism has survived, that it can hold on to life only by degrading the working class's conditions of life and that, consequently, having fulfilled its historic mission of *developing* the forces of production, having been a driver of development it has now become a *fetter* on development. The development of the productive forces is not simply apparent in the ever larger mass of *MP* that comes into operation in relation to *L*, in *MP* that constantly expands through technological innovations and inventions, but also in the participation of labour power, *L*, in this development. 'The main thing is not to be deprived of the fruits of civilization, of the acquired productive forces',[49] the main thing is that, as well as the growing mass of *MP*, *L* is also always *fully* reproduced, i.e. real wages rise in step with the increasing intensity of labour. The moment valorisation fails in the $c : v$ relation, however, capital begins to push the level of wages, that is, v, down continuously below the value of labour power. But, in doing so, it hinders the full reproduction of *L*. In this way the greatest and most important productive force, human labour power, is deprived of the fruits of civilisation's progress. This at the same time proves that we are increasingly approaching the situation that Marx and Engels already foresaw in the *Communist Manifesto*: 'the bourgeoisie … is unfit to rule because it is incompetent to assure an existence to its slave within his slavery'.[50] That is also the reason why wage slaves necessarily have to rise up against the system of wage slavery.

We saw earlier how Hilferding, Charasoff and Braunthal rejected the theory of breakdown because, in their view, such a theory proceeds from the mechanical idea that the end of capitalism will come about 'of itself', that it is to be awaited fatalistically and therefore seems to be incompatible with Marx's theory of class struggle.[51] If the development leads to an impoverishment of the proletariat then any *class struggle for goals in the present*, for the improvement of the working class's situation, is basically *pointless*.

As opposed to this conception, it is apparent from our exposition that the breakdown of capitalism – although it is objectively necessary and the time of its emergence can, on given assumptions, be calculated exactly – does not come about automatically, 'of itself' at the expected time and merely has to

49 See above, page 55.

50 [Marx and Engels 1976, p. 49.]

51 On Hilferding, see above, p. 92; Charasoff, p. 89; Braunthal, p. 82. Parvus too expresses himself in similar terms:

> There is no purely objective development and cannot be any objective development that simply pulverises capitalist production on its own [!] without the intervention of the political, revolutionary struggle of the working class, so that nothing remains but for the capitalist class to retreat and for the workers to come to power. Historical laws … are a product of political struggles … The theory of breakdown is as false as the hypothesis of growing-into [socialism]. (Parvus 1910, p. 11) [Parvus emphasised 'The theory of breakdown' and 'hypothesis of growing-into'. Editor's interpolation.]

be passively awaited. On the contrary, its emergence is, within certain limits, open to influence by the conscious intervention of both the classes concerned. In other words, if the *assumptions* under which its emergence is expected are changed, then obviously the very course of capital accumulation and its end will also be modified. If the lack of valorisation, already familiar to us, occurs because the accumulation of capital advances to a certain stage, then capital will exert greater pressure on the working class. If capital now succeeds in *pushing wages down* and thus in raising the rate of surplus value (we have already mentioned that such pressure on wages is only possible within definite, narrow limits) then the life of the capitalist system can be prolonged at the expense of the working class, the intensification of the breakdown tendency *slowed down*, and the end of the system therefore postponed to the more distant future. A higher degree of exploitation of labour is thus one of the capitalist system's and valorisation's temporary safety valves. Conversely, if the counter pressure of the working class can offset the pressure from the class of entrepreneurs or even more than offset it, in other words, if the working class succeeds in winning wage increases, that will reduce the rate of surplus value and thus the breakdown of the system must *accelerate*. With a rate of surplus value of 100 per cent, which underpins Otto Bauer's reproduction schema, the collapse comes about in year 35. If the rate of surplus value rises above 100 per cent then perhaps the breakdown would only take place in year 40; if it falls below 100 per cent, perhaps as early as in year 20. So it is apparent that the conception of a breakdown, whose necessity is objectively grounded, does not at all contradict the class struggle; that, on the contrary, despite its objective necessity, the breakdown can be powerfully influenced by the living forces of classes in struggle and leaves a certain margin for the active intervention of classes.

This is precisely why in Marx the whole analysis of the reproduction process flows into the class struggle. In a letter to Engels of 30 April 1868, in which he summarises the sequence of arguments in the second and third volumes of *Capital*, he writes: 'Finally, since those 3 items (wages, rent, profit) constitute the sources of income of the 3 classes of landowners, capitalists and wage labourers, *we have the class struggle, as the conclusion in which the movement and disintegration of the whole shit resolves itself*'.[52]

Our exposition of the accumulation of capital alone explains why at higher stages of accumulation the struggle over the distribution of income is not merely a struggle for better living standards by the classes engaged in it but a struggle *over the very existence of the capitalist mechanism* itself. Only now

52 Marx 1988c; similarly, Marx 1981, p. 25. [Marx only emphasised 'class struggle'.]

can we understand why at higher levels of capital accumulation any substantial increase in wages repeatedly runs into greater and greater difficulties, why every great *economic* struggle necessarily turns into a matter of life and death for capitalism and therefore into a *question of political power*. (Witness the British miners' strike of 1926.)

The struggle of the working class over its day-to-day demands is thus bound up with its struggle for the final goal. The final goal for which the working class struggles is not, therefore, some ideal that is brought into the workers' movement 'from outside', in a speculative manner, whose realisation is reserved for the distant future, quite independently of the struggles that occur in the present. It is, on the contrary, as the law of breakdown developed here demonstrates, a result that flows from immediate day-to-day class struggles and whose realisation is accelerated by these struggles.

2 The Breakdown of Capitalism and the General Cartel

Even for those writers who concede that capitalism contains a tendency to break down, resulting from the accumulation of capital, the following problem arises: will the abolition of the breakdown tendency not be enabled by the movement toward concentration so characteristic of modern industry? Shouldn't this movement toward concentration, whose ideal, theoretical conclusion and end point is the seamless cartelisation not only of national production but of the world economy – the general cartel – bring about a growing regulation of production, within the capitalist economy, and in this way contribute to the stabilisation of cyclical economic fluctuations?[53]

As Lederer accurately states, 'The question of whether crises are avoidable under capitalism will have to be straightaway *answered in the affirmative* by all those theorists who believe that only disproportionalities among branches of production cause crises'.[54] In fact, Hilferding's view is that the anarchy of production under competitive capitalism is replaced, in the age of the modern movement toward concentration and the formation of powerful concerns and trusts, by the *increasingly planned nature of production*, finding its most advanced expression in the elimination of crises and the 'regulated' economy of the general cartel.

---

53 The following critique of the 'general cartel' is different from Lederer's criticism of the 'universal cartel' (Lederer 1925, p. 410), already in terms of their different objects. Lederer only deals with the universal organisation of *national* production into a cartel, so foreign trade and the export of capital continue to exist.

54 Lederer 1925, p. 408. [Grossman's emphasis.]

'In itself', Hilferding argues, 'a general cartel which carries on all production, and thus *eliminates crises*, is economically conceivable.'[55] For, according to Hilferding, regulated, planned production – the socialist principle of planning – is already attainable under capitalism. 'What is decisive is that we find ourselves in the capitalist period in which the era of free competition, during which the blind laws of the market dominated capitalist governance, has essentially come to a close. We now have to do with the capitalist organisation of the economy, in which an economy of free competition gives way to an organised economy.'[56] '[I]n reality *organised capitalism* means the fundamental *replacement of the capitalist principle of free competition with the socialist principle of planned production*.'[57] Hilferding simply articulates here, *expressis verbis*,[58] what is already contained in his conception of the general cartel: that the general cartel represents the highest stage of planning under capitalism.

Hilferding thinks that the 'regulation' of production under capitalism is possible. In his view, the actual tendencies of development are not leading to the breakdown of capitalism but this regulation is rather making ever greater strides and the 'organised capitalism' of today's cartel magnates is realising 'the socialist principle of planned production'. He therefore sees the task of the working class as simply taking over this perfected, planned, organised economic apparatus. 'That means nothing other', writes Hilferding, 'than that our generation, with the help of the state, faces the challenge of transforming the capitalist organised and managed economy into one guided by the *democratic state*.'[59] According to Hilferding, socialism is almost here; its management only has to be taken into its own hands by the working class.

55 Hilferding 1981, p. 297.

56 Hilferding 2017, p. 569. [Hilferding emphasised 'an economy of free competition gives way to an organised economy'.]

57 Hilferding 2017, pp. 571–2. [Hilferding also emphasised 'fundamental'.]

58 ['*Expressis verbis*' means 'explicitly'.]

59 Hilferding 2017, p. 572. [Hilferding also emphasised 'capitalist'.] To gauge the full implications of the transformation of Marx's ideas that Hilferding has accomplished with his thesis of the working class taking the existing capitalist economy into its own hands, it is worth reiterating here, once again, the idea of breakdown as Engels formulated it in the Preface to *The Poverty of Philosophy*, where it is stated that Marx based his communist demands 'upon the inevitable *collapse of the capitalist mode of production which is daily taking place before our eyes to an ever growing degree*' (Engels 1990, p. 282). [Grossman's emphasis.] But during the first few decades after the appearance of *Capital*, bourgeois economists too saw the theory of breakdown as Marx's fundamental idea. For example, the Jesuit priest and economist Pesch writes, 'The aim of Marx's principal work, published under the title *Capital*, was to prove that capitalist society must *necessarily* encounter its doom, since the laws of its development are simultaneously the laws of its downfall' (Pesch

With this conception, Hilferding has expunged the last traces of Marx's socialism and placed himself on the terrain of bourgeois economics, which likewise glorifies the progress of planning under the existing economic order – in crying opposition to the facts – and regards workers' aspirations for socialism as superfluous because, of course, it has indeed already been realised. In Sombart we read that

> We will gradually have to get used to the idea that the difference between a stabilised and regulated capitalism and a technologised and rationalised socialism is not very great and that therefore it is a matter of pure *indifference*, for the fate of humanity and its culture, *whether the economy is organised along capitalist or socialist lines*. What counts is that the mode of labour is the same in both cases … it is asked where the difference lies between a large co-operative warehouse and a capitalist one, a communist blast furnace and a capitalist one, municipal trams and capitalist ones. And no essential difference is found. Perhaps the 'consciousness' of the worker is different in the two cases. *But the actual way in which working conditions are structured in the two cases is the same*.[60]

It would be superfluous to engage in a polemic with Sombart's naïve conception of how labour conditions are structured in a planned economy. We want to remain with the facts and phenomena of the existing economic order. Is regulation, planning of the economy on a capitalist basis, feasible?

It is completely impossible. We have demonstrated that the breakdown tendency and therefore also crises stem not from the anarchy of production, from competition, but occur as a function of the overaccumulation of capital, so that ever sharpening competition is a *consequence* of overaccumulation. It operated earlier on the domestic markets of capitalist states, as on the world market. The more free competition on the domestic market is replaced by monopolistic organisations, the sharper becomes competition on the world market. If a river's flow is blocked artificially by structures on one side of the stream, it presses on with even less restraint on the side that is still open. Whether the accumulation of capital within the capitalist mechanism takes place on the basis of competition between individual entrepreneurs or

---

1891, p. 23). [Grossman used the passage from Engels's preface to *The Poverty of Philosophy*, in the same way Pesch had.]

60 Sombart 1927, 2, p. 1016. [Sombart only emphasised '*indifference*' and '*whether the economy is organised along capitalist or socialist lines*'.]

between a series of cartelised, capitalist production associations, locked in combat with each other, is irrelevant to the emergence of the breakdown tendency and of crises.

The same is true of Hilferding's '*general cartel*'. For that is only conceivable as a series of cartels in individual branches of production which exchange their products *with each other*. In this form, however, it is no different from Otto Bauer's reproduction schema, that is, a form of production in which *at least two* central associations exist as *independent private owners* that manufacture different use values (means of production and means of consumption) and engage in *mutual exchange*. Exchange and so *exchange value* can only appear so as long as they exist. By contrast, Hilferding's general cartel conceived as a *single* subject is simply inconceivable, if it is still to count as an image of capitalist, commodity supplying production. 'Only the products of mutually independent acts of labour, performed in isolation, can confront each other as commodities.'[61] '[T]o consider society as a *single* subject is wrong; a spec-

---

61 Marx 1976b, p. 132. It is characteristic of the intellectual poverty of the neo-harmonists that they have taken over all their problems from the revisionists. Even the idea of the general cartel, which Otto Leichter calls Hilferding's 'grand vision' (Leichter 1923, p. 51) and which is also otherwise ascribed to Hilferding in the literature, is something Hilferding borrowed from Tugan-Baranovsky, the true theoretician of revisionism and neoharmonism. So too with his peculiar idea of regulated production *under capitalism*. 'Let us imagine', Tugan-Baranovsky writes, 'that the growth of joint stock companies and their subsequent combining into syndicates and trusts will lead to the absolute extinction of single capitalistic enterprises by *assimilating all capitalistic production in one immense national* [*enterprise organised on a planned basis*]'. 'All these centralisations and socialisations of production, effected on the *capitalistic base*, remain capitalistic, and are far from reflecting the principle of socialistic production.' '[S]ocialisation of production by itself does not yet constitute socialism' (Tugan-Baranowsky 1910, pp. 3–4). [Grossman's emphasis. The text in square brackets is the editor's more accurate translation of the original. Tugan-Baranowsky 1908, p. 4.] The idea of a general cartel is, however, even older than Tugan-Baranovsky. Already in his book *Cartels*, which appeared in 1883, Friedrich Kleinwächter considered the concept of 'a monopolisation of the cartels and an eventual fusion of the different enterprises into *one single giant enterprise*' (Kleinwächter 1883, p. 185). [Grossman's emphasis.] This 'fusion of different establishments of a branch into one single giant enterprise would eliminate all competition in the state' (p. 190). In this way it would be possible to achieve the 'regulation of total production according to overall needs' (p. 162) and 'that in turn would eliminate perpetual crises – overproduction and gluts' (p. 194). However, Kleinwächter too is aware of the *capitalist* character of such a general cartel. Thus Hilferding accepted the illusions that bourgeois economists entertained about the possibility of 'regulating' the economy by means of cartelisation on the basis of *capitalist* production. The difference from a planned socialist economy would then only be in relation to distribution.

ulative approach.'[62] Where there are no private owners independent of each other, there can be no exchange, therefore *exchange value* too *cannot* arise. Exchange value is precisely a function of the exchange relation; if the former disappears, so does the latter.[63] Hilferding nevertheless believes that, under his general cartel, '[t]he whole of *capitalist* production will be consciously *regulated* by a single body which would determine the volume of production in all spheres'.[64] Such a notion suffers from insoluble internal contradictions and is also incompatible with the principles of Marx's theory. Marx's powerful achievement lies precisely here, in his expanation of the totality of the capitalist mode of production's phenomena in terms of the law of value, so that the law of value offers us the key and constitutes an indispensable and at the same time self-evident presupposition for understanding those phenomena. Now, it is a notorious fact that in his *Finance Capital* Hilferding proved incapable of deducing the phenomena of the capitalist world from Marx's law of value. So he abandoned Marx's theory of value when discussing money in *Finance Capital* and instead of Marx's proposed his own theory of money, thus shattering the entire basis of the Marx's system, the fundamental theory of value as the measure of all commodities. Even Kautsky is forced to concede that this is a case of 'Marxist suicide'. For if the value of money can be determined in the way Hilferding proposed, that would signify, as Kautsky goes on to explain, '*the negation of the law of value for the money-commodity*; it would be saying that for the latter the value is not determined by the socially necessary labour time needed for its own production. *The universal applicability of the law of value would be broken through*.' Now, Kautsky thinks that Hilferding's abandonment of *Marx's* theory of value and theory of money 'is nothing but an academic whim' that does not diminish the value of his subsequent arguments, because this abandonment of Marx's theory affects 'only one point', 'it plays no more part in the course of [Hilferding's] book'. Hilferding's theory of money, that is the theory of the general measure of value, 'has *no effect* upon him, either theoretically or practically'. 'One can calmly reject it, and yet admit everything that

62 Marx 1986a, p. 31. [Grossman's emphasis.] Against Proudhon, Marx writes: 'He carries abstraction to the furthest limits when he fuses all producers into *one single producer* …' (Marx 1976a, p. 119). [Marx only emphasised '*one single*'.]

63 'Within the collective society based on common ownership of the means of production the producers do *not exchange* their products; *just as little does the labour employed on the products appear here as the value* of these products, as a material quality possessed by them' (Marx 1989a, p. 85). [Marx only emphasised '*as the value*'.]

64 Hilferding 1981, p. 234. [Grossman's emphasis.]

Hilferding goes on to build up on his examination of the different functions of money as means of circulation, measure of value, and means of payment.'[65]

If Kautsky is right about this, it means that exchange phenomena and price movements can be correctly understood with a false theory of money. In that case why would a theory of money be necessary, what function would it serve? It would be a superfluous toy.

Because Hilferding misunderstood the role of Marx's theory of value and money, however, he was also unable to grasp Marx's theory of accumulation and breakdown, since this is simply a consequence of the law of value. For the same reason Hilferding had to remain unclear about his general cartel's essential conditions of existence and end up with the idea of a capitalist society that could be 'regulated'. For only one of these two things is possible. If it is a matter of a 'regulated' economy, then it ceases to be a capitalist economy. If it is capitalist, then it cannot possibly be 'regulated'! It is an insoluble logical contradiction, a *contradictio in adjecto*,[66] when Hilferding *allows exchange to disappear completely* and nevertheless writes about a 'capitalist' mode of production. This is where his abandonment of Marx's theory of value wreaks its revenge, where his false theory of money has consequences: in his misconception of the connection between capitalist commodity production and exchange. 'In commodity production', Marx writes, 'the conversion of the product into money, *the sale*, is a *conditio sine qua non*.'[67] If Hilferding's general cartel entails the abolition of exchange, of sale, then this is no longer an image of capitalist production! And secondly, the abolition of exchange simultaneously means an abolition of wage labour as well. Yet the capitalist mode of economy based on wage labour presupposes the *capital relation*, a relation in which *labour power as a commodity* is purchased on the *market* by the owners of the means of production. Where a commodity is exchanged on the market between the class of workers and the class of entrepreneurs, there *exchange value necessarily also has to exist*. If Hilferding talks about the disappearance of commodity exchange and of value – and he has to do this to be able to achieve his 'regulated' economy – then it is also impermissible for the commodity labour power to be exchanged. In other words, the capital relation, the capitalist mode of production, must

65 Kautsky 1911, p. 772.

66 ['*Contradictio in adjecto*' means 'self-contradiction'.]

67 Marx 1989c, p. 139. [Marx emphasised only 'commodity production'. '*Conditio sine qua non*' means 'indispensible condition'.] 'Objects of utility become commodities *only because they are the products of the labour of private individuals who work independently of each other*' (Marx 1976b, p. 165). 'Labour which manifests itself in exchange value appears to be the labour of an *isolated individual*' (Marx 1987b, p. 275). [Grossman's emphasis.]

necessarily disappear. What emerges in its stead can only be a naked relation of domination, as during the Middle Ages, or a collectively managed socialist society. At any rate, *it ceases to be a capitalist* mode of production, based on free wage labour, working for the market, that is, commodity production. 'In a situation where men produce *for themselves*, there are indeed no crises, but *neither is there capitalist production*',[68] and not even simple commodity production.[69]

Hilferding, however, allows the exchange of commodities to disappear in his 'regulated' economy but wage labour nevertheless continues to exist. But if the existence of wage labour is assumed then the existence of commodity exchange is assumed. Wage labour and commodity exchange are correlative concepts. For the 'form of labour as wage labour is decisive for the shape of the entire process and for the specific mode of production itself',[70] because 'the relationship of capital and wage labour determines the whole character of the mode of production'.[71] 'It is only because labour is presupposed in the form of wage labour, and the means of production in the form of capital … that one part of the value (product) presents itself as surplus value … [as] the gains of the capitalist … and the expansion of the reproduction process in general presents itself as a process of capitalist accumulation.'[72]

All this is also true of Hilferding's general cartel. If exchange is abolished then wage labour has to be as well, the cartel is not an image of a 'capitalist' economy, and all of Hilferding's arguments about the 'regulation' of this capitalist economy become irrelevant. On the other hand, if the cartel represents a capitalist mode of production, then it *has to contain commodity exchange and thus production for the market*, in which case the 'sale' of commodities (labour power included) and 'demand' for them are self-evident and *necessary* preconditions. Consequently, there can be no question of the 'allocation' of resources. Production for the market, exchange, is inextricably bound up with the concept of

68 Marx 1989c, p. 133. [Grossman's emphasis.]

69 'He who satisfies his own need with the product of his own labour admittedly creates use values, but not commodities' (Marx 1976b, p. 131). Therefore Luxemburg quite correctly writes, 'Two basic forms characterise the capitalist mode of production. First, universal *commodity exchange* … Second, the capitalist wage system, i.e. a relationship in which the great mass of working people must make an *exchange* with the capitalists, trading their *labour power* for the means of purchasing commodities, and in this relationship the possessing class, in turn, obtains means of subsistence for itself only by exploiting the relationship' (Luxemburg 2015b, pp. 352–3).

70 Marx 1981, p. 1022.

71 Marx 1981, p. 1019.

72 Marx 1981, p. 1021.

capitalism. But where there is exchange, there has to be *exchange value* as well. In such a society, governed by exchange value, there will inevitably be shocks, crises and eventually the breakdown of the whole system governed by value, because the value form and its immanent opposition to the use value form of the commodity necessarily contain the germ of all those shocks. 'The character (1) of the product as commodity, and (2) of the commodity as the product of capital, already involves all the relations of circulation … the two above characters of the product as commodity … give rise to the entire determination of value and the regulation of the total production by value.' The division of social labour among individual spheres of production, the

> social mechanism, is left to the *accidental* and reciprocally countervailing motives of the individual capitalist producers … [T]he inner law operates only by way of their [commodity owners'] competition … It is only as an inner law, a blind natural force vis-à-vis the individual agents, that the law of value operates here and that the social balance of production is asserted in the midst of accidental fluctuations.[73]

We see that the production of commodities by independent producers who exchange their commodities with each other is a necessary element in the definition of capitalist production. This commodity character then necessarily and automatically gives rise to the entire process of production that is governed by value through competition, with the forms of distribution peculiar to it. Planned regulation of production is impossible on the basis of value production. In Hilferding there is no trace of this fundamental idea of Marx's system.[74]

---

73 Marx 1981, p. 1020. [Grossman's emphasis. 'Vis-à-vis' means 'in relation to'.]

74 A 'normal course' of capitalist production that lacks crises and disruptions, as expressed in the reproduction schema, can be imagined but it should not be forgotten that this is simply a theoretical fiction, that the schema does not embody an exact picture but grasps reality under a set of simplifying assumptions that do not exist in reality. Real capitalism is therefore 'identical with the anarchy of production'. 'In such a society', Mises therefore correctly states, 'there is no systematic centralised control of production … Production is "anarchistic" … The balancing of production and consumption takes place in the market …' (Mises 1953, p. 29). But an equilibrium established through the market means an *ex post* [retrospective] equilibrium, thus a subsequent removal of capitalist anarchy, i.e. with destruction and crisis. 'Capitalism', writes Lenin, 'is private ownership of the means of production and anarchy in production … Under capitalism, there are no other means of restoring the periodically disturbed equilibrium than crises in industry and wars in politics' (Lenin 1964a, p. 341).

Now, Hilferding thinks that in his general cartel 'price determination would become purely nominal', price would be 'a mere accounting device by which things were allocated among people'. Since it would be a matter here of the allocation of things and not the allocation of values, under the general cartel, along with the disappearance of the anarchy of production, the objectification of value in commodities, that is money, would also disappear.

> The cartel would *distribute* the product ... A part of the output would be distributed to the working class and the intellectuals, while the rest would be retained by the cartel to use as it saw fit. This would be a consciously regulated society, but in an *antagonistic* form. This antagonism, however, would be *antagonism over distribution*, which itself would be *consciously regulated* and hence able to dispense with money ... The circulation of money has become unnecessary, the ceaseless turnover of money has attained its goal in the *regulated society*, and the *perpetuum mobile* of circulation finds its ultimate resting place.[75]

Nothing is more erroneous than this exposition. Hilferding thinks it is enough *to write* 'allocation' instead of exchange and *to describe* actual prices as nominal prices – and a 'regulated society' is already there, even if, at first, its basis is still capitalist and antagonistic. According to him, this antagonism would only be over distribution, not production, as production would already be 'regulated'. In contrast to Marx's basic conception that '[t]he production relations of every society form *a whole*',[76] that 'every form of distribution vanishes along with the particular form of production that it arises from and corresponds to',[77] Hilferding introduces a discrepancy between the form of production and the form of distribution, 'not realising that the relations of distribution are only the relations of production *sub alia specie*'.[78] 'The vulgar socialists ... have [only] taken over from the bourgeois economists the consideration and treatment of *distribution* as independent of the *mode of production*.'[79] This was the objection Marx raised against the draft of the Gotha Programme in 1875. It is an objection that applies equally to Hilferding. According to him, production can be divorced from distribution; production is already 'regulated', social, and only

75 Hilferding 1981, p. 234. [Grossman's emphasis.]
76 Marx 1976a, p. 166. [Grossman's emphasis.]
77 Marx 1981, p. 1023.
78 Marx 1989c, p. 248. ['*Sub alia specie*' means 'in a different form'.]
79 [Marx 1989a, p. 88. Grossman's emphasis.]

distribution is still antagonistic, so that despite the regulated character of production, surplus value, profit, flows into the private pockets of the capitalists to be used by the general cartel 'as it sees fit'.

Now, however, the problem becomes one of showing how, in what way, according to which principle profits can be allocated to the capitalists in a 'capitalism' in which no exchange exists. In actual capitalism, antagonistic distribution is effected through *the exchange process on the basis of the law of value*. Workers always receive only the value of their labour power; the whole surplus of social production over and above that flows to the entrepreneur. The position of worker and entrepreneur in the process of production determines the mode of distribution and ensures that this antagonism over distribution is again and again reproduced. Under capitalism, the economic function of the law of value is precisely that through its mediation the entire surplus value flows into the pockets of the capitalists. Where, in earlier modes of production, compulsion and the whip had to be used to deprive producers of the surplus of production over and above their means of subsistence, now this 'antagonistic distribution' occurs peacefully through the automatic operation of commodity exchange and on the basis of the law of value.

Calculation in terms of value is not something connected with capitalism by chance, on the contrary, it emerged *from the exchange transaction* as a function of distribution, of allocation adequate to it. It will necessarily disappear together with private exchange and exchange value, and thus commodity production. For calculation in terms of value most intimately depends on value creating labour, on the specifically bourgeois form of labour. It is 'the bourgeois form of labour as distinct from its ancient and medieval forms …', Marx writes, 'labour which creates exchange value is a *specifically bourgeois feature*'.[80] In this specifically bourgeois, hence value-creating labour Marx identifies the ultimate cause of the capitalist system's crises, conflicts and shocks, because this value-creating labour is simply the necessary function of private property and private exchange. Marx therefore refers repeatedly to the '*contradictions inherent in the bourgeois mode of labour*'.[81] All the disruptions of the system flow precisely from this fact, precisely because capitalism is 'a mode of production dominated by exchange value'.[82] 'The continual depreciation of labour is only one side, one *consequence of the evaluation of commodities by*

80 Marx 1987b, p. 298. [Grossman's emphasis.]
81 Marx 1987b, p. 332. [Grossman's emphasis.]
82 Marx 1989c, p. 246. [Marx emphasised 'exchange value'.]

labour time. The excessive raising of prices, overproduction and many other features of industrial anarchy *have their explanation in this mode of evaluation*.'[83]

It is impossible to abolish private property in the means of production and the exchange process and still carry over the modes of distribution and calculation resting on value-creating labour that have grown up out of them and are deeply implicated in them, the *profit-based economy*, into the regulated economy of the future! In 1847 Marx already emphasised, against Proudhon, that 'the determination of value by labour time – the formula M. Proudhon gives us as the regenerating formula of the *future* – is therefore merely the scientific expression of the economic relations of *present day* society, as was clearly and precisely demonstrated by Ricardo long before M. Proudhon'.[84] But 'value, measured by labour time, is inevitably the formula of the present enslavement of the worker, instead of being, as M. Proudhon would have it, the "revolutionary theory" of the emancipation of the proletariat'.[85] If it is asserted that the exchange process has been abolished, then the commodity labour power likewise cannot be bought and sold on the labour market *as a commodity*, for it is assumed that wage labour and the capital relation have likewise been abolished. In that case, there is no longer a capitalist economy, either in production or in distribution, and there can no longer be any antagonism over distribution between owners of the means of production and the working class. In that case, there is no exchange value, but therefore also no profit; for this presupposes the existence of the wage relation, therefore exchange and the market. Hilferding's conception of 'regulated production' and 'antagonistic distribution' is logical nonsense. This shows the correctness of Marx's statement, 'The mode of exchange of products depends upon the mode of exchange of the *productive forces*'. And among the forces of production the decisive role is played by human labour power! 'In general', writes Marx, 'the form of exchange of products corresponds to the mode of production. Change the latter, and the former will change in consequence.'[86] If the mode of production is changed,

83 Marx 1976a, p. 136. [Grossman's emphasis.]
84 Marx 1976a, p. 138. [Grossman's emphasis.]
85 Marx 1976a, p. 125. [Grossman's emphasis.]
86 Marx 1976a, p. 143. [Grossman's emphasis.] Strangely, in his description of 'abstract ideal types of social formations', Bukharin too borrows Hilferding's false notion of a '*collective capitalist* social order … in which the capitalist class is united in a *unified trust* and we are dealing with an *organised*, though at the same time, from the standpoint of the classes, antagonistic economy'; where 'instead of an "anarchy of production"' there exists 'a plan that is rational from the standpoint of *Capital*'. In other words, Bukharin deals with the moments that make accumulation possible within this unified trust. This rational plan,

if the exchange of the commodity labour power abolished, then there can be no 'antagonism over distribution'. If it is conceded to Hilferding that antagonism over distribution exists in his 'general cartel', then it must also be conceded that the wage relation and thus also an economy based on profit, the *valorisation* of capital advanced, and thus also the law of value as the regulator of the exchange and distribution processes must remain in existence. *For how, otherwise, could the entire social surplus above necessary labour be at the disposal of the power holders in the general cartel, except on the basis of the law of value*, on the basis of the purchase of labour power as a commodity. If Hilferding wants to deny this, the only way out that remains for him would have to be the assumption that in his general cartel, with its 'regulated' production and 'things … allocated among people', this 'allocation' would take place purely by means of physical *force*, which leaves the working class with only the necessary means of subsistence and assigns the whole of the surplus to those who direct the general cartel. That would be a fine 'regulation of production'! If, however, this eventuality is excluded from his general cartel by Hilferding, then he has not explained to us any *other economic principle* by virtue of which the antagonism over distribution could operate and be constantly reproduced. There remains only the law of value and valorisation! This proves not only that antagonism over distribution will continue to exist in his general cartel, but also that no 'regulation' of production is possible. Considerations about the highest possible profitability would frustrate the proper disposition and 'allocation' of the elements of production, to the extent that this is required for the highest possible productivity. With the regulation of the whole system by value, the drive for valorisation, with a falling rate of profit, must lead to ever growing capital accumulation, until finally the whole system breaks down, because of overaccumulation. The breakdown would occur even more rapidly

writes Bukharin, ensures that '[n]otwithstanding this "underconsumption" of the masses, no crisis can arise, since *mutual demand* of all branches of production, and likewise *consumer demand*, that of the capitalists as well as of the workers, are given from the start' (Bukharin 1972b, p. 226). [Bukharin only emphasised '*collective capitalist*'.] The concept of 'demand' is necessarily linked to the correlative concept of supply and the market, consequently with at least two independent owners of the means of production, each of whom supplies one commodity while having a demand for the other. It is not apparent how demand (and its corresponding supply) can exist in a 'unified trust'. Secondly, however, a labour market, as well as the commodity market will also have to exist. For the workers' 'demand' presumes the existence of the capital relation. It is only because workers sell the commodity labour power on the labour market that they obtain as its equivalent, the wage, that is the fund that determines the scale of their demand as consumers. Where is the 'unified trust' when the commodity market and the labour market continue to exist!

in the 'general cartel' than in existing capitalism, because in the isolated capitalism of the general cartel no foreign trade and export of capital are possible at all and there are, consequently, no factors that weaken the breakdown tendency.

The magnificent conception of Marx's intellectual edifice is once more apparent here. In all pre-capitalist economic formations, where no commodities were produced, the economic process was a social *labour process* for the production of goods, use values. Only in capitalist commodity production has the economic process acquired a *double* character. It is a unity, simultaneously, of the *labour process* and the *process of valorisation*. The labour process is a technical process of production of use values, in which the means of production *MP* and living labour power *L* work together, and as such the 'labour process [is independent] of any specific social formation'. It is an eternal 'process between man and nature',[87] 'the universal condition for the metabolic interaction between man and nature, the everlasting nature imposed condition of human existence, and it is therefore independent of every form of that existence, or rather it is *common to all forms of society in which human beings live*'.[88] But along with this, the capitalist production process is simultaneously a *value creating* and *value distributing* process, a valorisation process, in which the elements of production of a given magnitude of value, $c + v$, are applied purely for the purpose of obtaining an *excess of value* over their own magnitude, a surplus value s. The valorisation process is peculiar to a specific, historical mode of production dependent on individual ownership by independent commodity producers. Thanks to the *dual structure of its foundations*, the capitalist production process is characterised by insoluble conflicts, incurable inner convulsions of the system, *which necessarily* stem *from its dual character*, from the immanent opposition between value and use value, between profitability and productivity, between the restricted possibilities for valorisation and the unlimited development of the productive forces, which necessarily leads to overaccumulation and insufficient valorisation, thus to the breakdown, the final catastrophe of the entire system.

Under the compulsion of overaccumulation and the competition that flows from it, on the one hand the technical level of production (the productive forces) is under constant development and for this purpose ever more capital is accumulated. On the other hand, it is apparent that surplus value is

87 Marx 1976b, p. 283.
88 Marx 1976b, p. 290. [Grossman's emphasis.]

insufficient to valorise the expanded capital, which results in lack of profitability and thus in the breakdown of the system of valorisation as a general phenomenon. But this opposition constitutes the '*differentia specifica*' – 'the bounds to bourgeois distribution'. The fact that capitalist production 'is compelled by its own immanent laws, on the one hand, *to develop the productive forces* as if production did not take place on a narrow restricted social foundation [of valorisation], while, on the other hand, it can develop these forces only within these narrow limits [= the limits to valorisation], is the *deepest and most hidden cause of crises*, of the crying contradictions within which bourgeois production is carried on and which, even at a cursory glance, reveal it as only a *transitional, historical form*. This is grasped … correctly by Sismondi … as a *contradiction* between production for the sake of production and distribution which makes absolute development of productivity impossible.'[89] It follows that the reference back to distribution, i.e. valorisation, excludes absolute development of the productive forces and therefore truly 'regulated' production.

The breakdown that results is, however, chiefly a breakdown of the *valorisation process* on the basis of the *process of value creation*, the law of value; what collapses is a form of distribution that is purely transitory and peculiar only to this historically specific mode of production, based on exchange transactions, but not the technical *labour process*. On the contrary: 'The production process, when separated from capital, is simply the labour process in general'.[90] The labour process $MP : L$, veiled in the capitalist valorisation process $c : v$, again reverts to exclusively being $MP : L$. This labour process, as an eternal form of production that is independent of specific social forms, continues to exist as a *technical process of production of use values*, even after the capitalist valorisation process has broken down, and will now be organised on a social (cooperative) basis. Finally freed from the principle of its dual construction, the production process is thereby at the same time freed from the inner convulsions and shocks that necessarily result from that dualism, from the opposition between the principles of productivity and profitability. Pursued on a social basis, the labour process will simply be a technical process that produces not surplus values but only use values. It has its own technical standards, therefore it does not calculate in values but in use values and the direct expenditure of labour time, by means of 'productive activity of a definite kind carried on with a definite aim',

89 Marx 1989c, p. 274. [Grossman's emphasis. '*Differentia specifica*' means 'the basis for distinguishing'.]
90 Marx 1981, p. 505.

that 'appropriates the materials of nature in a form adapted to his own needs'.[91] From being a labour and valorisation process it becomes an exclusively labour process, which determines the need for different products quantitatively and adapts the existing scale of the productive apparatus to needs calculated in this way, not indirectly through value but directly. Within such a production process there is no place for and no possibility of conceptions of value and price (regardless of whether prices are seen as 'real' or 'nominal'), since no exchange between independent commodity producers exists. Along with the *content* of the production process its *form of appearance* also necessarily changes. Calculating in terms of value is the adequate form of appearance of a mode of production whose economy is private and based on exchange between independent commodity owners, a mode of production that is 'regulated by value',[92] in which therefore the social interconnection of producers is established through the mediation of value; the process of calculating in terms of use values and of the immediate labour time required for their production will therefore be the necessary form of expression of every regulated, planned economy.[93] Where the social interconnection of individual production processes is direct and according to plan, there is no room for the law of value to function, since its most important task consists of the creation of this social interconnectedness. Social equilibrium *calculated in advance* does not have to be *subsequently* re-established by means of the mystical veil of value. 'The *veil is not removed* from the countenance of the social life-process, i.e. the process of material production, until it becomes production by freely associated men, and stands under their conscious and planned control.'[94] A 'regulated' society based on calculations of value and price, as portrayed in Hilferding's

91 Marx 1976b, pp. 133, 283. Marx criticises Ricardo for confusing the bourgeois mode of production, a 'mode of production which is dominated by exchange value', with one that produces use values or abundance. '[T]he production of *bourgeois* wealth [that is, of exchange value]', Marx writes, 'is something quite different from the production of "abundance", "of necessaries and luxuries" for the man who produces them, and this would have to be the case where production were only a means for satisfying the needs of the producers through *production dominated by use value alone*' (Marx 1989c p. 247). [Grossman's emphasis.]

92 Marx 1981, p. 1020.

93 About economic calculation in a socialist economy, Engels writes: 'The useful effects of the various articles of consumption, compared with one another and with the *quantities of labour* required for their production, will in the end determine the plan. People will be able to manage everything very simply, without the intervention of much vaunted "value"' (Engels 1987a, p. 295). [Grossman's emphasis.]

94 Marx 1976b, p. 173. [Grossman's emphasis.]

general cartel, is not only incompatible with these ideas of Marx as it is more generally with the fundamental ideas of his system; it is altogether inconceivable.

It will be Marx's immortal contribution to science, for all time to come, that he was the first to demonstrate *precisely* the insoluble contradictions of the existing economic order, that is the impossibility of 'regulating' production on its basis. He determined the elements that must bring about the downfall of this economic order. In doing this he achieved, in the field of economic theory, something that philosophers have always conceived as the goal of all knowledge and which Leibniz over 200 years ago formulated in this way: 'I have always said that the present is pregnant with the future, and that there is a perfect interconnection between things, no matter how distant they are from one another, so that someone who is sufficiently acute could read one from the other'.[95]

95 Leibniz 2015, p. 195.

APPENDIX

Corrections of Grossman's Calculations

Discrepancies in the corrected tables are due to rounding.

Table 1

Grossman's Original Calculationss

Year	Department	*c*	*v*	*k*	a_c	a_v	AV	*k/s* %	$(a_c+a_v)/s$ %	$s/(c+v)$ %
1	I	120,000	50,000	37,500	10,000	2,500	220,000	75.00	25.00	
	II	80,000	50,000	37,500	10,000	2,500	180,000	75.00	25.00	
	I+II	200,000	100,000	75,000	20,000	5,000	400,000	75.00	25.00	33.33
2	I	134,666	53,667	39,740	11,244	2,683	242,000	74.05	25.95	
	II	85,334	51,333	38,010	10,756	2,567	188,000	74.05	25.95	
	I+II	220,000	105,000	77,750	22,000	5,250	430,000	74.05	25.95	32.31
3	I	151,048	57,576	42,070	12,638	2,868	266,200	73.07	26.93	
	II	90,952	52,674	38,469	11,562	2,643	196,300	73.03	26.97	
	I+II	242,000	110,250	80,539	24,200	5,511	462,500	73.05	26.95	31.30
4	I	169,124	61,738	44,465	14,186	3,087	292,600	72.02	27.98	
	II	96,876	54,024	38,909	12,414	2,701	204,924	72.02	27.98	
	I+II	266,000	115,762	83,374	26,600	5,788	497,524	72.02	27.98	30.32

Year 4 in this table clearly contains errors, which contradict the assumptions of Bauer's and Grossman's schema. For I+II, c should be 266,200, likewise, a_c should be 26,620; therefore k should be 83,374, k/s should be 72.00 and $(a_c+a_v)/s$ should be 28.00. Consequently, the year 4 figures for c, k, a_c, k/s, $(a_c+a_v)/s$ and possibly and a_v in I and II are also wrong. It has not been possible to correct them on the basis of the information provided by Bauer and Grossman.

Table 1 Corrected

Even after straightforward arithmetical errors in the original table have been corrected, there are still difference between Bauer's table and the corrected table below, which satisfies all of Bauer's and Grossman's criteria. The errors are generally small.

Year	Department	*c*	*v*	*k*	a_c	a_v	AV	*k/s* %	$(a_c+a_v)/s$ %	*s/(c+v)* %
1	I	120,000	50,000	37,500	10,000	2,500	220,000	75.00	25.00	
	II	80,000	50,000	37,500	10,000	2,500	180,000	75.00	25.00	
	I+II	200,000	100,000	75,000	20,000	5,000	400,000	75.00	25.00	33.33
2	I	134,667	53,667	39,739	11,342	2,586	242,000	74.05	25.95	
	II	85,333	51,333	38,011	10,658	2,664	188,000	74.05	25.95	
	I+II	220,000	105,000	77,750	22,000	5,250	430,000	74.05	25.95	32.31
3	I	151,133	57,533	42,028	12,834	2,671	266,200	73.05	26.95	
	II	90,867	52,717	38,509	11,366	2,841	196,300	73.05	26.95	
	I+II	242,000	110,250	80,538	24,200	5,513	462,500	73.05	26.95	31.30
4	I	169,597	61,612	44,363	14,492	2,756	292,820	72.00	28.00	
	II	96,603	54,151	38,991	12,128	3,032	204,905	72.00	28.00	
	I+II	266,200	115,763	83,354	26,620	5,788	497,725	72.00	28.00	30.31

Formulae Used in Corrected Version of Table 1

After year 1, in year n.

Year	Department	*c*	*v*	*k*	a_c	a_v	AV
n	I	$(I+II)^n c - II^n c$	$(I+II)^n v - II^n v$	$(I+II)^n k - II^n k$	$(I+II)^n a_c - II^n a_c$	$(I+II)^n a_v - II^n a_v$	$(I+II)^n AV - II^n AV$
	II	$II^n AV - II^n v \times 2$	$(II^n AV - II^{n-1} c + II^{n-1} v \times 4)/6$	$(I+II)^n k/(I+II)^n v \times II^n v$	$(II^n v - II^n k) \times 0.8$	$(II^n v - II^n k) \times 0.2$	$(I+II)^n v + (I+II)^n k + (I+II)^n a_v$
	I+II	$I^{n-1} c \times 1.1$	$I^{n-1} v \times 1.05$	$(I+II)^n v - (I+II)^n a_c - (I+II)^n a_v$	$I^{n-1} c \times 1.1$	$I^{n-1} v \times 1.05$	$(I+II)^n c + (I+II)^n v \times 2$

Solve in the following order $(I+II)^n c$, $(I+II)^n v$, $(I+II)^n a_c$, $(I+II)^n a_v$, $(I+II)^n AV$, $(I+II)^n k$, $II^n AV$, $II^n v$, $II^n a_c$, $II^n a_v$ then the rest in any order

Table on page 140

Grossman's Original Calculations

Year	Department	c	v	k	a_c	a_v	AV
34	I	4,529,910	287,864	10,700	258,148	19,015	5,105,637
	II	111,579	212,440	441	206,000	6,600	536,460
	I+II	4,641,489	500,304	11,141	464,148	25,015	5,642,097
35	I	4,985,637	315,281	0	302,563	12,719	5,616,201
	II	120,000	210,038	0	208,000	2,038	540,574
	I+II	5,105,637	525,319	0	510,563	14,757 26,265 (required) 11,508 (deficit)	6,156,275

a_v in year 34 for I+II, is clearly a typo: 25,015 instead of 25,615. Cells with 0 indicate that the formulae Grossman used in previous years would have produced negative numbers in year 35.

Corrected

Year	Department	c	v	k	a_c	a_v	AV
34	I	4,327,608	390,963	8,439	378,907	3,617	5,109,534
	II	317,423	109,356	2,361	85,596	21,399	536,135
	I+II	4,645,031	500,319	10,800	464,503	25,016	5,645,669
35	I	4,789,723	415,382	0	421,001	3,779	5,620,487
	II	319,811	109,953	0	89,952	22,488	539,716
	I+II	5,109,534	525,335	0	510,953	14,381 26,267 (required) 11,885 (deficit)	6,160,204

Table 5

Grossman's Calculations and Figures

Year	*c*	*v* (*workers*)	*k*	a_c	a_v	*AV*
1	200,000	100,000	54,000	20,000	26,000	400,000
2	220,000	105,000	50,700	22,000	32,300	430,000
5	292,600	121,550	39,139	29,260	53,151	535,700
10	471,234	155,130	12,545	47,123	95,462	781,494
11	518,357	162,886	5,815	51,835	105,236	1,154,791
12	570,192	171,030	0	57,019	115,497	
13	627,211	179,581		[171,030 available] 172,516 (!) [required] 1,486 (deficit)		

It seems Grossman's formula for a_v was

(v in the next year × 0.2) + (v in the next year – initial v, which was 100,000)

Table 5 Corrected

Year	c	v (workers)	k	a_c	a_v	AV
1	200,000	100,000	54,000	20,000	26,000	400,000
2	220,000	105,000	50,240	22,000	32,760	430,000
3	242,000	110,250	44,772	24,200	41,278	462,500
4	266,200	115,763	37,133	26,620	52,010	497,725
5	292,820	121,551	26,736	29,282	65,532	535,921
6	322,102	127,628	12,847	32,210	82,571	577,358
7	354,312	134,010	–5,461	35,431	104,039	622,331
8	389,743	140,710		[134,101 available] 139,770 (!) [required] 5,461 (deficit)		

The formula for a_v in the corrected table is

> wage bill for the next year (= next year's wage rate, which increases by 20 % annually, × next year's workforce, which increases 5 % annually) – current year's wage bill

Table 8

Grossman's Calculations and Figures

Year	*c*	*v*	*Reserve army*	*k*	LC	*k*+LC	a_c	a_v
1	200,000	25,000	–	2,500	12,444	14,944	10,000	56
2	210,000	25,056	1,194	2,505	11,994	14,499	10,500	57
3	220,000	25,113	2,449	2,511	11,516	14,027	11,025	61
4	231,000	25,174	3,766	2,517	11,009	13,526	11,576	72
5	243,101	25,246	5,141	2,524	10,510	13,034	12,155	57
6	255,256	25,303	6,603	2,530	10,011	12,541	12,762	–
7	268,018	24,842	7,974	2,484	9,211	11,603	13,201	38
8	281,219	24,880	9,576	2,488	8,386	10,874	14,060	–
9	295,279	24,726	11,452		85,081		14,763	

Corrected

Year	*c*	*v*	*Reserve army*	*k*	LC	*k*+LC	a_c	a_v
1	200,000	25,000	0	2,500	12,443	14,943	10,000	57
2	210,000	25,057	1,193	2,506	11,994	14,500	10,500	57
3	220,500	25,114	2,449	2,511	11,520	14,032	11,025	57
4	231,525	25,171	3,770	2,517	11,020	13,537	11,576	57
5	243,101	25,228	5,160	2,523	10,493	13,016	12,155	57
6	255,256	25,285	6,622	2,529	9,937	12,465	12,763	57
7	268,019	25,343	8,160	2,534	9,350	11,884	13,401	58
8	281,420	25,400	9,777	2,540	8,732	11,272	14,071	58
9	295,491	25,458	11,478		85,489		14,775	

Table 8 Corrected and Extended

Year	c	v	*Reserve army*	k	LC	k+LC	a_c	a_v
1	200,000	25,000	0	2,500	12,443	14,943	10,000	57
2	210,000	25,057	1,193	2,506	11,994	14,500	10,500	57
3	220,500	25,114	2,449	2,511	11,520	14,032	11,025	57
4	231,525	25,171	3,770	2,517	11,020	13,537	11,576	57
5	243,101	25,228	5,160	2,523	10,493	13,016	12,155	57
6	255,256	25,285	6,622	2,529	9,937	12,465	12,763	57
7	268,019	25,343	8,160	2,534	9,350	11,884	13,401	58
8	281,420	25,400	9,777	2,540	8,732	11,272	14,071	58
9	295,491	25,458	11,478	2,546	8,080	10,626	14,775	58
10	310,266	25,516	13,267	2,552	7,393	9,945	15,513	58
11	325,779	25,574	15,148	2,557	6,670	9,227	16,289	58
12	342,068	25,632	17,126	2,563	5,907	8,471	17,103	58
13	359,171	25,690	19,206	2,569	5,104	7,673	17,959	58
14	377,130	25,749	21,392	2,575	4,259	6,834	18,856	59
15	395,986	25,807	23,691	2,581	3,369	5,949	19,799	59
16	415,786	25,866	26,107	2,587	2,431	5,018	20,789	59
17	436,575	25,925	28,647	2,592	1,445	4,037	21,829	59
18	458,404	25,984	31,317	2,598	406	3,004	22,920	59
19	481,324	26,043	34,123	2,604	−687	1,917	24,066	59

Table 9

Grossman's Calculations and Figures

Year	*c*	*v*	*Reserve army*	*k*	a_c	a_v	LC
1	200,000	25,000	–	2,500	10,000	56	12,444
2	210,000	25,056	1,194	2,505	14,700	535	7,316 balance 19,760
3	224,700	25,591	1,971	2,559	20,223	1,056	1,753 balance 21,513
4	244,923	26,647	2,293	2,664	26,941 credit 4,523	1,565 balance 16,990	−4,523
5	271,864	28,212	2,175	2,821	35,320 credit 12,167	2,238 balance 4,823	−12,167
6	307,184	30,450	1,456	3,045	44,077 credit 19,249	2,477 deficit −14,426	−19,249
7	{253,361}	{32,927}	{74}	0			

Corrected

Year	*c*	*v*	*Reserve army*	*k*	a_c	a_v	LC
1	200,000	25,000	0	2,500	10,000	57	12,443
2	210,000	25,057	1,193	2,506	14,700	535	7,316 balance 19,759
3	224,700	25,592	1,970	2,559	20,223	1,035	1,775 balance 21,534
4	244,923	26,627	2,313	2,663	26,942 credit 4,562	1,586 balance 16,971	−4,562
5	271,865	28,213	2,175	2,821	35,342 credit 12,169	2,219 balance 4,802	−12,169
6	307,207	30,432	1,475	3,043	46,081 credit 21,667	2,974 deficit −16,865	−21,667
7	{353,288}	{33,406}	{97}	0			

Table 10

Grossman's Original Calculations

Bauer's Table

Year	Department	*c*	*v*	*k*	*ac*	*av*	*AV*
1	I	120,000	50,000	37,500	10,000	2,500	220000
	II	80,000	50,000	37,500	10,000	2,500	180,000
	I+II	200,000	100,000	75,000	20,000	5,000	400,000
2	I	134,666	53,667	39,740	11,244	2,683	242,000
	II	85,334	51,333	38,010	10,756	2,567	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000
3	I	151,048	57,576	42,070	12,638	2,868	266,200
	II	90,952	52,674	38,469	11,562	2,643	196,300
	I+II	242,000	110,250	80,539	24,200	5,511	462,500
4	I	169,124	61,738	44,465	14,186	3,087	292,600
	II	96,876	54,024	38,909	12,414	2,701	204,924
	I+II	266,000	115,762	83,374	26,600	5,788	497,524

Variants

Year	Department	*c*	*v*	*k*	*ac*	*av*	*AV*
2a	I	140,000	51,000	35,750	12,000	3,250	242,000
	II	80,000	54,000	42,000	10,000	2,000	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000
2b	I	120,000	61,000	40,750	16,000	4,250	242,000
	II	100,000	44,000	37,000	6,000	1,000	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000
2c	I	110,000	66,000	38,750	22,000	5,250	242,000
	II	110,000	39,000	39,000	0	0	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000
2d	I	130,000	56,000	52,000	0	4,000	242,000
	II	90,000	49,000	25,750	22,000	1,250	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000

Table 10 original (*cont.*)

Year	Department	*c*	*v*	*k*	*ac*	*av*	*AV*
2e	I	130,000	56,000	56,000	0	0	242,000
	II	90,000	49,000	21,750	22,000	5,250	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000
2f	I	132,000	55,000	46,000	6,000	3,000	242,000
	II	88,000	50,000	31,750	16,000	2,250	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000
2g	I	134,000	54,000	40,073	11,244	2,683	242,000
	II	86,000	51,000	37,677	10,756	2,567	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000
3a	I	162,000	52,100	40,050	10,050	2,000	266,200
	II	80,000	58,150	40,489	14,150	3,511	196,300
	I+II	242,000	110,250	80,539	24,200	5,511	462,500
3b	I	120,000	73,100	60,539	10,050	2,511	266,200
	II	122,000	37,150	20,000	14,150	3,000	196,300
	I+II	242,000	110,250	80,539	24,200	5,511	462,500
3c	I	130,000	68,100	40,000	24,200	3,900	266,200
	II	112,000	42,150	40,539	0	1,611	196,300
	I+II	242,000	110,250	80,539	24,200	5,511	462,500
3d	I	130,000	68,100	38,389	24200	5511	266,200
	II	112,000	42,150	42,150	0	0	196,300
	I+II	242,000	110,250	80,539	24,200	5,511	462,500
4a	I	186,000	53,300	41,374	10,600	1,326	292,600
	II	80,000	62,462	42,000	16,000	4,462	204,924
	I+II	266,000	115,762	83,374	26,600	5,788	497,524
4b	I	120,000	86,300	70,912	10,600	4,788	292,600
	II	146,000	29,462	12,462	16,000	1,000	204,924
	I+II	266,000	115,762	83,374	26,600	5,788	497,524
4c	I	154,000	69,300	65,000	0	4,300	292,600
	II	112,000	46,462	18,374	26,600	1,488	204,924
	I+II	266,000	115,762	83,374	26,600	5,788	497,524
4d	I	154,000	69,300	69,300	0	0	292,600
	II	112,000	46,462	14,074	26,600	5,788	204,924
	I+II	266,000	115,762	83,374	26,600	5,788	497,524

Table 10 Corrected
Bauer's Table

Year	Department	*c*	*v*	*k*	*ac*	*av*	*AV*
1	I	120,000	50,000	37,500	10,000	2,500	220,000
	II	80,000	50,000	37,500	10,000	2,500	180,000
	I+II	200,000	100,000	75,000	20,000	5,000	400,000
2	I	134,667	53,667	39,739	11,342	2,586	242,000
	II	85,333	51,333	38,011	10,658	2,664	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000
3	I	151,133	57,533	42,028	12,834	2,671	266,200
	II	90,867	52,717	38,509	11,366	2,841	196,300
	I+II	242,000	110,250	80,538	24,200	5,513	462,500
4	I	169,597	61,612	44,363	14,492	2,756	292,820
	II	96,603	54,151	38,991	12,128	3,032	204,905
	I+II	266,200	115,763	83,354	26,620	5,788	497,725

Variants

Year	Department	*c*	*v*	*k*	*ac*	*av*	*AV*
2a	I	140,000	51,000	35,750	12,000	3,250	242,000
	II	80,000	54,000	42,000	10,000	2,000	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000
2b	I	120,000	61,000	40,750	16,000	4,250	242,000
	II	100,000	44,000	37,000	6,000	1,000	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000
2c	I	110,000	66,000	38,750	22,000	5,250	242,000
	II	110,000	39,000	39,000	0	0	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000
2d	I	130,000	56,000	52,000	0	4,000	242,000
	II	90,000	49,000	25,750	22,000	1,250	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000
2e	I	130,000	56,000	56,000	0	0	242,000
	II	90,000	49,000	21,750	22,000	5,250	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000

Table 10 corrected (*cont.*)

Year	Department	*c*	*v*	*k*	*ac*	*av*	*AV*
2f	I	132,000	55,000	46,000	6,000	3,000	242,000
	II	88,000	50,000	31,750	16,000	2,250	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000
2g	I	134,000	54,000	40,073	11,244	2,683	242,000
	II	86,000	51,000	37,677	10,756	2,567	188,000
	I+II	220,000	105,000	77,750	22,000	5,250	430,000
3a	I	162,000	52,100	40,050	10,050	2,000	266,200
	II	80,000	58,150	40,489	14,150	3,511	196,300
	I+II	242,000	110,250	80,539	24,200	5,511	462,500
3b	I	120,000	73,100	60,539	10,050	2,511	266,200
	II	122,000	37,150	20,000	14,150	3,000	196,300
	I+II	242,000	110,250	80,539	24,200	5,511	462,500
3c	I	130,000	68,100	40,000	24,200	3,900	266,200
	II	112,000	42,150	40,539	0	1,611	196,300
	I+II	242,000	110,250	80,539	24,200	5,511	462,500
3d	I	130,000	68,100	38,389	24,200	5,511	266,200
	II	112,000	42,150	42,150	0	0	196,300
	I+II	242,000	110,250	80,539	24,200	5,511	462,500
4a	I	186,200	53,310	38,386	12,633	2,291	292,820
	II	80,000	62,453	44,969	13,987	3,497	204,905
	I+II	266,200	115,763	83,355	26,620	5,788	497,725
4b	I	120,000	86,410	62,219	20,046	4,145	292,820
	II	146,200	29,353	21,135	6,574	1,643	204,905
	I+II	266,200	115,763	83,355	26,620	5,788	497,725
4c	I	154,000	69,300	65,000	0	4,300	292,820
	II	112,000	46,462	18,354	26,620	1,488	204,905
	I+II	266,200	115,763	83,355	26,620	5,788	497,725
4d	I	154,000	69,300	69,300	0	0	292,820
	II	112,000	46,462	14,054	26,620	5,788	204,905
	I+II	266,200	115,763	83,355	26,620	5,788	497,725

References

Abromeit, John 2011, *Max Horkheimer and the Foundations of the Frankfurt School*, Cambridge: Cambridge University Press.

Adler, Georg 1887, *Die Grundlagen der Karl Marx'schen Kritik der bestehenden Volkswirtschaft*, Tübingen: Laupp.

Aereboe, Friedrich 1927, 'Die Bevölkerungskapazität der Landwirtschaft', in *Verhandlungen des Vereins für Sozialpolitik in Wien 1926: Krisis der Weltwirtschaft. Übervölkerung Westeuropas. Steuerüberwälzung*, Schriften des Vereins für Socialpolitik, 172, edited by Franz Boese, Berlin: Duncker & Humblot, pp. 123–60.

Aihara, Shigeru 1949, 'Henryk Grossmann's "Reconstruction"', translated by Michael Schauerte, from Shigeru Aihara, *Chikuseki to kyoko*, Tokyo: Kadokawa Shoten, https://www.marxists.org/subject/japan/aihara/grossmann.htm, accessed 27 May 2019.

Alighieri, Dante 1984 [completed 1320], *The Divine Comedy. Volume 1: Inferno*, translated by Mark Musa, London: Penguin.

Altschul, Eugen 1927, 'Konjunkturaufschwung beim sinkenden Preisen', *Magazin der Wirtschaft*, 17 February, 3, no. 7: 235–88.

Altschul, Eugen 1928, 'Die moderne Konjunkturforschung in ihrer Beziehung zur theoretischen Nationalökonomie', in *Beiträge zur Wirtschaftstheorie. Zweiter Teil: Konjunkturforschung und Konjunkturtheorie: wissenschaftliche Gutachten*, edited by Karl Diehl, Berlin: Duncker & Humblot, pp. 165–84.

Annual Report of the Chief Inspector of Factories and Workshops for the Year 1925, 1926, Command Paper 2714, London: His Majesty's Stationery Office.

Anonymous 1694, *Vrankryks Val ofte gewisse Krenking*, Leiden.

Anonymous 1845, *The Currency Theory Reviewed in a Letter to the Scottish People on the Menaced Interference by Government with the Existing System of Banking in Scotland by a Banker in England*, Edinburgh: Tait.

Anonymous 1913, 'Die Akkumulation des Kapitals', *Dresdner Volkszeitung*, 21 and 22 January: 1 and 1.

Anonymous 1993, 'Decadence: The Theory of Decline or the Decline of Theory. Part 1', *Aufheben*, 2: 26–39.

Attewell, Paul A. 1984, *Radical Political Economy since the 1960s: A Sociology of Knowledge Analysis*, New Brunswick: Rutgers University Press.

Auerbach, Nelli 1922, *Marx und die Gewerkschaften*, Berlin: Vereinigung Internationaler Verlagsanstalten.

Bain, Harry Foster 1927, *Ores and Industry in the Far East: The Influence of Key Mineral Resources on the Development of Oriental Civilization*, New York: Council on Foreign Relations.

Ballod, Karl 1911, *Güterbedarf und Konsumtion*, Berlin: Schweitzer.

Ballod, Karl 1919, *Der Zukunftsstaat. Produktion und Konsum im Sozialstaat*, second edition, Stuttgart: Dietz.

Ballod, Karl 1927, *Der Zukunftsstaat: Wirtschaftstechnisches Ideal und volkswirtschaftliche Wirklichkeit*, fourth edition, Berlin: Laub.

Baran, Paul and Paul Sweezy 1966, *Monopoly Capital: An Essay on the American Economic and Social Order*, New York: Monthly Review Press.

Barth, Paul 1967 [1890], *Die Geschichtsphilosophie Hegels und del Hegelianer bis auf Marx and Hartmann*, Darmstadt: Wissenschaftliche Buchgesellschaft.

Bauer, Helene 1929, 'Ein neuer Zusammenbruchstheoretiker', *Der Kampf*, 22, no. 6, June: 270–80.

Bauer, Otto 2000 [1907], *The Question of Nationalities and Social Democracy*, translated by Joseph O'Donnell, Minneapolis: University of Minnesota Press.

Bauer, Otto 2012a [1910], 'Finance Capital', in *Discovering Imperialism: Social Democracy to World War I*, translated, edited and introduced by Richard B. Day and Daniel Gaido, Leiden: Brill, pp. 414–24.

Bauer, Otto 2012b [1913], 'The Accumulation of Capital', in *Discovering Imperialism: Social Democracy to World War I*, translated, edited and introduced by Richard B. Day and Daniel Gaido, Leiden: Brill, pp. 719–43.

Beer, Adolf 1860, *Allgemeine Geschichte des Welthandels. Erste Abteilung*, Wien: Braumüller.

Beer, Max 1957 [1923], *The General History of Socialism and Social Struggles. Volume 2: Social Struggles and Socialist Forerunners. Social Struggles and Modern Socialism*, New York: Russell & Russell.

Behrens, Fritz 1952, *Zur Methode der polischen Ökonomie: Ein Beitrag zur Geschichte der politischen Ökonomie*, Berlin: Akademie.

Behrens, Fritz 1976, *Grundriss der Geschichte der politischen Őkonomie. Band 2: Die Marxsche politische Őkonomie*, Berlin: Akademie.

Bendixen, Friedrich 1912 [1910], 'Die nationale Bedeutung der Kapitalbildung', in Friedrich Bendixen, *Geld und Kapital*, first edition, Jena: Duncker & Humblot, pp. 162–87.

Benedikt, Otto 1929, 'Die Akkumulation des Kapitals bei wachsender organische Zusammensetzung', *Unter dem Banner des Marxismus*, 3, no. 6: 869–911.

Bérard, Victor 1906, *British Imperialism and Commercial Supremacy*, translated by H.W. Foskett, London: Longmans.

Berlin, Isiah 2013 [1939], *Karl Marx*, Princeton: Princeton University Press.

Berliner Börsen-Courier 1927, 27 December.

Berliner Tageblatt 1927, 'Amerikanische Weltkontrolle über den Schwefelmarkt', morning edition, third supplement, 19 July: 18.

Bernstein, Eduard 1893, 'Der neueste Vernichter des Sozialismus', *Die Neue Zeit*, 11, no. 1, 16 and 17: 502–8 and 534–9.

Bernstein, Eduard 1899, 'Antwort', *Vorwärts*, 16, no. 73, 26 March: 9–10.

Bernstein, Eduard 1904 [1891], 'Zur Frage des ehernen Lohngesetzes', in *Zur Theorie und Geschichte des Socialismus: Gesammelte Abhandungen. Teil 1: Zur Theorie des Lohngesetzes und Verwandtes*, fourth edition, Berlin: Dümmler, pp. 1–109.

Bernstein, Eduard 1993 [1899], *The Preconditions of Socialism*, translated by Henry Tudor, Cambridge: Cambridge University Press.

Bhandari, Rakesh 2008, 'Grossman and Luxury Spending', *Science & Society*, 72, no. 1, January: 95–105.

Bienstock, Gregor 1928, 'Die Zukunft des Kapitalismus', *Die Gesellschaft*, 55: 416–25.

Blake, William J. 1939, *Marxian Economic Theory and Its Criticism*, New York: Cordon Company.

Bober, M.M. 1929, Review of Henryk Grossmann, *Das Akkumulations- und Zusammenbruchsgesetz des Kapitaliatischen Systems*, *American Economic Review*, 19, no. 4: 735–7.

Bocher, Amédée 1896, *La Fin de l'Europe*, Paris: Ollendorff.

Böhm-Bawerk, Eugen 1898, Review of Eugen von Bergmann, *Die Wirtschaftskrisen: Geschichte der nationalökonomischen Krisentheorien*, *Zeitschrift für Volkswirtschaft, Socialpolitik und Verwaltung*, 7: 132–3.

Böhm-Bawerk, Eugen 1949 [1896], *Karl Marx and the Close of his System*, translated by J. Bonar, in Eugen von Böhm-Bawerk, Rudolf Hilferding and Ladislaus von Bortkiewicz, *Karl Marx and the Close of His System* and *Böhm-Bawerk's Criticism of Marx*, New York: Kelley.

Boislandy-Dubern, Eugène 1919, 'Un part de la petite épargne dans les finances publiques americaines', *Journal de la Société de Statistique de Paris*, 60: 202–4.

Boldizzoni, Francesco 2020, *Foretelling the End of Capitalism: Intellectual Misadventures since Karl Marx*, Cambridge (Massachusetts): Harvard University Press.

Bonacchi, Gabriella M. 1976, 'The Council Communists between the New Deal and Fascism', *Telos*, 30, January: 43–72.

Bortkiewicz, Ladislaus von 1907, 'Zur Berichtigung der grundlegenden theoretischen Konstruktionen von Marx im III. Band des *Kapital*', *Jahrbücher für Nationalökonomie und Statistik*, 34: 319–35.

Bortkiewicz, Ladislaus von 1949 [1907], 'On the Correction of Marx's Fundamental Theoretical Construction in the Third Volume of *Capital*', translated by Paul Sweezy, in Eugen von Böhm-Bawerk and Rudolf Hilferding, *Karl Marx and the Close of his System* and *Böhm-Bawerk's Criticism of Marx*, New York: Kelley, pp. 199–221.

Bortkiewicz, Ladislaus von 1952 [1907], 'Value and Price in the Marxian System', translated by J. Kahane, http://classiques.uqac.ca/classiques/Bortkiewicz_ladislaus_von/value_and_price_marxian_system/value_price_marxian_system.pdf, accessed 16 July 2019.

Boudin, B. Louis 1907, *The Theoretical System of Karl Marx in the Light of Recent Criticism*, Chicago: Kerr.

Bouniatian, Mentor 1908, *Wirtschaftskrisen und Überkapitalisation: Eine Untersuchung über die Erscheinungsformen und Ursachen der periodischen Wirtschaftskrisen*, München: Reinhardt.

Boven, Pierre 1924, *Le prix normal. Essai sur la lutte contre les crises économiques et la spéculation illicite*, Paris: Payot.

Braeuer, Walter 1952, 'Henryk Großmann (1881–1950)', in Walter Braeuer, *Handbuch zur Geschichte der Volkswirtschaftslehre: ein bibliographisches Nachschlagewerk*, Frankfurt am Main: Klostermann, pp. 177–8.

Braeuer, Walter 1954, 'Henryk Grossmann als Nationalökonom', *Arbeit und Wirtschaft*, 8 no. 5, pp. 149–151.

Braeuer, Walter 1966 'Henryk Grossmann', in *Neue Deutsche Biographie volume 7*, edited by Historishe Kommission bei der Bayerischen Akademie der Wissenschaft, Berlin: Duncker & Humblot, pp. 158–159.

Brandt, Alexander von 1896, *Beiträge zur Geschichte der französischen Handelspolitik von Colbert bis zur Gegenwart*, Leipzig: Duncker & Humblot.

Brauer, Theodor 1929, Review of Henryk Grossmann *Das Akkumulations- und Zusammenbruchsgetz des kapitalistischen Systems*, *Literarischer Handweiser: Kritische Monatsschrift*, 65, July: 766–7.

Braunthal, Alfred 1927, *Die Entwicklungstendenzen der kapitalistischen Wirtschaft*, Berlin: Laubsche Verlagsbuchhandlung.

Braunthal, Alfred 1929, 'Der Zusammenbruch der Zusammenbruchstheorie', *Die Gesellschaft*, 6, no. 10: 289–304.

Bucharin, Nikolaj Ivanovic 1914, 'Eine Ökonomie ohne Wert', *Die Neue Zeit*, 32, no. 1, 22 and 23: 806–16 and 850–8.

Bucharin, Nikolaj Ivanovic 1926, *Fragen des sozialistischen Aufbaues*, Berlin: Hoym.

Büchele, Conrad 1867, *Geschichte des Welthandels*, Stuttgart: Maier.

Bukharin, Nikolai 1972 [1925], *Imperialism and the Accumulation of Capital*, with Rosa Luxemburg, *The Accumulation of Capital: An Anti-Critique*, edited by Kenneth Tarbuck, translated by Rudolf Wichmann, New York: Monthly Review Press.

Bukharin, Nikolai 1979 [1920], *The Politics and Economics of the Transition Period*, translated by Oliver Field, edited by Kenneth J. Tarbuck, London: Routledge & Kegan Paul.

Bukharin, Nikolai 2012 [1922], 'The Programme of the International and the Communist Parties', in *Toward the United Front: Proceedings of the Fourth Congress of the Communist International, 1922*, translated and edited by John Riddell, Leiden: Brill, pp. 479–501.

Bureau of Foreign Commerce, Department of Commerce 1925, *Statistical Abstract of the United States 1924*, 47.

Bureau of the Census, Department of Commerce 1913, *Thirteenth Census of the USA Taken in the Year 1910. Volume VIII: Manufactures 1909. General Report and Analysis*, Washington: Department of Commerce.

Bureau of the Census, Department of Commerce 1920, *Fourteenth Census of the United States Taken in the Year 1920. Volume VIII: Manufactures 1919: General Report and Analytical Tables*, Washington: Department of Commerce.

Burmester, Richard 1923, 'Zur Frage der Rohstoffversorgung der englischen Baumwollindustrie', *Weltwirtschaftliches Archiv*, 19: 297–315, 405–39.

Buttiglione, Rocco 1977, 'Prefazione', in Henryk Grossmann, *Il crollo del capitalismo: La legge dell'accumulazione e del crollo del sistema capitalista*, translated by Luigi Gianninazzi, Milano: Jaca Book, pp. ix–xxix.

Caligaris, Gastón 2018, 'Revisitando el debate marxista sobre el "derrumbe" del capitalismo. Una crítica metodológica', *Revista Izquierdas*, 39, April: 182–208.

Callinicos, Alex 2014, *Deciphering Capital: Marx's Capital and Its Destiny*, London: Bookmarks.

Carchedi, Guglielmo 2010, 'Zombie Capitalism and the Origin of Crises', *International Socialism*, 125: 113–26.

Carchedi, Guglielmo and Michael Roberts 2013a, 'A Critique of Heinrich's "Crisis Theory, the Law of the Tendency of the Profit Rate to Fall, and Marx's Studies in the 1870s"', *Monthly Review*, 11, April: 15–31.

Carchedi, Guglielmo and Michael Roberts 2013b, 'Marx's Law of Profitability: Answering Old and New Misconceptions', *Critique*, 41, no. 4: 571–97.

Carchedi, Guglielmo and Michael Roberts (eds) 2018, *World in Crisis a Global Analysis of Marx's Law of Profitability*, Chicago: Haymarket.

Caspary, Adolf 1930, Review of Henryk Grossmann *Das Akkumulations- und Zusammenbruchsgetz des kapitalistischen Systems*, 1929, *Weltwirtschaftliches Archiv*, 32, no. 2: 80–4.

Cassel, Gustav 1967 [1918], *The Theory of Social Economy*, translated by S.L. Barron, New York: Kelley.

Charasoff, Georg 1910, *Das System des Marxismus: Darstellung und Kritik*, Berlin: Bondy.

Chase, Stuart 1925, *The Tragedy of Waste*, New York: Macmillan.

Cherbuliez, Antoine-Elisée 1841, *Richesse ou pauvreté*, Paris: Gallois.

Chesnais, François 2016, *Finance Capital Today: Corporations and Banks in the Lasting Global Slump*, Leiden: Brill.

Clark, John Bates 1907, *Essentials of Economic Theory: As Applied to Modern Problems of Industry and Public Policy*, New York: Macmillan.

Clarke, Simon 1994, *Marx's Theory of Crisis*, Basingstoke: Macmillan.

Cogoy, Mario 1987a [1972], 'Neo-Marxist Theory, Marx, and the Accumulation of Capital', *International Journal of Political Economy*, 17, no. 2, Summer: 11–37.

Cogoy, Mario 1987b [1973], 'The Falling Rate of Profit and the Theory of Accumulation', *International Journal of Political Economy*, 17, no. 2, Summer: 54–74.

Cogoy, Mario 1987c [1973], 'The Theory of Value and State Spending', *International Journal of Political Economy*, 17, no. 2, Summer: 75–110.

Colonial Office 1897, *Trade of the British Empire and Foreign Competition*, Command Paper 8449, London: His Majesty's Stationary Office.

Corbach, Otto 1928, 'Krisis des Erfolgs', *Berliner Börsen-Courier*, 9 May: 1–2.

Cournot, Augustin 1927 [1838], *Researches into the Mathematical Principles of the Theory of Wealth*, translated by Nathaniel T. Bacon, New York: Macmillan.

Cullenberg, Stephen 1994, *The Falling Rate of Profit: Recasting the Marxian Debate*, London: Pluto.

Cunow, Heinrich 1898, 'Zur Zusammenbruchstheorie', *Die Neue Zeit*, 17, nos. 1, 12, 13, 14: 356–64, 396–403, 424–30.

Damaschke, Adolf 1917, *Die Bodenreform*, fourteenth edition, Jena: Fischer.

Darwin, Charles 1898, 'Letter to Alfred Russel Wallace, 22 December 1857', in *The Life and Letters of Charles Darwin. Volume 1*, edited by Francis Darwin, New York: Appleton, pp. 465–6.

Day, Richard 1981, *The 'Crisis' and the 'Crash': Soviet Studies of the West (1917)*, London: NLB.

Dehning, Ernst 1925, 'Chronik des Seeverkehrs', *Weltwirtschaftliches Archiv*, 22: 82–125.

Delaisi, Francis 1922, *Oil: Its Influence on Politics*, London: Labour Publishing Company.

Delden, Willy van 1915, *Studien über die indische Juteindustrie*, München and Leipzig: Dunker & Humblot.

Deutsche Bergwerkszeitung 1928, 90, 17 April.

Deutschmann, Christoph 1973a, *Der linke Keynesianismus*, Frankfurt am Main: Athenäum.

Deutschmann, Christoph 1974, 'Der Weltwirtschaftskrise als Problem der marxistischen Krisentheorie', in Paul Mattick, Christoph Deutschmann and Volkhard Brandes, *Krisen und Krisentheorien*, Frankfurt am Main: Fischer.

Diederichs, Rainer 2004, *Die dritte industrielle Revolution und die Krise des Kapitalismus: Zusammebruchstheorien in der neomarxistischen Diskussion*, Marburg: Tectum.

Diehl, Karl 1898, *Über das Verhältnis von Wert und Preis im ökonomischen System von Karl Marx*, Jena: Fischer.

Dietzel, Heinrich 1909, 'Ernten, Erntezyklus und Wirtschaftszyklus', *Handwörterbuch der Staatswissenschaften. Dritter Band: Binnenschiffahrt – Exportmusterlager*, third edition, edited by Johannes Conrad et al., Jena: Fischer, pp. 1091–102.

Dietzel, Heinrich 1921, *Vom Lehrwert der Wertlehre und vom Grundfehler der Marx'schen Verteilungslehre*, Leipzig and Erlangen: Deichert.

Dresdner Bank 1927, *Die wirtschaftlichen Kräfte der Welt*, Berlin: Dresdner Bank.

Dreßler, Walter 1915, *Der europäische Schiffahrtsverkehr nach Australien*, Munich: Duncker & Humblot.

Dublin, Louis J. 1925, 'The Statistician and the Population Problem', *Journal of the American Statistical Association*, 20, no. 149: 1–12.

Duret, Jean 1977 [1933], *Le Marxisme et les crises*, Paris: Éditions d' Aujourd' hui.

Dussel, Enrique 2001 [1988], 'Marx's Economic Manuscripts of 1861–63 and the "Concept" of Dependency', in Enrique Dussel, *Towards an Unknown Marx: A Commentary on the Manuscripts of 1861–63*, translated by Yolanda Angulo, edited by Fred Moseley, London: Routledge, pp. 205–34.

Dvolaitskii, Sholom Moiseevich 1923, 'K teorii rynka: Po povodu doklada T. Talgeimera na kongresse Kominterna', *Vestnik Kommunisticheskoi Akademii*, 3: 100–33.

Echeverría, Bolívar 1984, 'La Discusión de los años veinte en torno a la crisis: Grossmann y la teoría del derrumbe', in *La crisis del capitalismo: Teoría y práctica*, edited by Pedro López Díaz, México: Siglo Veintiuno-UNAM, pp. 173–93.

Eckstein, Gustav 2012 [1913], 'Rosa Luxemburg's *The Accumulation of Capital: A Critique*', in *Discovering Imperialism: Social Democracy to World War I*, translated, edited and introduced by Richard B. Day and Daniel Gaido, Leiden: Brill, pp. 699–712.

Edgar, Edward Mackay 1920, 'Future of Oil', *Sunday Times*, 18 April: 11–12.

Economist 1926, 'India – A Bright Outlook – Tasks of the New Viceroy – Depression in Bombay – Jute Shortage', 26 December: 194–5.

Economist 1927a, 'Industrial Profits', 15 January: 93–5.

Economist 1927b, 'The Viewpoint of Mr Coolidge', 10 December: 1019–20.

Ehrenberg, Richard 1892, 'Die Amsterdamer Aktienspekulation im 17. Jahrhundert', *Jahrbuch für Nationalökomie und Statistik*, series 3, 3, no. 6: 809–26.

Elster, Ludwig 1924, 'Der Bevölkerungsstand und die Bevölkerungsbewegung der neuesten Zeit bis zum Ausbruch des Weltkrieges', in *Handwörterbuch der Staatswissenschaften. Zweiter Band: Aufbewahrung von Wertpapieren-Börsenwesen*, fourth edition, edited by Ludwig Elster, Adolf Weber and Friedrich Wieser, Jena: Fisher, pp. 687–97.

Elster, Ludwig (ed.) 1931–33, *Wörterbuch der Volkswirtschaft*, three volumes, fourth edition, Jena: Fischer.

Engels, Frederick 1987a [1878], *Anti-Dühring: Herr Eugen Dühring's Revolution in Science*, in Karl Marx and Frederick Engels, *Marx and Engels Collected Works. Volume 25*, New York: International Publishers, pp. 1–309.

Engels, Frederick 1987b [1868], 'Letter to Karl Marx, 23 January 1868', in Karl Marx and Frederick Engels, *Marx and Engels Collected Works. Volume 47*, New York: International Publishers, pp. 525–6.

Engels, Frederick 1990 [1885], 'Marx and Rodbertus. Preface to the First German Edition of the Poverty of Philosophy by Karl Marx', in Karl Marx and Frederick Engels, *Marx and Engels Collected Works. Volume 26*, New York: International Publishers, pp. 278–91.

Esslen, Joseph Bergfried 1916, 'Zur Lehre von auswärtigen Handel', in *Festschrift für Lujo Brentano zum siebzigsten Geburtstag*, Munich and Leipzig: Duncker & Humblot, pp. 133–8.

Fawcett, Henry 1865, *The Economic Position of the British Labourer*, Cambridge and London: Macmillan.

Feiler, Arthur 1914, *Die Konjunktur-Periode 1907–1913 in Deutschland*, Jena: Fischer.

Feiler, Arthur 1929, 'Aussprache', *Verhandlungen des Vereins für Sozialpolitik in Zürich 1928: Auslandanleihen. Kredit und Konjunktur*, *Schriften des Vereins für Sozialpolitik. Band 175*, edited by Franz Boese, Berlin: Duncker & Humblot, pp. 71–6.

Fibonacci, Leonardo 2002 [1202], *Fibonacci's Liber Abaci: A Translation into Modern English of Leonardo Pisano's Book of Calculation*, translated by Laurence Sigler, New York: Springer.

Fircks, Arthur 1898, *Bevölkerungslehre und Bevölkerungspolitik*, Leipzig: Hirschfeld.

Fisher, Irving 1922, *The Purchasing Power of Money: Its Determination and Relation to Credit, Interest and Crises*, new and revised edition, New York: Macmillan.

Fischer, Louis 1926, *Oil Imperialism: The International Struggle for Petroleum*, New York: Hyperion Press.

Foster, John Bellamy 2013, 'Introduction to the Second Edition of The Theory of Monopoly Capitalism', *Monthly Review*, 65, no. 3, July/August: 107–34.

Foster, John Bellamy 2000, *Marx's Ecology: Materialism and Nature*, New York: Monthly Review Press.

Foster, John Bellamy and Robert W. McChesney 2010, 'Listen Keynesians, it's the system! Response to Palley', *Monthly Review*, 61, no. 11, April: 44–56.

FP 1928, 'Die Tagung des Bankierparlaments', *Berliner Tageblatt*, morning edition, Handels-Zeitung, second supplement, 11 September: 9.

Fran, Mara 1983, 'Beleska o piscu i delu', in Henryk Grossmann, *Zakon akumulacije i sloma kapitalistickog sistema* (*ujedno i teorija kriza*), translated by Mara Fran, Beograd: Prosveta, pp. 477–81.

Frankfurter Zeitung 1910, table on value of shares in rubber companies, 23 April.

Frankfurter Zeitung 1927a, balances of the large banks, 30 March.

Frankfurter Zeitung 1927b, polemic against the Reichsbank, 20 March, second morning edition.

Frankfurter Zeitung 1927c, retrospective on the previous year, late December.

Frankfurter Zeitung 1927d, upswing in Germany linked with that in Poland, Czechoslovakia, 7 December.

Frankfurter Zeitung 1927e, Swedish iron ore exports, 22 March, second morning edition.

Frankfurter Zeitung 1928a, report on economic developments in France, 5 May.

Frankfurter Zeitung 1928b, foundation of Steel Export Association of America and Copper Exporters Incorporated, 1 July.

Frankfurter Zeitung 1928c, report on the bankers convention in Köln.

Frankfurter Zeitung 1928d, report on the conference of the Verein für Sozialpolitik in Zürich, 14 September, second morning edition.

Frankfurter Zeitung 1928e, report on the NY stock exchange crash, 8 December, evening edition.

Frankfurter Zeitung 1928f, on Columete, sales organisation of Arbed and Terres Rouges, 22 April.

Frankfurter Zeitung 1928g, report on coal mining in the Ruhr, 'Handelsblatt', second morning edition, 10 June.

Frankfurter Zeitung 1928h, Professor Schmalenbach on monopolies, 5 June, first morning edition.

Frankfurter Zeitung 1928i, Altschul on the weakness of crisis theories, 747, 5 October.

Frankfurter Zeitung 1928j, Silverberg leader of heavy industry warns, 24 February, second morning edition.

Frankfurter Zeitung 1928k, attack of McFadden on the Federal Reserve, 2 October, evening edition.

Friedlaender, Martin 1927, 'Krisensymptome am Hypothekenmarkt', *Berliner Tageblatt*, morning edition, Handels-Zeitung, second supplement, 20 November: 9.

Fried, Adalbert 1926, 'Ultramarxismus', *Die Internationale*, 9, no. 22, 15 November: 703–4.

Fuchs, Christian 2012, 'Henryk Grossmann 2.0: A Critique of Paul Mason's Book "Post-Capitalism: A Guide to Our Future"', *tripleC*, 14, no. 1: 232–43, https://www.triple-c.at/index.php/tripleC/article/view/757/837, accessed 4 July 2019.

Gangl, Manfred 1987, *Politische Ökonomie und Kritische Theorie: Ein Beitrag zur theoretischen Entwicklung der Frankfurter Schule*, Frankfurt: Suhrkamp.

Gebhard, Ludwig 1927 'Die Entwicklungstendenzen der kontinentalen Rohstahlgemeinschaft', *Magazin der Wirtschaft*, 3, 2, 41, 13 October: 1562–7.

Gilbart, James William 1907 [1827 and 1834], *The History, Principles and Practice of Banking. Volume 1*, London: Bell.

Gillman, Joseph Moses 1957, *The Falling Rate of Profit, Marx's Law and its Significance to Twentieth-Century Capitalism*, London: Dobson.

Giussani, Paulo 2012, 'Lo schema numerico del "crollo" del capitalismo di Henryk Grossmann', in *Un omaggio a Paul Mattick: Contributi per una critica marxiana radicale dalla critica alle teorie delle crisi ad una nuova organizzazione economica e sociale*, Connessioni Edizioni, pp. 39–61, http://www.yumpu.com/it/document/read/14947283/un-omaggio-a-paul-mattick-contra-versus, accessed 16 June 2021.

Glaser, Ernst 1981, *Im Umfeld des Austromarxismus: Ein Beitrag zur Geschichte des österreichischen Sozialismus*, Wien: Europa Verlag.

Gliwic, Hipolit 1926, *Podstawy ekonomiki światowej. Tom 1: Sprawa surowców*, Warsaw: Tygodnik Przemysł i Handel.

Goethe, Johann Wolfgang von 2010 [1819], *West-East Divan*, translated by Martin Bidney, Binghamton: Global Academic Publishing.

Goldstein, Julius 1930, 'Fritz Sternbergs Imperialismus', *Unter dem Banner des Marxismus*, 4, no. 2: 219–28.

Gómez, Adolfo Lizárraga 1999, 'Henryk Grossmann y la actualidad de la teoría de Marx', *Economia y Sociedad*, 4, no. 5, January–June: 177–98.

Gramsci, Antonio 1995 [written 1932], *Further Selections from the Prison Notebooks*, edited and translated by Eric Boothman, London: Lawrence & Wishart.

Gramsci, Antonio 2008 [written 1932], *Il materialismo storico e la filosofia di Benedetto Croce*, https://www.liberliber.it/mediateca/libri/g/gramsci/il_materialismo_storico_e_la_filosofia_etc/pdf/il_mat_p.pdf, accessed 29 May 2019, based on *Il materialismo storico e la filosofia di Benedetto Croce*, third edition, Roma: Editori Riuniti, 1996.

Grossman, Henryk 1924, 'Zur Dynamik des kapitalistisches Wirtschaftsmechanismus', manuscript, folder I d 37, in 'Henryk Grossman III-155' collection, Archiwum Polskiej Akademii Nauk, Warszawa.

Grossman, Henryk 1924–26, 'Die Entwicklungstendenzen des "reinen" und empirischen Kapitalismus', manuscript, folders I d 38–44, in 'Henryk Grossman III-155' collection, Archiwum Polskiej Akademii Nauk, Warszawa.

Grossman, Henryk written circa 1929–32, Manuscripts in folder labelled 'Stellungnahme zur Kritik am Hauptwerk', Materiały Henryka Grossmanna, III-155, originally in folder 45, Archiwum, Polskiej Akademii Nauk, Warszawa.

Grossman, Henryk 1932 [1929], *Shihon no chikuseki narabi ni hokai no riron*, Tokyo: Kaizosha.

Grossman, Henryk 1933 [1929], 'Maruki shizumu no tame no toso goju-nen', translated by Yoshitaro Hirano *Chuo Koron*, 48, no. 3 (543): 2–65.

Grossman, Henryk 1994, 'The Breakdown Tendency and the Class Struggle', translated by Kenneth Lapides, *History of Political Economy*, 26, no. 2: 247–66.

Grossman, Henryk 2019a, *Henryk Grossman Works. Volume 1: Essays and Letters on Economic Theory*, translated by Dominika Balwin et al., edited and introduced by Rick Kuhn, Leiden: Brill.

Grossman, Henryk 2019b [1922, paper presented 1919], 'The Theory of Economic Crisis', in *Henryk Grossman Works. Volume 1: Essays and Letters on Economic Theory*, edited and introduced by Rick Kuhn, Leiden: Brill, pp. 44–9.

Grossman, Henryk 2019c [1923], 'The Economic System of Karl Marx (on the Fortieth Anniversary of His Death)', translated by Dominika Balwin, in *Henryk Grossman Works. Volume 1: Essays and Letters on Economic Theory*, edited and introduced by Rick Kuhn, Leiden: Brill, pp. 250–4.

Grossman, Henryk 2019d [1924], 'Simonde de Sismondi and His Economic Theories (a New Interpretation of His Thought)', translated by Ian Birchall, in *Henryk Grossman Works. Volume 1: Essays and Letters on Economic Theory*, edited and introduced by Rick Kuhn, Leiden: Brill, pp. 55–119.

Grossman, Henryk 2019e [1928], 'A New Theory of Imperialism and the Social Revolution', translated by Geoffrey McCormack and Julian Germann, in *Henryk Grossman Works. Volume 1: Essays and Letters on Economic Theory*, edited and introduced by Rick Kuhn, Leiden: Brill, pp. 120–76.

Grossman, Henryk 2019f [1929], 'The Change in the Original Plan for Marx's Capital and Its Causes', translated by Geoffrey McCormack, in *Henryk Grossman Works. Volume 1: Essays and Letters on Economic Theory*, edited and introduced by Rick Kuhn, Leiden: Brill, pp. 183–209.

Grossman, Henryk 2019g [written circa 1929–32], 'Notes for "Response to Criticisms of the Principle Work"', translated by Rick Kuhn, in *Henryk Grossman Works. Volume 1: Essays and Letters on Economic Theory*, edited and introduced by Rick Kuhn, Leiden: Brill, pp. 210–25.

Grossman, Henryk 2019h [1931–37], 'Letters to Frieda and Paul Mattick', translated by Ben Fowkes, Tom O'Lincoln and Rick Kuhn, in *Henryk Grossman Works. Volume 1: Essays and Letters on Economic Theory*, edited and introduced by Rick Kuhn, Leiden: Brill, pp. 226–75.

Grossman, Henryk 2019i [1931], 'Gold Production in the Reproduction Schema of Marx and Rosa Luxemburg', translated by David Meienreis, in *Henryk Grossman Works. Volume 1: Essays and Letters on Economic Theory*, edited and introduced by Rick Kuhn, Leiden: Brill, pp. 276–303.

Grossman, Henryk 2019j [1931], 'The Value-Price Transformation in Marx and the Problem of Crisis', translated by David Meienreis, in *Henryk Grossman Works. Volume 1: Essays and Letters on Economic Theory*, edited and introduced by Rick Kuhn, Leiden: Brill, pp. 304–31.

Grossman, Henryk 2019k [1932/1933], 'Fifty Years of Struggle over Marxism 1883–1932', translated by Rick Kuhn and Einde O'Callaghan, in *Henryk Grossman Works. Volume 1: Essays and Letters on Economic Theory*, edited and introduced by Rick Kuhn, Leiden: Brill, pp. 332–89.

Grossman, Henryk 2019l [1937], 'Letter to Max Horkheimer, 1 August 1937', translated by Nick Reynolds, in *Henryk Grossman Works. Volume 1: Essays and Letters on Economic Theory*, edited and introduced by Rick Kuhn, Leiden: Brill, pp. 432–4.

Grossman, Henryk 2019m [1941], 'Marx, Classical Political Economy and the Problem of Dynamics', translated by Rick Kuhn, in *Henryk Grossman Works. Volume 1: Essays and Letters on Economic Theory*, edited and introduced by Rick Kuhn, Leiden: Brill, pp. 469–533.

Grossman, Henryk 2019n [1943], 'The Evolutionist Revolt against Classical Economics', in *Henryk Grossman Works. Volume 1: Essays and Letters on Economic Theory*, edited and introduced by Rick Kuhn, Leiden: Brill, pp. 556–99.

Grossman, Henryk 2019o [1948], 'William Playfair, the Earliest Theorist of Capitalist Development', in *Henryk Grossman Works. Volume 1: Essays and Letters on Economic Theory*, edited and introduced by Rick Kuhn, Leiden: Brill, pp. 600–23.

Grossman, Henryk 2020a, *Henryk Grossman Works. Volume 2: Political Writings*, translated by Dominika Balwin et al., edited and introduced by Rick Kuhn, Leiden: Brill.

Grossman, Henryk 2020b [1906], 'Our Position on Electoral Reform', translated by Rick Kuhn, in *Henryk Grossman Works. Volume 2: Political Writings*, edited and introduced by Rick Kuhn, Leiden: Brill, pp. 137–46.

Grossman, Henryk 2020c [1907], *Bundism in Galicia*, translated by Floris Kalman and Rick Kuhn, in *Henryk Grossman Works. Volume 2: Political Writings*, edited and introduced by Rick Kuhn, Leiden: Brill, pp. 161–90.

Grossman, Henryk 2020d [1923], 'Notes on the History of Socialism in Poland Forty Years Ago', translated by Dominika Balwin, in *Henryk Grossman Works. Volume 2: Political Writings*, edited and introduced by Rick Kuhn, Leiden: Brill, pp. 194–207.

Grossman, Henryk 2020e [1931], 'Bolshevism', translated by Ben Fowkes, in *Henryk Grossman Works. Volume 2: Political Writings*, edited and introduced by Rick Kuhn, Leiden: Brill, pp. 139–291.

Grossman, Henryk 2020f [1932], 'Lenin (pseudonym for Ulyanov), Vladimir Ilyich', translated by Ben Fowkes, in *Henryk Grossman Works. Volume 2: Political Writings*, edited and introduced by Rick Kuhn, Leiden: Brill, pp. 410–418.

Grossmann, Henryk 1914, *Österreichs Handelspolitik mit Bezug auf Galizien in der Reformperiode 1772–1790*, in series *Studien zur Soziale-, Wirtschafts- und Verwaltungsgeschichte, herausgegeben von Carl Grünberg. 10. Heft*, Wien: Konegen.

Grossmann, Henryk 1916, 'Die Anfänge und geschichtliche Entwicklung der amtlichen Statistik in Österreich', *Statistische Monatsschrift*, new series 21: 331–423.

Grossmann, Henryk 1929, *Das Akkumulations- und Zusammenbruchsgesetz des kapitalistischen Systems* (*zugleich eine Krisentheorie*), Leipzig: Hirschfeld.

Grossmann, Henryk 1964, 'Industrialisierung …' in *Der Marxismus seine Geschichte in Dokumenten. 2: Ökonomie Soziologie*, edited by Iring Fetscher, München: Piper, pp. 375–81.

Grossmann, Henryk 1967 [1929], *Das Akkumulations- und Zusammenbruchsgesetz des kapitalistischen Systems* (*zugleich eine Krisentheorie*), Frankfurt am Main: Verlag Neue Kritik.

Grossmann, Henryk 1970 [1929], *Das Akkumulations- und Zusammenbruchsgesetz des kapitalistischen Systems* (*zugleich eine Krisentheorie*), Frankfurt am Main: Verlag Neue Kritik.

Grossmann, Henryk 1975 [1929, translation 1970], 'Considerazioni conclusive', translated by Giogorio Backhaus, in *Il Marxismo e il 'crollo' del capitalismo*, edited by Lucio Colletti, Roma: Laterza, pp. 341–87.

Grossmann, Henryk 1976, 'Wertübertragung und Außenhandel', in *Kritische Einführung in die Außenhandelstheorie*, edited by Wolfgang Bärtschi and Hanns-Dieter Jacobsen, Reinbeck: Rowohlt, pp. 122–30.

Grossmann, Henryk 1977 [1929], *Il crollo del capitalismo: La legge dell'accumulazione e del crollo del sistema capitalista*, translated by Luigi Gianninazzi, Milano: Jaca Book.

Grossmann, Henryk 1978 [1929], 'La ley de la acumulación y del derrumbe del sistema capitalista' conclusion only, in *El marxismo y el derrumbe del capitalismo: antología sistemática de textos de Marx, Bernstein, Cunow, Schmidt, Kautsky, Tugán-Baranovski, Lenin, Hilfderding, Bauer, Luxemburg, Burjarin y Grossmann*, edited by Lucio Colletti, translated by José Aricó, México: Siglo Veintiuno, pp. 434–69.

Grossmann, Henryk 1979a [1929], *The Law of Accumulation and Breakdown of the Capitalist System: Being also a Theory of Crises*, abridged and translated by Jairus Banaji, Bombay: Platform.

Grossmann, Henryk 1979b [1929], *La ley de la acumulación y del derrumbe del sistema capitalista: una teoría de la crisis*, translated by Juan Behrend, Jorge Tula, Irene del Carril and José Aricó, México: Siglo Veintiuno.

Grossmann, Henryk 1983 [translation first published 1956], *Zakon akumulacije i sloma kapitalističkog sistema* (*Ujedno i teorija kriza*), translated by Mara Fran, Beograd: Prosveta.

Grossmann, Henryk 1992 [1929], *The Law of Accumulation and Breakdown of the Capitalist System: Being also a Theory of Crises*, abridged and translated by Jairus Banaji, London: Pluto Press.

Grossman, Henryk 1994 [1929], 'The Breakdown Tendency and the Class Struggle', *History of Political Economy*, 26, no. 2: 247–66.

Grossmann, Henryk 2003 [1929], *Hukum Akumulasi dan Keruntuhan Sistem Kapitalisme: juga sebuah Teori Mengenai Krisis*, translated from Grossmann 1992, by 'Ira Iramanto' (i.e. Oey Hay Djoen), Jakarta: Hasta Mitra.

Grossmann, Henryk 2009a [1935], 'The Social Foundations of Mechanistic Philosophy and Manufacture', translated by Gabriella Shalit, in *The Social and Economic Roots of the Scientific Revolution: Texts by Boris Hessen and Henryk Grossmann*, edited by Gideon Freudenthal and Peter McLaughlin, Dordrecht: Springer, pp. 103–56.

Grossmann, Henryk 2009b [written 1930s and 1940s], 'Descartes and the Social Origins of the Mechanistic Concept of the World', in *The Social and Economic Roots of the Scientific Revolution: Texts by Boris Hessen and Henryk Grossmann*, edited by Freudenthal and Peter McLaughlin, Dordrecht: Springer, pp. 157–229.

Grossmann, Henryk 2010, *Il crollo del capitalismo: la legge dell'accumulazione e del crollo del sistema capitalista*, Milano: Mimesis.

Grossmann, Henryk 2017, *Schriften aus dem Nachlass. Mit weiteren Materialien und Dokumenten*, edited by Jürgen Scheele, Baden-Baden: Tectum.

Guerrero, Diego 1989, 'Una aproximacion polémica a la teoría marxista de la crisis económica', *Foro De Economía Política – Teoría Económica*.

Gurland, Arkadij 1930, 'Absatz und Verwertung im Kapitalismus: Zur neueren Diskussion des Zusammenbruchsproblems', *Klassenkampf*, 4, no. 3: 75–83.

Guyot, Yves 1927, 'La Conférence internationale des Cartels', *Journal des Économistes*, 15, no. 3: 273–99.

Hahn, Albert 1926, 'Zur Frage des volkswirtschaftlichen Erkenntnisinhalts der Bankbilanzziffern', *Vierteljahrshefte zur Konjunkturforschung*, 1, Ergänzungsheft 4: 49–70.

Hahn, Albert 1928, 'Grundprinzipien der monetären Konjunkturtheorie', in *Beiträge zur Wirtschaftstheorie. Zweiter Teil: Konjunkturforschung und Konjunkturtheorie: wissenschaftliche Gutachten*, edited by Karl Diehl, Berlin: Duncker & Humblot, pp. 153–64.

Halfeld, Adolf 1928a, 'Amerikas Wirtschaft bei Jahresbeginn', *Münchner Neueste Nachrichten*, Handels- und Industrie-Zeitung, 18 January.

Halfeld, Adolf 1928b, 'Das amerikanische Gold', *Münchner Neueste Nachrichten*, Handels- und Industrie-Zeitung, 25 January.

Halfeld, Adolf 1928c, 'Amerika und Kreditpolitik', *Münchner Neueste Nachrichten*, Handels- und Industrie-Zeitung, 10 April.

Handelmann, Heinrich 1856, *Geschichte der Insel Hayti*, Kiel: Homann.

Hansen, F.R. 1985, *The Breakdown of Capitalism: A History of the Idea in Western Marxism*, London, Routledge and Kegan Paul.

Harman, Chris 1995, *Economics of the Madhouse: Capitalism and the Market Today*, London: Bookmarks.

Harman, Chris 1999 [1984], *Explaining the Crisis: A Marxist Reappraisal*, London: Bookmarks.

Harman, Chris 2009, *Zombie Capitalism: Global Crisis and the Relevance of Marx*, London: Bookmarks.

Harms, Bernhard 1927, 'Strukturwandlungen der Weltwirtschaft', *Weltwirtschaftliches Archiv*, 25: 1–58.

Harms, Bernhard 1929, 'Wandlungen in der weltwirtschaftlichen Stellung Europas', in *Strukturwandlungen der Deutschen Volkswirtschaft: Vorlesungen gehalten in der Deutschen Vereinigung für Staatswissenschaftliche Fortbildung. Erster Band*, edited by Bernhard Harms, Berlin: Hobbing, pp. 3–16.

Harris, Abram L. 1945, 'Pure Capitalism and the Disappearance of the Middle Class', *Journal of Political Economy*, 47, no. 3, June: 328–56.

Harvey, David 1982, *The Limits to Capital*, Oxford: Blackwell.

Harvey, David 2016, 'Crisis Theory and the Falling Rate of Profit', in *The Great Financial Meltdown: Systemic, Conjunctural or Policy Created?*, edited by Turan Subasat, Cheltenham: Elgar, pp. 37–54.

Hashagen, Justus 1925, 'Die Japanpolitik der Vereinigten Staaten in ihren Anfängen', *Weltwirtschaftliches Archiv*, 22: 250–68.

Hayek, Friedrich August von 2002 [1928], 'Some Remarks on the Relation of Monetary Theory to Business Cycle Theory', in *Business Cycle Theory. Part I: Selected Texts 1860–1939. Volume 3: Monetary Theories of the Business Cycle*, edited by Harald Hagemann, London: Pickering and Chatto, pp. 161–97.

Hegemann, Werner 1908, *Mexikos Übergang zur Goldwährung: Ein Beitrag zur Geschichte des mexikanischen Geldwesens (1867–1906)*, Stuttgart and Berlin: Cotta.

Heinrich, Michael 2013, 'Crisis Theory, the Law of the Tendency of the Profit Rate to Fall, and Marx's Studies in the 1870s', *Monthly Review*, 64, no. 11, April: 15–31.

Heinrich, Michael 2014 [1991], *Die Wissenschaft vom Wert: Die Marxsche Kritik der politischen Ökonomie zwischen Wissenschaftlicher Revolution und klassischer Tradition*, sixth edition, Münster: Westfälisches Dampfboot.

Helander, Sven 1926, 'Der Tonnageüberfluß in der Weltwirtschaft', *Weltwirtschafticbes Archiv*, 24: 79–120.

Helfferich, Karl 1912, 'Die zeitweise übermässige Inanspruchnahme der Reichsbank: ihre Ursachen und die Mittel zur Abhilfe', *Verhandlungen des IV. Allgemeinen Deutschen Bankiertages zu München am 17. und 18. September 1912*, Berlin: Guttentag.

Henning, Christoph 2005, 'Übersetzungsprobleme. Eine wissenschaftstheoretische Plausiblisierung des Marxschen Gesetzes vom tendenziellen Fall der Profitrate', *Marx-Engels Jahrbuch, 2005*: 63–85.

Henning, Christoph 2014 [2005], *Philosophy after Marx: 100 Years of Misreadings and the Normative Turn in Political Philosophy*, translated by Max Henninger, Leiden: Brill.

Hennings, Klaus H. 1970 [1967], 'Henryk Grossmann: Eine biographische Notiz', in Henryk Grossmann 1967 [1929], *Das Akkumulations- und Zusammenbruchsgesetz des kapitalistischen Systems (zugleich eine Krisentheorie)*, Frankfurt am Main: Verlag Neue Kritik, pp. i–v.

Hermanin, Federico 1973, 'Über einige Aspekte der Akkumulations- und Krisentheorie bei Grossmann und Mattick', in Federico Hermanin, Michael Lauer and Axel Schürmann, *Drei Beiträge zur Methode und Krisentheorie bei Marx*, Giessen: Achenbach, pp. 87–111.

Hermberg, Paul 1928 'Wirtschaft und Arbeiterschaft', *Leipziger Volkszeitung*, 31 January: 5–6.

Herrmann, Kurt A. 1927, *Berliner Tageblatt*, 6 November.

Heß, Fritz 1925, 'Die neuere Entwicklung der Wollindustrie in den überseeischen Wollexportländern', *Weltwirtschaftliches Archiv*, 22: 134–66.

Heyd, Wilhelm 1879, *Geschichte des Levantehandels im Mittelalter. Erster Band*, Stuttgart: Cotta.

Hildebrand, Gerhard 1910, *Die Erschütterung der Industrieherrschaft und des Industriesozialismus*, Jena: Fischer.

Hilferding, Rudolf 1912, Review of Ludwig Mises, *Theorie des Geldes und des Umlaufsmittel*, *Die Neue Zeit*, 30, no. 2, 52, 27 September: 1024–7.

Hilferding, Rudolf 1926, 'Aussprache', *Verhandlungen des Vereins für Sozialpolitik in Wien 1926: Krisis der Weltwirtschaft, Übervölkerung Westeuropas, Steuerüberwälzung*, Schriften des Vereins für Sozialpolitik: Band 172, edited by Franz Boese, Berlin: Duncker & Humblot, pp. 110–15.

Hilferding, Rudolf 1927, 'Referat des Genossen Hilferding', *Leipziger Volkszeitung*, 27 May: 7–8.

Hilferding, Rudolf 1949 [1904], 'Böhm-Bawerk's Criticism of Marx', translated by Eden Paul and Cedar Paul, in Eugen von Böhm-Bawerk and Rudolf Hilferding, *Karl Marx and the Close of his System* and *Böhm-Bawerk's Criticism of Marx*, edited by Paul Sweezy, New York: Kelley, pp. 121–96.

Hilferding, Rudolf 1981 [1910], *Finance Capital: A Study of the Latest Phase of Capitalist Development*, translated by Morris Watnick and Sam Gordon, London: Routledge & Kegan Paul.

Hilferding, Rudolf 2017 [1927], 'The Tasks of Social Democracy in the Republic', in *Austro-Marxism: The Ideology of Unity. Volume II: Changing the World: The Politics of Austro-Marxism*, edited by Mark E. Blum and William Smaldone, Leiden: Brill, pp. 568–90.

Hirsch, Julius 1925, 'Der moderne Handel', in *Grundriß der Sozialökonomik. V. Abteilung: Handel, Transportwesen, Bankwesen. Teil II: Der moderne Handel, seine Organisation und Formen und die staatliche Binnen handelspolitik*, second edition, Mohr: Tübingen.

Hirsch, Julius 1926, 'Weltrohstoffsteuer', *Berliner Tageblatt*, morning edition, 15 July: 1–2.

Hobson, John Atkinson 1902, *Imperialism: A Study*, London: Nesbit.

Horkheimer, Max 1950, 'Preface', in Theodor W. Adorno, Else Frenkel-Brunswik, Daniel Levinson and Nevitt Sanford, *The Authoritarian Personality*, New York: Harper and Brothers, pp. ix–xii.

Horkheimer, Max and Theodor W. Adorno 2002 [1944], *Dialectic of Enlightenment: Philosophical Fragments*, translated by Edmund Jephcott, edited by Gunzelin Schmid Noerr, Stanford: Stanford University Press.

Howard, Michael Charles and John Edward King 1988, 'Henryk Grossmann and the Breakdown of Capitalism', *Science & Society*, 52, no. 3, Fall: 290–309.

Howard, Michael Charles and John Edward King 1989, *A History of Marxian Economics. Volume I: 1883–1929*, Princeton: Princeton University Press.

Humboldt, Alexander von 1852 [1819], *Personal Narrative of Travels to the Equinoctial Regions of America, during the Years 1799–1804. Vol. II*, translated by Thomasina Ross, London: Bohn.

Humboldt, Alexander von 2011 [1826], *Political Essay on the Island of Cuba: A Critical Edition*, edited by Vera M. Kutzinski and Ottmar Ette, translated by J. Bradford Anderson, Vera M. Kutzinski and Anja Becker, Chicago: University of Chicago Press.

Informations Sociales 1925, 'Les Travailleurs indigènes: Nigeria, La main-d'œuvre indigène des mines', 14, no. 8, 25 May: 385–6.

Informations Sociales 1926a, 'Union Sud-Africaine: les conditions d'emploi des indigènes dans les mines', 17, no. 7, 15 February: 260–3.

Informations Sociales 1926b, 'Les travailleurs indigènes: Rhodesia meridionale', 18, no. 4, 26 April: 142–9.

Informations Sociales 1926c, 'Les travailleurs indigènes: Congo belge', 18, no. 10, 7 June: 549–52.

Internationale Rundschau der Arbeit 1926, labour market conditions in Africa, ii, around pp. 648–51.

Iron Age 1928, 'Editorial: Overproduction, a Waiting Game', 1 March: 620–1.

Israel, Jonathan I. 2019, *The Enlightenment that Failed: Ideas, Revolution, and Democratic Defeat, 1748–1830*, Oxford: Oxford University Press

Itoh, Markoto 1980, *Value and Crisis: Essays on Marxian Economics in Japan*, New York: Monthly Review Press.

Jacoby, Russell 1975, 'The Politics of Crisis Theory: Towards a Critique of Automatic Marxism II', *Telos*, 23, Spring: 3–52.

Jaffé, Edgar 1914, 'Der treibende Faktor in der kapitalistischen Wirtschaftsordnung', *Archiv für Sozialwissenschaft und Sozialpolitik*, 40, no. 1: 3–29.

Jevons, William Stanley 1884, *Investigations in Currency and Finance*, London: Macmillan.

Jones, Peter 2014, 'The Falling Rate of Profit and the Great Recession', PhD thesis, Australian National University.

Juglar, Clément 1862, *Des crises commerciales et de leur retour périodique en France, en Angleterre et aux Etats-Unis*, Paris: Guillaumin.

Juglar, Clément and Pierre des Essars 'Crises financières et commerciales', in *Dictionnaire des finances. Tome I: A–D*, edited by Léon Say, Louis Foyot and A. Lanjalley, Paris: Berger-Levrault, pp. 1348–55.

Juvenal 1958 [early second century], *The Satires of Juvenal*, translated by Rolfe Humphries, Bloomington: Indiana University Press.

Kautsky, Karl 1899b, *Bernstein und das sozialdemokratische Programm: Eine Antikritik*, Dietz: Stuttgart.

Kautsky, Karl 1902, 'Krisentheorien', *Die Neue Zeit*, 20, nos. 2, 2, 3, 4, 5: 37–47, 76–81, 110–18, 133–43.

Kautsky, Karl 1908, 'Verelendung und Zusammenbruch: Die neuste Phase des Revisionismus', *Die Neue Zeit*, 26, nos. 2, 42, 43: 540–51 and 607–12.

Kautsky, Karl 1909a, *Der Weg zur Macht Politische Betrachtungen über das Hineinwachsen in die Revolution*, second edition, Berlin: Buchhandlung Vorwärts.

Kautsky, Karl 1909b, *The Road to Power*, translated by A.M. Simons, Chicago: Bloch.

Kautsky, Karl 1909c, 'Vorwort zur deutschen Ausgabe', in Louis B. Boudins, *Das theoretische System von Karl Marx*, Stuttgart: Dietz, pp. vii–xx.

Kautsky, Karl 1911, 'Finance-Capital and Crises', *Marxists Internet Archive*, www.marxists.org/archive/kautsky/1911/xx/finance.htm, accessed 4 February 2012.

Kautsky, Karl 1926, 'Vorwort zur Volksausgabe', in Karl Marx, *Das Kapital: Kritik der polischen Oekonomie: Zweite Band*, Berlin: Dietz, pp. ix–xxxi.

Kautsky, Karl 1927, *Die materialistische Geschichtsauffassung. Zweiter Band, Der Staat und die Entwicklung der Menschheit*, Berlin: Dietz.

Kautsky, Karl 1988 [1927], *The Materialist Conception of History*, translated by Raymond Meyer and John H. Kautsky, abridged, annotated and introduced by John H. Kautsky, New Haven: Yale University Press.

Keltie, John Scott and M. Epstein 1921, *Statesman's Year-book*, London: Macmillan.

Kennedy, Tony 1992, 'Introduction', in Henryk Grossman, *The Law of Accumulation and Breakdown of the Capitalist System: Being also a Theory of Crises*, abridged and translated by Jairus Banaji, London: Pluto Press, pp. 1–27.

Kestner, Fritz 1912, *Der Organisationzwang. Eine Untersuchung über die Kampfe zwischen den Kartellen und Außenseitern*, Berlin: Heymann.

Keynes, John Maynard 1981 [1926], 'The Control of Raw Materials by Governments', in John Maynard Keynes, *The Collected Writings of John Maynard Keynes. Volume XIX: Activities 1922–1929, Return to the Gold Standard and Industrial Policy. Part II*, London: Macmillan, pp. 546–52.

Kleinert, Andreas 2009, 'Der messende Luchs: Zwei verbreitete Fehler in der Galilei-Literatur', *NTM Zeitschrift für Geschichte der Wissenschaften, Technik und Medizin*, 17, no. 2, May: 199–206.

Kleinwächter, Friedrich 1883, *Die Kartelle: Ein Beitrag zur Frage der Organisation der Volkswirtschaft*, Innsbruck: Wagner.

Kliman, Andrew 2007, *Reclaiming Marx's 'Capital': A Refutation of the Myth of Inconsistency*, Lanham, MD: Lexington.

Kliman, Andrew 2011, *The Failure of Capitalist Production: Underlying Causes of the Great Recession*, London: Pluto.

Korsch, Karl 1973a [1933], 'Über einige grundsätzliche Voraussetzungen für eine materialistische Diskussion der Krisentheorie', in Karl Korsch, Paul Mattick and Anton Pannekoek, *Zusammenbruchstheorie des Kapitalismus oder Revolutionäres Subjekt*, Berlin: Karin Kramer, pp. 97–8.

Korsch, Karl 1973b [1933], 'Die Grundlagen einer revolutionären Krisentheorie', in Karl Korsch, Paul Mattick, and Anton Pannekoek, *Zusammenbruchstheorie des Kapitalismus oder revolutionäres Subjekt*, Berlin: Karin Kramer, pp. 71–90.

Korsch, Karl 1977 [1933], 'Some Fundamental Presuppositions for a Materialist Discussion of Crisis Theory', translated by Karl-Heinz Otto and Andrew Giles-Peters, in Karl Korsch, *Karl Korsch: Revolutionary Theory*, Austin: University of Texas Press, pp. 181–6.

Kostede, Norbert 1974, 'Akkumulation und Mittelklassen: Zur Diskussion über die Theorie der neuen Mittelklassen', *Probleme des Klassenkampfs*, 4, no. 2: 1–49.

Kowalewsky, Maxime Maximovich 1901–04, *Die ökonomische Entwicklung Europas bis zum Beginn der kapitalistischen Wirtschaftsform*, seven volumes, translated by Leo Motzkin, Berlin: Prager.

Kowalik, Tadeusz 1960, 'Henryk Grossman: polsko-niemiecki teoretyk ekonomii marksistowskiej', *Zycie gospodarcze*, 16, 17 April: 2.

Kowalik, Tadeusz 1992, *Historia ekonomii w polsce*, Wroclaw: Zaklad Narodowy Imienia Ossolinskich.

Krahl, Hans-Jürgen 2008 [1971, written 1966–67], 'Bemerkungen zur Akkumulation und Krisentendenz des Kapitals', in Hans-Jürgen Krahl, *Hans-Jürgen Krahl, Konstitution und Klassenkampf zur historischen Dialektik von bürgerlichen Emanzipation und proletarischer Revolution: Schriften, Reden und Entwürfe aus den Jahren 1966–1970*, Frankfurt am Main: Neue Kritik, pp. 84–99.

Kraus 1930, 'Die marxistische Zusammenbruchstheorie', *Die Internationale*, 13, no. 1/2: 53–9; 13, no. 3: 89–96; and 13, no. 4: 122–5.

Krause, Werner and Günther Rudolph 1980, *Grundlinien des ökonomischen Denkens in Deutschland 1848–1945*, Berlin: Akademie.

Kröll, Michael 1926, 'Aussprache', *Verhandlungen des Vereins für Sozialpolitik in Wien 1926: Krisis der Weltwirtschaft, Übervölkerung Westeuropas, Steuerüberwälzung*, Schriften des Vereins für Sozialpolitik: Band 172, edited by Franz Boese, Berlin: Duncker & Humblot, pp. 214–22.

Krüger, Karl and Guido R. Poschardt 1926, *Die Erdölwirtschaft der Welt*, Stuttgart: Schweizerbart.

Kühne, Karl 1979 [1972], *Economics and Marxism. Volume II: The Dynamics of the Marxian System*, translated by Robert Shaw, London: Macmillan.

Kuhn, Rick 1995, 'Capitalism's Collapse: Henryk Grossmann's Marxism', *Science & Society*, 59, no. 2, Summer: 174–93.

Kuhn, Rick 1997, 'Grossmann on Class Struggle, Beyond Exegesis: A Response to Lapides', *Science & Society*, 61, no. 2, Summer: 236–43.

Kuhn, Rick 2000, 'Henryk Grossman, a Marxist Activist and Theorist: On the 50th Anniversary of His Death', in *Value, Capitalist Dynamics and Money: Research in Political Economy. 18*, edited by Paul Zarembka, New York: Elsevier Science, pp. 111–70.

Kuhn, Rick 2004, 'Economic Crisis and Socialist Revolution: Henryk Grossman's Law of Accumulation, its First Critics and his Responses', in *Neoliberalism in Crisis, Accumulation and Rosa Luxemburg's Legacy: Research in Political Economy. 21*, edited by Paul Zarembka and Susanne Soederberg, Amsterdam: Elsevier, pp. 181–22.

Kuhn, Rick 2007, *Henryk Grossman and the Recovery of Marxism*, Chicago: University of Illinois Press.

Kuhn, Rick 2008, 'The Problem is Capitalism, Not Just the Banks', *MRZine*, 17 October, https://mronline.org/2008/10/17/the-problem-is-capitalism-not-just-the-banks/, accessed 2 July 2019.

Kuhn, Rick 2009, 'Economic Crisis, Henryk Grossman and the Responsibility of Socialists', *Historical Materialism*, 17, no. 2: 3–34.

Kuhn, Rick 2013, 'Introduction to "The Change in the Original Plan for Marx's Capital and Its Causes"', *Historical Materialism*, 21, no. 3: 117–37.

Kuhn, Rick 2016, 'Henryk Grossman and Critical Theory', *History of the Human Sciences*, 29, no. 2: 42–59.

Kuhn, Rick 2019, 'Introduction', in Henryk Grossman, *Henryk Grossman Works. Volume 1: Essays and Letters on Economic Theory*, edited and introduced by Rick Kuhn, translated by Dominika Balwin et al., Leiden: Brill, pp. 1–41.

Kumpmann, Karl 1925, 'Arbeitslosigkeit und Arbeitslosenversicherung', *Handwörterbuch der Staatswissenschaften. Erster Band: Abbau–Assignaten*, fourth edition, edited by Ludwig Elster, Adolf Weber and Friedich Wieser, Jena, pp. 791–824.

Kurz, Robert 2014 [1986], 'The Crisis of Exchange Value: Science as Productivity, Productive Labor, and Capitalist Reproduction', in *Marxism and the Critique of Value*, edited by Neil Larsen, Mathias Nilges, Josh Robinson and Nicholas Brown, Chicago: MCM' Publishing, pp. 17–75.

Kurz, Robert 1999, *Schwarzbuch Kapitalismus: Ein Abgesang auf die Marktwirtschaft*, Frankfurt am Main: Eichborn.

Landauer, Carl 1959, *European Socialism: A History of Ideas and Movements from the Industrial Revolution to Hitler's Seizure of Power. Volume II: The Socialist Struggle against Capitalism and Totalitarianism*, Berkeley and Los Angeles: University of California Press.

Lange, Oscar Ryszard 1963 [1959], *Political Economy. Volume 1: General Problems*, Oxford: Pergamon.

Lapides, Kenneth 1994, 'Henryk Grossmann on Marx's Wage Theory and the "Increasing Misery" Controversy', *History of Political Economy*, 26, no. 2: 239–46.

Lapides, Kenneth 1997, 'Grossmann's Model of Capitalist Breakdown: A False View of Marx's Wage Theory', *Science & Society*, 61, no. 2, Summer: 229–35.

Laspeyres, Étienne 1863, *Geschichte der volkswirthschaflichen Anschauungen der Niederländer und ihrer Literatur zur Zeit der Republik*, Leipzig: Hirzel.

Laurat, Lucien 1931, 'Le movement cyclique de la production moderne', *La critique sociale*, 1, March: 5–8.

Lauterbach, Albert 1931, 'Zur Problemstellung des Imperialismus', *Archiv fur Sozialwissenschaft und Sozialpolitik*, 65: 580–99.

Lawson, W.R. 1909, 'The Past 25 Years in the City', *Financial Times*, 13 February, 10.

L'Espagnol de la Tramerye, Pierre 1924, *The World Struggle for Oil*, translated by C. Leonard Leese, New York: Knopf.

Lederer, Emil 1922, *Grundzügen der ökonomischen Theorie*, Tübingen: Mohr.

Lederer, Emil 1925, 'Konjunktur und Krisen', in Carl Brinkmann et al., *Grundriß der Sozialökonomie. IV. Abteilung: Spezifische Elemente der modernen kapitalistischen Wirtschaft, I Teil*, Tübingen: Mohr, pp. 355–413.

Lederer, Emil 1928, 'Zur morphologie der Krisen', in *Die Wirtschaftstheorie der Geg-*

enwart. Band IV: Konjunkturen und Krisen, internationaler Verkehr, Hauptprobleme der Finanzwissenschaft, ökonomische Theorie des Sozialismus, edited by Hans Mayer, Wien: Springer, pp. 1–16.

Leibniz, Gottfried Wilhelm 1768, *Opera Omnia. Tomus Quartus*, Genève: Fratres de Tournes.

Leibniz, Gottfried Wilhelm 1989, 'Letter to Coste on Human Freedom', in Gottfried Wilhelm Leibniz, *Philosophical Essays*, translated by Roger Ariew and Daniel Garber, Indianapolis: Hackett, pp. 193–6.

Leichter, Otto 1923, *Die Wirtschaftsrechnung in der sozialistischen Gesellschaft*, Vienna: Verlag der Wiener Volksbuchhandlung.

Lenin, Vladimir Ilyich 1964a [1915], 'On the Slogan for a United States of Europe', in Vladimir Ilyich Lenin, *Collected Works. Volume 21*, Moscow: Progress, pp. 339–43.

Lenin, Vladimir Ilyich 1964b [1917], *Imperialism, the Highest Stage of Capitalism: A Popular Outline*, in Vladimir Ilych Lenin, *Collected Works. Volume 22*, Moscow: Progress, pp. 185–304.

Lenin, Vladimir Ilyich 1964c [1915], 'The Collapse of the Second International', in Vladimir Ilych Lenin, *Collected Works. Volume 21*, Moscow: Progress, pp. 205–59.

Lenin, Vladimir Ilyich 1966 [1920], 'Report on the International Situation and the Fundamental Tasks of the Communist International', in Vladimir Ilyich Lenin, *Collected Works. Volume 31*, Moscow: Progress, pp. 215–34.

Leonid, 1928, 'Der Kampf um die Eisenerzvorräte der Welt', *Die Internationale*, 11, no. 6: 177–81.

Leroy-Beaulieu, Paul 1876, 'De l'organisation des sociétés anonymes en france. Troisième article: les banques de dépots', *L'Économiste français*, 1, no. 25, 17 June: 773–5.

Leroy-Beaulieu, Paul 1900, *The Awakening of the East: Siberia–Japan–China*, translated by Richard Davey, London: Heinemann.

Leroy-Beaulieu, Paul 1913, *La question de la population*, Paris: Alcan.

Lescure, Jean 1910, *Des crises générales et périodiques de surproduction*, second edition, Paris: Larose & Tenin.

Lescure, Jean 1928, 'Krisenlehre', in *Die Wirtschaftstheorie der Gegenwart: Band IV. Konjunkturen und Krisen*, edited by Hans Mayer, Frank A. Fetter and Richard Reisch, Wien: Springer, pp. 32–48.

Levy, Benas 1928, 'Baumwolle, Baumwoll-Industrie und Grosshandel im Jahre 1927', *Berliner Tageblatt*, evening edition, Handels-Zeitung, second supplement, 4 January: 7.

Levy, Hermann 1927, *Monopole, Kartelle und Trusts in der Geschichte und Gegenwart der englischen Industrie*, second edition, Jena: Fischer.

Lewin, J.D. 1927, 'Zur Frage der Wandlung des englischen Kapitalismus', *Die Kommunistische Internationale*, 8, no. 4: 171–7.

Lexis, Wilhelm 1894, 'Ueberproduktion', in *Handwörterbuch der Staatswissenschaften.*

Sechster Band: Statistik–Zwischenhandel, first edition, edited by Johannes Conrad et al., Jena: Fischer, pp. 295–301.

Lexis, Wilhelm 1911, 'Krisen', in *Wörterbuch der Volkswirtschaft. Zweiter Band: Kabel–Zwecksteuer*, edited by Ludwig Elster, third edition, Jena: Fischer, pp. 205–12.

Lexis, Wilhelm 1913 [1910], *Allgemeine Volkswirtschaftslehre*, second edition, Leipzig: Teubner.

Liebknecht, Wilhelm 1963, 'Letter to Friedrich Engels, 20 January 1868', in *Wilhelm Liebknecht: Briefwechsel mit Karl Marx und Friedrich Engels*, Hague: Mouton, pp. 87–9.

Liefmann, Robert 1912, 'Theorie des Sparens und der Kapitalbildung', *Jahrbuch für Gesetzgebung, Verwaltung und Volkswirtschaft im Deutschen Reiche*, 36: 1565–642.

Liefmann, Robert 1922 [1905], *Kartelle und Trusts und die Weiterbildung der volkswirtschaftlichen Organisation*, fifth edition, Stuttgart: Moritz.

Liefmann, Robert 1928, 'Konjunkturforschung und Konjunkturpolitik vom Standpunkt einer dynamisch-individualistischen Wirtschaftstheorie', in *Beiträge zur Wirtschaftstheorie. Zweiter Teil: Konjunkturforschung und Konjunkturtheorie: wissenschaftliche Gutachten*, edited by Karl Diehl, Berlin: Duncker & Humblot, pp. 39–86.

Liefmann, Robert 2001 [1905], *Cartels, Concerns and Trusts*, Kitchener: Batoche.

Livshits, Boris 1929, Review of Henryk Grossmann *Das Akkumulations- und Zusammenbruchsgetz des kapitalistischen Systems*, *Vestnik Kommunisticheskaia akademiia*, 35–36: 351–66.

Lohoff, Ernst 1988, 'Der Zusammenbruch einer Zusammenbruchstheorie: Henryk Grossmann und die Marxschen Reproduktionsschemata', *Marxistische Kriktik*, 5, December: 59–118.

Losch, Hermann 1923, *Die Grössengrenze der Erdbevölkerung*, Stuttgart: Kohlhammer.

Löwe, Adolf 1926, 'Wie ist Konjunkturtheorie überhaupt möglich?', *Weltwirtschaftliches Archiv*, 24: 165–97.

Löwe, Adolf 2002 [1928], 'On the Influence of Monetary Factors on the Business Cycle', in *Business Cycle Theory. Part 1: Selected Texts 1860–1939. Volume 3: Monetary Theories of the Business Cycle*, edited by Harald Hagemann, London: Pickering and Chatto, pp. 199–211.

Ludwig, E. 1927, 'Theorie des Imperialismus oder Bevölkerungstheorie', *Die Internationale*, 10, no. 2/3, 1 February: 73–9.

Lufft, Hermann A.L. 1926, 'Die weltwirtschaftlichen Bindungen der Vereinigten Staaten von Amerika', *Weltwirtschaftliches Archiv*, 24: 273–309.

Luxemburg, Rosa 1900, 'Die "deutsche Wissenschaft" hinter den Arbeitern', *Die Neue Zeit*, 18, nos. 2, 51 and 52: 740–7 and 773–82.

Luxemburg, Rosa 2008a [1899, 1908], *The Essential Rosa Luxemburg: Reform or Revolution and The Mass Strike*, Chicago: Haymarket.

Luxemburg, Rosa 2008b [1899, 1908], *Social Reform or Revolution*, translated by Integer, in Rosa Luxemburg, *The Essential Rosa Luxemburg: Reform or Revolution and The Mass Strike*, Chicago: Haymarket, pp. 41–104.

Luxemburg, Rosa 2013 [1925, written 1907–12], *Introduction to Political Economy*, in Rosa Luxemburg, *The Complete Works of Rosa Luxemburg. Volume I, Economic Writings 1*, translated by David Fernbach, edited by Peter Hudis, ebook, London: Verso.

Luxemburg, Rosa 2015a, *The Accumulation of Capital: A Contribution to the Economic Theory of Imperialism*, in Rosa Luxemburg, *The Complete Works of Rosa Luxemburg. Volume II, Economic Writings 2*, translated by Nicholas Gray, edited by Peter Hudis and Paul Le Blanc, London: Verso, pp. 6–342.

Luxemburg, Rosa 2015b [1921, written 1915], *The Accumulation of Capital, Or, What the Epigones Have Made out of Marx's Theory – An Anti-Critique*, in Rosa Luxemburg, *The Complete Works of Rosa Luxemburg. Volume II, Economic Writings 2*, translated by George Shriver, edited by Peter Hudis and Paul Le Blanc, London: Verso, pp. 345–449.

Mach, Ernst 1986 [1896], *Principles of the Theory of Heat: Historically and Critically Elucidated*, translated by Thomas J. McCormack, P.E.B. Jourdain and A.E. Heath, edited by Brian McGuinness, Dordrecht: Reidel.

Mage, Shane 1963, 'The "Law of the Falling Tendency of the Rate of Profit": Its Place in the Marxian Theoretical System and Relevance to the US Economy', PhD thesis, Columbia University.

Malthus, Thomas Robert 1826 [1898], *An Essay on the Principle of Population*, sixth edition, two volumes, London: Murray.

Mandel, Ernest 1971 [1962], *Marxist Economic Theory. Volume One*, New York: Monthly Review Press.

Mandel, Ernest 1975 [1972], *Late Capitalism*, London: NLB.

Marschak, Jacob 1927, 'Die rebellische Konjunkturkurve', *Magazin der Wirtschaft*, 3, no. 11, 17 March: 390–4.

Marshall, Alfred 1920 [1890], *Principles of Economics*, eighth edition, London: Macmillan.

Marks, Karol 1923, *Karol Marks: Pisma niewydane, 1 Listy Marksa do Kugelmana, 2 Przyczynek do Krytyki socjaldemokratycznego programu partyjnego. Przełożył, wstępem i uwagami zaopatrzył*, translated by Henryk Grossman, Warszawa: Książka.

Marramao, Giacomo 1975 [1973], 'Political Economy and Critical Theory', translated by Ray Morrow, *Telos*, 24, Summer: 56–80.

Marramao, Giacomo 1975–76 [1975], 'Theory of Crisis and Problem of Constitution', translated by Laurette Fiocchi and Wayne Heimbach, *Telos*, 26, Winter: 143–64.

Marramao, Giacomo 2008 [1976], 'The Theories of Collapse and Organized Capitalism in the Debates of "Historical Extremism"', https://libcom.org/library/theories-collapse-organized-capitalism-debates-%E2%80%9Chistorical-extremism%E2%80%9D-giacomo-marramao, accessed 21 June 2019.

Marx, Karl 1910a [written 1861–63], *Theorien über den Mehrwert: Aus dem nachgelassenen Manuskript 'Zur Kritik der politischen Ökonomie' von Karl Marx*. Band 2, Teil 1, edited by Karl Kautsky, Stuttgart: Dietz.

Marx, Karl 1910b [written 1861–63], *Theorien über den Mehrwert: Aus dem nachgelassenen Manuskript 'Zur Kritik der politischen Ökonomie' von Karl Marx*. Band 2, Teil 2, edited by Karl Kautsky, Stuttgart: Dietz.

Marx, Karl 1975 [written 1844], 'Economic and Philosophic Manuscripts of 1844', in Karl Marx and Frederick Engels, *Collected Works. Volume 3*, New York: International Publishers, pp. 229–346.

Marx, Karl 1976a [1847], *The Poverty of Philosophy: Answer to the Philosophy of Poverty by M. Proudhon*, in Karl Marx and Frederick Engels, *Collected Works. Volume 6*, New York: International Publishers, pp. 105–212.

Marx, Karl 1976b [1867], *Capital: A Critique of Political Economy. Volume 1*, translated by Ben Fowkes, Harmondsworth: Penguin.

Marx, Karl 1976c [1848], 'Speech on the Question of Free Trade', in Karl Marx and Frederick Engels, *Collected Works, Volume 6*, New York: International Publishers, pp. 450–65.

Marx, Karl 1978 [1885], *Capital: A Critique of Political Economy. Volume 2*, translated by David Fernbach, Harmondsworth: Penguin.

Marx, Karl 1979a [1852], *The Eighteenth Brumaire of Louis Bonaparte*, in Karl Marx and Frederick Engels, *Collected Works. Volume 11*, New York: International Publishers, pp. 99–197.

Marx, Karl 1979b [1853], 'The British Rule in India', in Karl Marx and Frederick Engels, *Collected Works, Volume 12*, New York: International Publishers, pp. 125–33.

Marx, Karl 1980 [1859], *Zur Kritik der politischen Ökonomie*, in Karl Marx and Friedrich Engels, *Marx Engels Gesamtausgabe: Ökonomische Manuskripte und Schriften. Abteilung 2. Band 2*, Berlin: Dietz, pp. 95–245.

Marx, Karl 1981 [1894], *Capital: A Critique of Political Economy. Volume 3*, translated by David Fernbach, Harmondsworth: Penguin.

Marx, Karl 1986a [1903, written 1857], 'Introduction', in Karl Marx and Frederick Engels, *Collected Works. Volume 28*, New York: International Publishers, pp. 17–48.

Marx, Karl 1986b [written 1857–58] *Outlines of the Critique of Political Economy. First Instalment*, in Karl Marx and Frederick Engels, *Collected Works. Volume 28*, New York: International Publishers, pp. 49–537.

Marx, Karl 1987a [written 1857–58], *Outlines of the Critique of Political Economy* (*Rough Draft of 1857–58*) [*Second Instalment*], in Karl Marx and Frederick Engels, *Collected Works. Volume 29*, New York: International Publishers, pp. 5–251.

Marx, Karl 1987b [1859], *A Contribution to the Critique of Political Economy. Part One*, in Karl Marx and Frederick Engels, *Collected Works. Volume 29*, New York: International Publishers, pp. 257–417.

Marx, Karl 1988a [1905–10, written 1862–63], 'Economic Manuscript of 1861–63' [Notebooks I to VII], in Karl Marx and Frederick Engels, *Collected Works. Volume 30*, New York: International Publishers.

Marx, Karl 1988b, 'Letter to Ludwig Kugelmann, 11 July 1868', in Karl Marx and Frederick Engels, *Collected Works. Volume 43*, New York: International Publishers, pp. 67–70.

Marx, Karl 1988c, 'Letter to Friederich Engels, 30 April 1868', in Karl Marx and Frederick Engels, *Collected Works. Volume 43*, New York: International Publishers, pp. 20–5.

Marx, Karl 1989a [1875], *Critique of the Gotha Programme*, in Karl Marx and Frederick Engels, *Collected Works. Volume 24*, New York: International Publishers, pp. 75–100.

Marx, Karl 1989b [1905–10, written 1862–63], 'Economic Manuscript of 1861–63' [Notebooks VII to XII], in Karl Marx and Frederick Engels, *Collected Works. Volume 31*, New York: International Publishers.

Marx, Karl 1989c [1905–10, written 1862–63], 'Economic Manuscript of 1861–63' [Notebooks XII to XV], in Karl Marx and Frederick Engels, *Collected Works. Volume 32*, New York: International Publishers.

Marx, Karl 1991a [1905–10, written 1862–63], 'Economic Manuscript of 1861–63' [Notebooks XV to XX], in Karl Marx and Frederick Engels, *Collected Works. Volume 33*, New York: International Publishers.

Marx, Karl 1991b [written 1878], 'Letter to Nikolai Danielson, 15 November 1878', in Karl Marx and Frederick Engels, *Collected Works. Volume 45*, New York: International Publishers, pp. 343–4.

Marx, Karl 1992a [written 1863–67], 'Karl Marx Ökonomische Manuskripte 1863–1867', in *Karl Marx Friedrich Engels Gesamtausgabe*: Das Kapital *und Vorarbeiten. Zweite Abteilung. Band 4, Text. Teil 2*, Berlin: Dietz.

Marx, Karl 1992b [written 1880], 'Letter to Nikolai Danielson, 12 September 1880', in Karl Marx and Frederick Engels, *Collected Works. Volume 46*, New York: International Publishers, pp. 30–2.

Marx, Karl 1997 [1885], *Capital. Volume II*, in Karl Marx and Frederick Engels, *Collected Works. Volume 36*, New York: International Publishers.

Marx, Karl 1998 [1894], *Capital, Volume III*, in Karl Marx and Frederick Engels, *Collected Works. Volume 37*, New York: International Publishers.

Marx, Karl 2004 [1894, written 1864–65], *Das Kapital: Kritik der politischen Ökonomie. Dritter Band*, in *Karl Marx Friedrich Engels Gesamtausgabe*: Das Kapital *und Vorarbeiten. Zweite Abteilung. Band 15, Text.*, Berlin: Akademie Verlag.

Marx, Karl 2016 [written 1864–65], *Marx's Economic Manuscript of 1864–1865*, translated by Ben Fowkes, edited and introduced by Fred Moseley, Leiden: Brill.

Marx, Karl and Friedrich Engels 1976 [1848], *Manifesto of the Communist Party*, in Karl Marx and Frederick Engels, *Collected Works. Volume 6*, New York: International Publishers, pp. 477–519.

Masaryk, Tomáš Garrigue 1899, *Die philosophischen und sociologischen Grundlagen des Marxismus*, Wien: Konegen.

Masaryk, Tomáš Garrigue 1972 [1899], *Masaryk on Marx*, translated and abridged by Erazim V. Kohák, Lewisburg: Bucknell University Press.

Massar, Karl 1927, *Die volkswirtschaftliche Funktion hoher Löhne*, Heidelberg: Verlagsgesellschaft des Allgemeinen Deutschen Gewerkschaftsbundes.

Mattick Jr., Paul 2002, 'Class, Capital and Crisis', in *The Culmination of Capital: Essays on Volume III of Marx's* Capital, edited by Martha Campbell and Geert Reuten, Basingstoke: Palgrave, pp. 16–41.

Mattick Jr., Paul 2018, *Theory as Critique: Essays on Capital*, Leiden: Brill.

Mattick Jr., Paul 2019, 'Henryk Grossmann: Theory of Accumulation and Breakdown', in *The Sage Handbook of the Frankfurt School and Critical Theory. Volume I*, edited by Beverley Best, Werner Bonefeld and Chris O'Kane, London: Sage, pp. 72–88.

Mattick Sr., Paul 1931, 'Die Krise und ihre Ursachen. Einleitung zu einer Diskussion', *Chicagoer Arbeiterzeitung*, 1, no. 5, May: 4.

Mattick Sr., Paul 1934, 'The Permanent Crisis: Henryk Grossmann's Interpretation of Marx's Theory of Capitalist Accumulation', *International Council Correspondence*, 1, no. 2, November: 1–20.

Mattick Sr., Paul 1973 [1934], 'Zur Marx'schen Akkumulations- und Zusammenbruchstheorie', in Karl Korsch, Paul Mattick and Anton Pannekoek, *Zusammenbruchstheorie des Kapitalismus oder Revolutionäres Subject*, Berlin: Karin Kramer, pp. 47–70.

Mattick Sr., Paul 1974a [1969], *Marx and Keynes: The Limits of the Mixed Economy*, London: Merlin.

Mattick Sr., Paul 1974b, *Economic Crisis and Crisis Theory*, London: Merlin.

Maurer, Erwin 1988, 'Henryk Grossmann: Das Akkumulations- und Zusammenbruchsgesetz des kapitalistischen Systems: Darstellung und Kritik', *Aufsätze zur Diskussion*, 10, no. 45, April: 32–53.

Mavroudeas, Stavros and Alexis Ioannides 2006a, 'Henryk Grossmann's Falling Rate of Profit Theory of Crisis: A Presentation and a Reply to Old and New Critics', *Indian Development Review*, 4, no. 1: 69–91.

Mavroudeas, Stavros and Alexis Ioannides 2006b, 'Grossmann, Kalecki, and the Theory of Crisis: Comment', *Science & Society*, 70, no. 3, July: 384–92.

McChesney, Robert W. 2008, *The Political Economy of Media: Enduring Issues, Emerging Dilemmas*, New York: Monthly Review Press.

McNally, David 2012, *Global Slump: The Economics and Politics of Crisis and Resistance*, Oakland: PM.

Mehrens, Bernhard 1911, *Die Entstehung und Entwicklung der grossen französischen Kreditinstitute, mit Berücksichtigung ihres Einflusses auf die wirtschaftliche Entwicklung Frankreichs*, Stuttgart: Cotta.

Melrose, Jamie 2018, 'A Breakdown of Breakdown: A Potted Account of Marxist Breakdown Theory', *Philosophy@Lisbon*, 8: 59–80, downloaded from http://www.philosophyatlisbon.org/userfiles/file/n_8/04/melrose.pdf, on 16 June 2021.

Mendel, Joseph 1922, *Die Entwicklung der internationalen Erdölwirtschaft in den letzten Jahren*, Leipzig: Koehler.

Métin, Albert 1977 [1901], *Socialism without Doctrine*, translated by Russel Ward, Chippendale: Alternative Publishing Co-operative.

Meusel, Alfred 1928, 'Das Problem des äusseren Handelspolitik bei Friedrich List und Karl Marx', *Weltwirtschaftliches Archiv*, 27: 77–103.

Michael, Wolfgang 1908, 'Der Südseeschwindel vom Jahe 1720', *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte*, 6, no. 3/4: 549–70.

Michels, Robert 1922, *La teoria di C. Marx sulla miseria crescente e le sue origini: contributo alla storia delle dottrine economiche*, Torino: Bocca.

Michels, Robert 1928, *Die Verelendungstheorie: Studien und Untersuchungen zur internationalen Dogmengeschichte der Volkswirtschaft*, Leipzig: A. Kröner.

Miksch, Leonhard 1930, 'Zusammenbruch des kapitalistischen Systems?', *Frankfurter Zeitung*, 75 (610), 17 August, second morning edition: 7.

Milios, John 1994, 'Marx's Theory and the Historic Marxist Controversy on Economic Crisis (1900–1937)', *Science & Society*, 58, no. 2, Summer: 175–94.

Milios, John, Dimitri Dimoulis and George Economakis 2002, *Karl Marx and the Classics: An Essay on Value, Crises and the Capitalist Mode of Production*, Aldershot: Ashgate.

Mill, John Stuart 1890 [1848], *Principles of Political Economy*, London: Routledge.

Ministry of Labour Gazette 1926, 'Changes in the Estimated Numbers of Insured Persons in the Various Industries', 34, no. 11, November: 415–17.

Mises, Ludwig von 1912, *Theorie des Geldes und der Umlaufsmittel*, first edition, Munich and Leipzig: Duncker & Humblot.

Mises, Ludwig von 1953 [1924], *The Theory of Money and Credit*, translated by H.E. Batson from the second German edition, New Haven: Yale University Press.

Mises, Ludwig von 2012 [1920], *Economic Calculation in the Socialist Commonwealth*, translated by S. Adler, Auburn, Alabama: Ludwig von Mises Institute.

Mitchell, Wesley Clair 1927, *Business Cycles: The Problem and its Setting*, New York: National Bureau of Economic Research.

Mombert, Paul 1916, 'Zur Frage von Kapitalbildung und Kapitalbedarf in Deutschland', in *Festschrift für Lujo Brentano zum siebzigsten Geburtstag*, Munich and Leipzig: Duncker & Humblot, pp. 379–400.

Moore, Henry Ludwell 1923, *Generating Economic Cycles*, New York: Macmillan.

Morgenstern, Oskar 1928, 'Aufgaben und Grenzen der Institute für Konjunkturforschung', in *Beiträge zur Wirtschaftstheorie. Zweiter Teil: Konjunkturforschung und Konjunkturtheorie: Wissenschaftliche Gutachten*, edited by Karl Diehl, Berlin: Duncker & Humblot, pp. 337–53.

Moseley, Fred 2016, *Money and Totality: A Macro-Monetary Interpretation of Marx's Logic in Capital and the End of the 'Transformation Problem'*, Leiden: Brill.

Moseley, Fred 2018, 'The Development of Marx's Theory of the Falling Rate of Profit in the Four Drafts of Capital', in *Marx's Capital: An Unfinishable Project?*, edited by Marcel van der Linden and Gerald Hubmann, Leiden: Brill, pp. 96–143.

Moszkowska, Natalie 1935, *Zur Kritik moderner Krisentheorien*, Prag: Kacha.

Motylev, Volf Evnovich 1923, 'Teoriia nakopleniia Rozy Liuksemburg', *Vestnik Kommunisticheskoi Akademii*, 4: 137–68.

Muckle, Friedrich 1920, *Die großen Sozialisten. Band II, Saint-Simon, Pecqueur, Buchez, Blanc, Rodbertus, Weitling, Marx, Lassalle*, fourth edition, Leipzig: Teubner.

Muhs, Karl 1927, *Anti-Marx: Betrachtungen über den Inneren Aufbau der marxschen Ökonomik. Band I*, Jena: Fischer.

Muhs, Karl 1931, 'Das Gesetz der fallenden Profitrate und die Zusammenbruchstendenz des Kapitalismus', *Jahrbuch für Nationalökonomie und Statistik*, 135, no. 1, July: 1–29.

Nachimson, Miron Isaakovic 1917, *Imperialismus und die Handelskriege. Eine volkswirtschaftliche Untersuchung über die Entwicklungstendenzen der modernen Wirtschaft und der Handelspolitik*, Bern: Wyss.

Nachimson, Miron Isaakovic 1922, *Die Weltwirtschaft vor und nach dem Kriege. Band I: Die Weltwirtschaft vor dem Weltkriege*, Berlin: Laub.

Nachtwey, Oliver 2005, *Weltmarkt und Imperialismus zur Entstehungsgeschichte der klassischen marxistischen Imperialismustheorie*, Köln: ISP.

The Nation and the Athenaeum 1926, 'The Background to the Coal Dispute', 39, no. 12, 26 June: 342–3.

Nearing, Scott and Joseph Freeman 1926, *Dollar Diplomacy: A Study in American Imperialism*, London: Allen & Unwin.

Neisser, Hans 1931, 'Das Gesetz der fallenden Profitrate als Krisen- und Zusammenbruchsgesetz', *Die Gesellschaft*, 8, no. 1: 72–85.

Neue Zürcher Zeitung 1928, 'Die neue Spekulationswelle an der New Yorker Börse', Handelsteil, 5 September: 11.

Neusüss, Christel 1972, *Imperialismus und Weltmarktbewegung des Kapitals: Kritik der Leninischen Imperialismustheorie und Grundzüge einer Theorie des Verhältnissen zwischenden kapitalistischen Metropolen*, Erlangen: Politladen.

Okishio, Nobuo 1961, 'Technical Change and the Rate of Profit', *Kobe University Economic Review*, 7: 85–99.

Olk, Friedrich 1926, 'Rationalisierung und Arbeitsmarkt', *Die Arbeit: Zeitschrift für Gewerkschaftspolitik und Wirtschaftskunde*, 3, 15 September: 550–63.

Ollman, Bertell 1995, 'Some Questions for Critics of Engels' Edition of *Capital*', in *Engels' Druckfassung versus Marx' Manuskripte zum III. Buch des 'Kapital'*, edited by Carl-Erich Vollgraf, Richard Sperl and Rolf Hecker, Hamburg: Argument.

Oppenheimer, Franz 1903, *Das Grundgesetz der Marxschen Gesellschaftslehre,* Berlin: Reimer.

Oppenheimer, Franz 1909, *David Ricardos Grundrententheorie: Darstellung und Kritik*, first edition, Berlin: Reimer.

Oppenheimer, Franz 1913, *Die Soziale Frage und der Sozialismus. Eine kritische Auseinandersetzung mit der marxistischen Theorie*, Jena: G. Fischer.

Oppenheimer, Franz 1919, *Kapitalismus, Kommunismus, wissenschaftlicher Sozialismus*, Leipzig: de Gruyter.

Oppenheimer, Franz 1922, *Wert und Kapitalprofit. Neubegründung der objektiven Wertlehre*, second edition, Jena: Fischer.

Oppenheimer, Franz 1927, 'Fritz Sternberg's "Imperialismus"', *Archiv für Sozialwissenschaft und Sozialpolitik*, 57, no. 2: 496–526.

Oppenheimer, Franz 1928, 'Des heutige Stand der Theorie des Sozialismus in Deutschland', in *Die Wirtschaftstheorie der Gegenwart: Band IV. Konjunkturen und Krisen*, edited by Hans Mayer, Frank A. Fetter and Richard Reisch, Wien: Springer, pp. 305–22.

Oppenheimer, Franz 1931, Review of Henryk Grossmann *Das Akkumulations- und Zusammenbruchsgetz des kapitalistischen Systems*, *Archiv für Rechts- und Wirtschaftsphilosophie*, 24, no. 3: 402–6.

Oppenheimer, Franz 1964a [1923], *System der Soziologie. Band 1/2: Allgemeine Soziologie. 2. Teil: Der soziale Prozess*, Stuttgart: Gustav Fischer.

Oppenheimer, Franz 1964b [1924], *System der Soziologie. Dritter Band: Theorie der reinen und politischen Ökonomie. Zweiter Halbband: Die Gesellschaftwirtschaft*, Stuttgart: Fischer.

Orzech, Ze'ev B. and Shalom Groll 1983, 'Otto Bauer's Scheme of Expanded Reproduction: An Early Harrodian Growth Model', *History of Political Economy*, 15, no. 4: 529–48.

Otto, Hans 1929, 'Zusammenbruch des Kapitalismus?', *Rote Revue: Sozialistische Monatsschrift*, 8, no. 12, August: 388–92.

Owen, Robert 1927 [1816], *A New View of Society*, in Robert Owen, *A New View of Society and Other Essays*, London: Dent, pp. 1–90.

Pannekoek, Anton 1977 [1934], 'The Theory of the Collapse of Capitalism', translated by Adam Buick, *Capital and Class*, 1: 59–81.

Parijs, Philippe Van 1980, 'The Falling-Rate-of-Profit Theory of Crisis: A Rational Reconstruction by Way of Obituary', *Review of Radical Political Economics*, 12, no. 1, Spring: 1–16.

Park, Cheol-Soo 2006, 'Kalecki and the Grossmann Model of Economic Breakdown: Comment', *Science & Science*, 70, no. 3, July: 380–4.

Parvus, A. 1901, 'Die Handelspolitik und die Doktrin', *Die Neue Zeit*, 19, no. 1, 19: 580–9.

Parvus, A. 1910, *Der Sozialismus und die soziale Revolution*, Berlin: Buchhandlung Vorwärts.

Pecqueur, Constantin 1842, *Théorie Nouvelle d'économie social et politique ou études sur l'organisation des sociétés*, Paris: Capelle.

Penck, Albrecht 1924, *Das Hauptproblem der physischen Anthropogeographie*, Berlin: Reichsdruckerei.

Pesch, Heinrich 1891, 'Die ökonomischen Lehren des Marx'schen Sozialismus', *Stimmen aus Maria-Laach, Katholische Blätter*, 41: 23–58.

Petit, Eugène 1877, 'Les societes anonymes et la loi de 1867', *Journal des économistes*, third series, 47, no. 139, July: 5–24.

Plenge, Johann 1915, *Der Krieg und die Volkswirtschaft. Zwischen Zukunft und Vergangenheit nach 16 Monaten Wirtschaftskrieg*, München: Borgmeyer.

Plumpe, Werner 2006, 'Das Akkumulations- und Zusammenbruchsgesetz des kapitalistischen Systems', in *Schlüsseltexte der Kritischen Theorie*, edited by Axel Honneth, Wiesbade: VS, pp. 160–4.

Pollock, Friedrich 1926, *Sombarts 'Widerlegung' des Marxismus*, Leipzig: Hirschfeld.

Pollock, Friedrich 1932, 'Die gegenwärtige Lage des Kapitalismus und die Aussichten einer planwirtschaftlichen Neuordnung', *Zeitschrift für Socialforschung*, 1, no. 1/2: 9–27.

Popper, Karl Raimund 1947, *The Open Society and Its Enemies. Volume II: The High Tide of Prophecy Hegel, Marx, and the Aftermath*, London: Routledge.

Pownall, George Henry 1987 [1894], 'Crises, Periodicity of', in *Palgrave's Dictionary of Political Economy*, edited by R.H. Inglis Palgrave, London: Macmillan, pp. 466–7.

Poznyakov, Vladimir 1929, Review of Henryk Grossman [sic], *Das Akkumulations-und Zusammenbruchsgesetz des Kapitaliatischen Systems*, *Pod Znamiem Marksyzma*, 9: 208–13.

Priester, Hans E. 1926, 'Schiffsneubauten bei Schiffsüberfluß', *Magazin der Wirtschaft*, 2, no. 47: 1545–8.

Prion, Wilhelm 1929, 'Der deutsche Geld- und Kapitalmarkt seit der Stabilisierung', in *Strukturwandlungen der Deutschen Volkswirtschaft. Zweiter Band*, edited by Bernhard Harms, Berlin: Hobbing, pp. 327–47.

Pupin, René 1919, 'L'épargne française et ses placements dans la période d'avant-guerre', *Journal de la Société de Statistique de Paris*, 60: 246–55.

Pyritz, Carl 1912, *Die volkswirtschaftliche Entwicklungstendenz in Ägypten und im englisch-ägyptischen Sudan*, Berlin: Süsserott.

Quesnay, François 1962 [1758], 'The "Tableau économique"', translated by Ronald L. Meek, in Ronald Meek, *The Economics of Physiocracy: Essays and Translations*, London: George Allen & Unwin.

Ragol'sky, M. 1930, 'Protiv novogo izvrashcheniya Marksovoi teorii nakopleniya', *Bol'shevik*, 7, nos 7–8 and 10, 30 April and 31 May: 36–47, 101–27.

Ravenstein, Ernest George 1891, 'Lands of the Globe still Available for European Settlement', *Proceedings of the Royal Geographical Society and Monthly Record of Geography*, 13, no. 1, January: 27–35.

Reese, Ted 2019, *Socialism or Extinction: Climate, Automation and War in the Final Capitalist Breakdown*, Kindle edition.

Reeves, William Pember 1902, *State Experiments in Australia and New Zealand. Volume II*, London: Grant Richards.

Reichwein, Adolf 1928, *Die Rohstoffwirtschaft der Erde*, Jena: G. Fischer.

Reynaud, P. 1904, *La théorie de la population en Italie du XVIe au XVIIIe siècle. Les précurseurs de Malthus*, seventh edition, Paris: Rousseau.

Ricardo, David 1912, *On the Principles of Political Economy and Taxation*, edited by Ernest Rhys, London: Dent.

Riddell, Walter Alexander 1926, 'The Influence of Machinery on Agricultural Conditions in North America', *International Labour Review*, 13, no. 3, March: 309–26.

Riesser, Jacob 1905, *Zur Entwicklungsgeschichte der deutschen Großbanken mit besonderer Rücksicht auf die Konzentrationsbestrebungen*, Jena: G. Fischer.

Roberts, Michael 2009, *The Great Recession: Profit Cycles, Economic Crisis, a Marxist View*, London: Michael Roberts.

Roberts, Michael 2016, *The Long Depression: Marxism and the Global Crisis of Capitalism*, Chicago: Haymarket.

Röpke, Wilhelm 1928, 'Auslandskredite und Konjunktur', in *Beiträge zur Wirtschaftstheorie. Zweiter Teil: Konjunkturforschung und Konjunkturtheorie: Wissenschaftliche Gutachten*, edited by Karl Diehl, Berlin: Duncker & Humblot, pp. 213–46.

Roscher, Wilhelm and Robert Jannasch 1885, *Kolonien, Kolonialpolitik und Auswanderung*, third edition, Leipzig: Winter.

Rosdolsky, Roman 1957, Review of Martin Trottmann, *Zur Interpretation und Kritik der Zusammenbruchstheorie von Henryk Grossmann*, *Kyklos*, 10, no. 3: 353–5.

Rosdolsky, Roman 1977a [1968], *The Making of Marx's 'Capital'*, London: Pluto.

Rosdolsky, Roman 1977b [1956], 'On Recent Criticisms of Marx's Law of the Falling Rate of Profit', in Roman Rosdolsky, *The Making of Marx's 'Capital'*, London: Pluto, pp. 398–411.

Rosdolsky, Roman 1977c [1959], 'Karl Marx and the Problem of Use-Value in Political Economy', in Roman Rosdolsky, *The Making of Marx's 'Capital'*, London: Pluto, pp. 73–95.

Rosenbaum, Eduard 1929, 'Funktionen des Export- und des Importhandels', in *Strukturwandlungen der Deutschen Volkswirtschaft. Zweiter Band*, edited by Bernhard Harms, Berlin: Hobbing, pp. 124–48.

Rosenbaum, Wolf 1967, 'Einleitung', in Henryk Grossmann, *Das Akkumulations- und Zusammenbruchsgetz des kapitalistischen Systems* (*zugleich eine Krisentheorie*), Frankfurt am Main: Neue Kritik, pp. 4–12.

Rousiers, Paul de 1912, *Les syndicats industriels de producteurs en France et à l'étranger: trust – cartels – comptoirs, ententes internationals*, Colin: Paris.

Royal Commission on the Natural Resources, Trade, and Legislation of Certain Portions of his Majesty's Dominions 1914, *Minutes of Evidence Taken in Australia in 1913. Part I*, Command Paper 7171, London: His Majesty's Stationary Office.

Sablowski, Thomas 2003, 'Entwicklungstendenzen und Krisen des Kapitalismus', in *Modelle kritischer Gesellschaftstheorie: Traditionen und Perspektiven der Kritischen Theorie*, edited by Alex Demirović, Stuttgart: Metzler, pp. 101–30.

Salz, Arthur 1925, 'Kapital, Kapitalformen, Kapitalbildung, Kapitaldynamik', in Carl Brinkmann et al., *Grundriss der Sozialökonomik. IV. Abteilung. Teil I, Spezifische Elemente der modernen kapitalistischen Wirtschaft*, Tübingen: Mohr, pp. 209–57.

Schachner, Robert 1903, 'Seeverkehr und Reedereien', in *Die Störungen im deutschen Wirtschaftsleben während der Jahre 1900ff. Vierter Band*, edited by Verein für Socialpolitik, Leipzig: Duncker & Humblot, pp. 1–176.

Schachner, Robert 1912, *Australien und Neuseeland. Land, Leute und Wirtschaft*, Leipzig: Teubner.

Scheele, Jürgen 1990, 'Der Beitrag Henryk Grossmanns zur Akkumulations- und Krisentheorie', Diplomarbeit, Fach Politikwissenschaft, Philipps-Universität, Marburg, Septemer.

Scheele, Jürgen 1999, *Zwischen Zusammenbruchsprognose und Positivismusverdikt: Studien zur politischen und intellektuellen Biographie Henryk Grossmanns (1881–1950)*, Frankfurt am Main: Lang.

Scheele, Jürgen 2017a, 'Einführung', in Henryk Grossmann, *Schriften aus dem Nachlass. Mit weiteren Materialien und Dokumenten*, edited by Jürgen Scheele, Baden-Baden: Tectum, pp. 2–43.

Scheele, Jürgen 2017b, 'Bibliographie', in Henryk Grossmann, *Schriften aus dem Nachlass. Mit weiteren Materialien und Dokumenten*, edited by Jürgen Scheele, Baden-Baden: Tectum, pp. 269–90.

Schilder, Sigmund 1912, *Die Entwicklungstendenzen der Weltwirtschaft*, Berlin: Siemenroth.

Schmalenbach, Eugen 1928, 'Die Betriebswirtschaftslehre an der Schwelle der neuen Wirtschaftsverfassung', *Zeitschrift für handelswissenschaftliche Forschung*, 22: 241–51.

Schmidt, Conrad 1887, *Die natürliche Arbeitslohn*, Jena: Fischer.

Schmidt, Conrad 1929, 'Zusammenbruchstheorie', *Sozialistische Monatshefte*, 35: 638–41.

Schmidt, Fritz 1922, *Die Effektenbörse und ihre Geschäfte*, second edition, Leipzig: Gloeckner.

Schmidt, Fritz 1926, 'Ein Rechenfehler als Konjunkturursache', *Vierteljahrshefte zur Konjunkturforschung*, 1, Ergänzungsheft 4: 3–27.

Schmiede, Rudi 1973, *Grundprobleme der Marx'schen Akkumulations- und Krisentheorie*, Frankfurt am Main: Athenäum.

Schmiede, Rudi and David Yaffe 1972 [written 1971], *State Expenditure and the Marxian Theory of Crisis*, London.

Schmoller, Gustav 1914, 'Geschichte der Lohntheorien', *Schmollers Jahrbuch für Gesetzgebung, Verwaltung und Volkswirtschaft*, 38, nos. 3 and 4: 1–28 and 1–32.

Schmoller, Gustav 1918, *Die soziale Frage: Klassenbildung, Arbeiterfrage, Klassenkampf*, München und Leipzig: Duncker & Humblot.

Schmoller, Gustav 1904, *Grundriß der allgemeinen Volkswirtschaftslehre. Zweiter Teil*, sixth edition, Leipzig: Duncker & Humblot.

Schüller, Richard 1905, *Schutzzoll und Freihandel*, Vienna: Tempsky.

Schulze-Gaevernitz, Gerhart von 1892, *Der Großbetrieb, ein wirtschaftlicher und socialer Fortschritt: Eine Studie auf dem gebiete der Baumwollindustrie*, Leipzig: Duncker & Humblot.

Schulze-Gaevernitz, Gerhart von 1906, *Britischer Imperialismus und englischer Freihandel zu Beginn des zwangzigsten Jahrhunderts*, Leipzig: Duncker and Humblot.

Schumpeter, Joseph Alois 1949 [1911], *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*, translated by Redvers Opie, Cambridge, Massachusetts: Harvard University Press.

Schumpeter, Joseph Alois 1954 [1912], *Economic Doctrine and Method: An Historical Sketch*, translated by R. Aris, New York: Oxford University Press.

Schumpeter, Joseph Alois 2010 [1908], *The Nature and Essence of Economic Theory*, New Brunswick: Transaction.

Serra, Antonio 2011 [1613], *A Short Treatise on the Wealth and Poverty of Nations*, edited by Sophus A. Reinert, translated by Jonathan Hunt, London: Anthem.

Shaikh, Anwar 1978, 'An Introduction to the History of Crisis Theories', in *US Capitalism in Crisis*, edited by Bruce Steinberg et al., New York: Union for Radical Political Economics, pp. 219–41.

Shaikh, Anwar 1987, 'Organic Composition of Capital', in *Marxian Economics*, edited by John Eatwell, Murray Milgate and Peter Newman, London: Palgrave Macmillan, pp. 304–9.

Shmidt, Otto Yulyevich Schmidt (ed.) 1930, 'Grossman Genrik', in *Bolshaya Sovetskaya Entsiklopediya. Tom 19: Graciades–Guryev*, Moskva: Sovetskaya Entsiklopediya, p. 450.

Shmidt, Otto Yulyevich Schmidt 2010 [1908], *The Nature and Essence of Economic Theory*, translated by Bruce A. McDaniel, New Brunswick: Transaction.

Shoul, Bernice 1947, 'The Marxian Theory of Capitalist Breakdown', PhD thesis, Columbia University.

Shoul, Bernice 1957, 'Karl Marx and Say's Law', *Quarterly Journal of Economics*, 71, no. 4, November: 611–29.

Shoul, Bernice 1965, 'Similarities in the Work of John Stuart Mill and Karl Marx', *Science & Society*, 29, no. 3, Summer: 270–95.

Sieveking, Heinrich 1921, *Wirtschaftsgeschichte: vom Ausgang der Antike bis zum Beginn des 19. Jahrhunderts, third edition*, Leipzig: Teubner.

Simkhovitch, Vladimir Gregorievitch 1913 [1908], *Marxism versus Socialism*, second edition, New York: Holt.

Sismondi, Jean Charles Léonard Simonde de 1838, *Études sur l'économie politique. Tome second*, Paris: Treuttel et Würtz.

Sismondi, Jean Charles Léonard Simonde de 1991a [1824], 'On the Balance of Consumption with Production', in Jean Charles Léonard Simonde de Sismondi, *New Principles of Political Economy*, translated by Richard Hyse, New Brunswick: Transaction, pp. 617–39.

Sismondi, Jean Charles Léonard Simonde de 1991b [1827], *New Principles of Political Economy*, translated by Richard Hyse, New Brunswick: Transaction.

Smith, Adam 1910 [1776], *The Wealth of Nations. Volume 1*, London: Dent.

Smith, Tony 1999, 'Brenner and Crisis Theory: Issues in Systematic and Historical Dialectics', *Historical Materialism*, 5, no. 1: 145–78.

Snyder, Carl 1928, 'Das Studium der Krisen und Wirtschaftszyklen in den Vereinigten Staaten', in *Die Wirtschaftstheorie der Gegenwart. Band IV, Konjunktur und Krisen: Festschrift für Leopold von Wieser*, edited by Hans Mayer, Wien: Springer, pp. 17–31.

Soetbeer, Adolf 1879, *Edelmettalproduction und Wertverhältnis zwischen Gold und Silber seit der Entdeckung Amerikas bis zur Gegenwart*, Gotha: Perthes.

Sombart, Werner 1902, *Der moderne Kapitalismus. Erster Band: Die Genesis des Kapitalismus*, Leipzig: Duncker & Humblot.

Sombart, Werner 1909 [1903], *Die deutsche Volkswirtschaft im neunzehnten Jahrhundert*, second edition, Berlin: Bondi.

Sombart, Werner 1911, *Die Juden und das Wirtschaftsleben*, Leipzig: Duncker & Humblot.

Sombart, Werner 1919, *Der moderne Kapitalismus. Zweiter Band: Das europäische Wirtschaftsleben im Zeitalter des Frühkapitalismus. Zweiter Halbband*, third edition, München and Leipzig: Duncker & Humblot.

Sombart, Werner 1924, *Der proletarische Sozialismus. Erster Band*, Jena: Fischer.

Sombart, Werner 1927, *Der moderne Kapitalismus. Dritter Band: Das Wirtschaftsleben im Zeitalter des Hochkapitalismus*, two volumes, München: Duncker & Humblot.

Sombart, Werner 1928, 'Die Wandlung des Kapitalismus', *Weltwirtschaftliches Archiv*, 28: 243–56.

Sombart, Werner 2001 [1911], *The Jews and Modern Capitalism*, translated by M. Epstein, Kitchener: Bartoche.

Somogyi, Stefano 1931, Review of Henryk Grossmann, *Das Akkumulations- und Zusammenbruchsgesetz des Kapitaliatischen Systems*, *Economia: rivista mensile di politica economica e di scienze soziali*, 9, new series 7, no. 3, March: 326–32.

Sorel, Georges 1961 [1907], 'The Decomposition of Marxism', in *Radicalism and the Revolt Against Reason: The Social Theories of Georges Sorel*, translated by Irving Louis Horowitz, London: Routledge and Kegan Paul, pp. 207–54.

Spengler, Oswald 1927 [1918], *The Decline of the West: Form and Actuality*, translated by Charles Francis Atkinson, New York: Knopf.

Spann, Othmar 1918, *Die Haupttheorien der Volkswirtschaftslehre*, third edition, Leipzig: Quelle & Meyer.

Spann, Othmar 1923a, *Die Haupttheorien der Volkswirtschaftslehre*, twelth–fifteenth edition, Leipzig: Quelle & Meyer.

Spann, Othmar 1923b, 'Imperialismus', in *Handwörterbuch der Staatswissenschaften. Fünfter Band: Haftpflicht – Kries*, fourth edition, edited by Ludwig Elster, Adolf Weber and Friedrich Wieser, Jena: Fischer, pp. 383–5.

Spiethoff, Arthur 1919, 'Einige Bemerkungen zur Lehre von des Sozialisierung', *Schmollers Jahrbuch*, 43, no. 2: 437–58.

Spiethoff, Arthur 1925, 'Krisen', in *Handwörterbuch der Staatswissenschaften. Sechster Band: Kriminalstatistik–Reklamesteuer*, fourth edition, edited by Ludwig Elster, Adolf Weber and Friedrich Wieser, Jena: Fischer, pp. 8–91.

Spiethoff, Arthur 1953 [1923], 'Business Cycles', *International Economic Papers*, 3: 75–171.

Spiethoff, Arthur 2002 [1902], 'Preliminary Remarks to a Theory of Overproduction', in *Business Cycle Theory: Selected Texts 1860–1939. Volume II: Structural Theories of the Business Cycle*, edited by Harald Hagemann, London: Pickering & Chatto, pp. 45–76.

Stamp, Josiah Charles 1918, 'The Effect of Trade Fluctuations upon Profits', *Journal of the Royal Statistical Society*, 81, no. 4: 563–608.

Statistisches Reichsamt 1926, *Statistisches Jahrbuch für das Deutsche Reich 1926*, Berlin: Statistisches Reichsamt.

Statistisches Reichsamt 1927, *Statistisches Jahrbuch für das Deutsche Reich 1927*, Berlin: Statistisches Reichsamt.

Stein, Günther 1928, 'Irrungen der amerikanischen Zahlungsbilanz-Statistik', *Berliner Tageblatt*, morning edition, 'Handels-Zeitung', second supplement, 24 June: 9.

Steitz, Walter 1977, *Einführung in die politische Ökonomie des Marxismus*, Paderborn: Schöningh.

Sternberg, Fritz 1929, *'Der Imperialismus' und seine Kritiker*, Berlin: Soziologische Verlagsanstalt.

Sternberg, Fritz 1930, *Eine Unwältzung der Wissenschaft? Kritik des Buches von Henryk Grossmann 'Das Akkumulations- und Zusammenbruchsgesetz des kapitalistischen System'. Zugleich eine positive Analyse des Imperialismus*, Berlin: Prager.

Sternberg, Fritz 1971 [1926], *Der Imperialismus*, Frankfurt: Neue Kritik.

Sternberg, Theodor 1927, 'Japans Wirtschaftsnöte', *Berliner Tageblatt*, morning edition, 3 December: 1–2.

Stucken, Rudolf 1926, *Theorie der Konjunkturschwankungen*, Jena: Fischer.

Sturgis, Henry S. 1924, *Investment: A New Profession*, New York: Macmillan.

Supan, Alexander 1906, *Die territoriale Entwicklung der europäischen Kolonien*, Gotha: Perthes.

Sweezy, Paul 1962 [1942], *The Theory of Capitalist Development*, London: Dobson.

Sweezy, Paul 1981, *Four Lectures on Marxism*, New York: Monthly Review Press.

Sweezy, Paul 1987 [1973], 'Some Problems in the Theory of Capital Accumulation', *International Journal of Political Economy*, 17, no. 2, Summer: 38–53.

Tarbell, Ida M. 1904, *The History of the Standard Oil Company. Volume One*, New York: McClure, Phillips.

Tarbuck, Ken 1994, Review of Henryk Grossmann, *The Law of Accumulation and Breakdown of the Capitalist System*, *New Interventions*, 5, no. 3/4, October–November.

Tarnow, Fritz 1928, *Warum arm sein?* Berlin: Allgemeiner Deutscher Gewerkschaftsbund.

Tazerout, Mohand 1932, 'Théorie économique et sociologie économique', *Revue internationale de sociologie*, 40, no. 5–6, May–June: 303–20.

Temps, Le 1928, 'La main-d' œuvre en Indochine', 12 April: 1.

Thorn, Herman P. 1962, 'Roots: A Family Memoir', unpublished manuscript in the possession of Monica Mayer Segal.

Todt, Rudolf 1877, *Der radikale deutsche Sozialismus und die christliche Gesellschaft. Versuch einer Darstellung des socialen Gehaltes des Christenthums und der socialen Aufgaben der christlichen Gesellschaft auf Grund einer Untersuchung des Neuen Testaments*, Wittenberg: Rust.

Tolley, Howard Ross 1925, 'The Role of Machinery in American Agriculture', in *Report of the Proceedings of the First International Management Congress*, 21–24 July 1924, Prague: Masaryk Academy of Work.

Tönnies, Ferdinand 1894, 'Neuere Philosophie der Geschichte: Hegel, Marx, Comte', *Archiv für Geschichte der Philosophie*, 7: 486–515.

Tougan-Baranowsky, Michel 1913, *Les crises industrielles en Angleterre, traduit sur la 2e édition Russe revue et augmentée par l'auteur*, translated by Joseph Schapiro, Paris: Giard et Brière.

Trenkle Norbert 2014 [1998], 'Value and Crisis: Basic Questions', in *Marxism and the Critique of Value*, edited by Neil Larsen, Mathias Nilges, Josh Robinson and Nicholas Brown, Chicago: MCM', pp. 1–15.

Trigg, Andrew B. 2004, 'Kalecki and the Grossmann Model of Economic Breakdown', *Science & Society*, 68, no. 2, Summer: 187–205.

Trigg, Andrew B. 2006a, 'Kalecki and Grossmann: Reply', *Science & Society*, 70, no. 3, July: 392–7.

Trigg, Andrew B. 2006b, *Marxian Reproduction Schema: Money and Aggregate Demand in a Capitalist Economy*, London: Routledge.

Trottmann, Martin 1956, *Zur Interpretation und Kritik der Zusammenbruchstheorie von Henryk Grossmann*, Zürich: Polygraphischer Verlag.

Tsuru, Shego 1956, *Essays on Marxian Economics*, Tokyo: Science Council of Japan.

Tugan-Baranovsky, Michael 2000 [1901], 'Chapter I. The Fundamental Causes of Crises in the Capitalist Economy' and 'Chapter VII. Marx's Theory of Crises', from *Studien zur Theorie und Geschichte der Handelskrisen in England*, translated by Alejandro Ramos-Martínez, in *Value, Capitalist Dynamics and Money*, *Research in Political Economy 18*, edited by Paul Zarembka, New York: Elsevier, pp. 53–80, 81–110.

Tugan-Baranowsky, Michael von 1901 [1894], *Studien zur Theorie und Geschichte der Handelskrisen in England*, translation of second Russian edition, Jena: Fischer.

Tugan-Baranowsky, Michael von 1904, 'Der Zusammenbruch der kapitalistischen Wirtschaftsordnung im Lichte der nationalökonomischen Theorie', *Archiv für Sozialwissenschaft und Sozialpolitik*, 19: 273–306.

Tugan-Baranowsky, Michael von 1905, *Theoretische Grundlagen des Marxismus*, Leipzig: Duncker & Humblot.

Tugan-Baranowsky, Michael von 1908, *Der moderne Sozialismus in seiner geschichlichen Entwicklung*, Dresden: Böhmert.

Tugan-Baranowsky, Michael von 1910 [1908], *Modern Socialism in Its Historical Development*, translated by M.I. Redmount, London: Sonnenschein.

Tugan-Baranowsky, Michael von 1913, *Soziale Theorie der Verteilung*, Berlin: Springer.

Tula, Jorge 1979, 'Prefacio', in Henryk Grossmann, *La ley de la acumulación y del derrumbe del sistema capitalista: una teoría de la crisis*, México: Siglo Veintiuno, pp. ix–xxxvii.

Turban, Manfred 1980, *Marxsche Reproduktionsschemata und Wirtschaftstheorie: die Diskussion ihres analytischen Gehalts in verschiedenen wirtschaftswissenschaftlichen Forschungstraditionen*, Berlin: Duncker & Humblot.

Ungewitter, Friedrich H. 1851, *Geschichte des Handels, der Industrie und Schiffahrt von den ältesten Zeiten an bis auf die Genenwart*, Leipzig and Meißen: Goedsche.

Varga, Eugen 1924, 'Die allgemeine Grundlagen der Agrarfrage', in *Beiträge zur Agrarfrage*, edited by Eugen Varga, Hamburg: Hoym, pp. 5–58.

Varga, Eugen 1926a, 'Der Überimperialismus und das Gesetz der ungleichmäßigen Entwicklung des Kapitalismus', *Die Kommunistische Internationale*, 9, no. 6: 245–50.

Varga, Eugen 1926b, 'Der Marxistische Sinn der Rationalisierung', *Die Internationale*, 9, no. 14: 431–7.

Varga, Eugen 1927, 'Kapitalexport in der Weltwirtschaft', *Die Internationale*, 10, no. 12: 362–9.

Varga, Eugen 1928, *Die Wirtschaft der Niedergangsperiode des Kapitalismus nach der Stabilisierung*, Hamburg: Hoym.

Varga, Eugen 1930a, 'Akkumulation und Zusammenbruch des Kapitalismus', *Unter dem Banner des Marxismus*, 4, no. 1: 60–95.

Varga, Eugen 1930b, 'Nakoplenie i krakh kapitalizma', *Problemi ekonomiki*, 3: 31–62.

Veblen, Thorstein 1920 [1919], *The Vested Interests and the Common Man*, New York: Huebsch.

Vega, José de la 2015 [1688], *Confusión de confusiones: Diálogos curiosos entre un filósofo agudo, un mercader discreto y un accionista erudito describiendo el negocio de las acciones, su origen, su etimología, su realidad, su juego y su enredo*, edited by Ricardo A. Fornero, Mendoza (Argentina): Universidad Nacional de Cuyo, Faculdad de Ciencias Económicas.

Vierteljahrshefte zur Konjunkturforschung 1926a, 1, no. 1, around p. 43.

Vierteljahrshefte zur Konjunkturforschung 1926b, 1, no. 3, around p. 22.

Vierteljahrshefte zur Konjunkturforschung 1926c, 'Zum Problem der Lagerhaltung', 1, no. 3, around pp. 43–5.

Vierteljahrshefte zur Konjunkturforschung 1927a, 2, no. 1, around p. 20.

Vierteljahrshefte zur Konjunkturforschung 1927b, 2, no. 3, around p. 65.

Vierteljahrshefte zur Konjunkturforschung 1927c, 2, no. 4, around p. 20.

Vierteljahrshefte zur Konjunkturforschung 1927d, 2, no. 4, around p. 35.

Vierteljahrshefte zur Konjunkturforschung 1928a, 'Bevölkerungsentwicklung und Wirtschaft', 3, no. 1, A, pp. 31–6.

Vierteljahrshefte zur Konjunkturforschung 1928b, 3, no. 1, B, around pp. 49–52.

Vogel, Emanuel Hugo 1917, *Die Theorie des volkswirtschaftlichen Entwickelungsprozesses und das Krisenproblem. Mit besonderer Berücksichtigung der englischen Wirtschaftsentwickelung bis zum Ausbruche des Weltkrieges im Jahre 1914*, Wien and Leipzig: Hölder.

Vogel, Emanuel Hugo 1931, Review of Henryk Grossmann *Das Akkumulations- und Zusammenbruchsgetz des kapitalistischen Systems*, *Vierteljahresschrift für Sozial und Wirtschaftschaftsgeschichte*, 23: 389–1.

Vogelstein, Theodor 1923 [1914], 'Die finanzielle Organisation des kapitalistischen Industrie und die Monopolbildungen', in Eberhard Gothein et al., *Grundriß der Sozialökonomik. VI. Abteilung: Industrie, Bergwesen, Bauwesen*, second edition, Tübingen: Mohr, pp. 383–445.

Vogt, Johannes 1929, 'Wandlungen im deutschen Eisenbahnwesen', in *Strukturwandlungen der Deutschen Volkswirtschaft. Zweiter Band*, edited by Bernhard Harms, Berlin: Hobbing, pp. 153–87.

Vollgraf, Carl Erich and Jürgen Jungnickel 2002 [1994], '"Marx in Marx's Words": On Engels's Edition of the Main Manuscript of Book 3 of *Capital*', *International Journal of Political Economy*, 32, no. 1: 35–78.

Vossische Zeitung 1928, 18 January.

Wagemann, Ernst 1926, 'Zur Einfuehrung', *Vierteljahrshefte zur Konjunkturforschung*, 1, no. 1: 4–6.

Wätjen, Hermann 1925, 'Die Hansestädte und Brasilien 1820 bis 1870. Eine wirtschaftsgeschichtliche Studie', *Weltwirtschaftliches Archiv*, 22: 33–57.

Waltershausen, August Sartorius von 1907, *Das volkswirtschaftliche System der Kapitalanlage im Auslande*, Berlin: Reimer.

Waltershausen, August Sartorius von 1924, 'Auswanderung', in *Handwörterbuch der Staatswissenschaften. Zweite Band: Aufbewahrung von Wertpapieren–Börsenwesen*, fourth edition, edited by Ludwig Elster, Adolf Weber and Friedrich Wieser, Jena: Fischer: 60–115.

Weber, Adolf 1915, *Depositenbanken und Spekulationsbanken. Ein Vergleich deutschen und englischen Bankwesens*, second edition, Munich: Duncker & Humblot.

Weber, Adolf 1921, *Der Kampf zwischen Kapital und Arbeit*, third and fourth edition, Tübingen: Mohr (P. Siebeck).

Weber, Max 1950 [1923], *General Economic History*, translated by Frank H. Wright, Glencoe: Free Press.

Weber, Max 2012, *Collected Methodological Writings*, edited by Hans Henrik Bruun and Sam Whimster, translated by Hans Henrik Bruun, Abingdon: Routledge.

Weyermann, Moritz Rudolf 1923 [1914], 'Die ökonomische Eigenart der modernen gewerblichen Technik', in Eberhard Gothein et al., *Grundriß der Sozialökonomik. VI. Band: Industrie, Bergwesen, Bauwesen*, Tübingen: Mohr, pp. 148–202.

Wicksell, Knut 1962 [1898], *Interest and Prices: A Study of the Causes Regulating the Value of Money*, translated by R.F. Kahn, New York: Kelley.

Winkler, Wilhelm 1926, 'Die Bevölkerungsfrage auf deutschem Volksboden', in *Verhandlungen des Vereins für Sozialpolitik in Wien 1926: Krisis der Weltwirtschaft, Übervölkerung Westeuropas, Steuerüberwälzung*, Schriften des Vereins für Sozialpolitik, Band 172, edited by Franz Boese, Berlin: Duncker & Humblot, pp. 179–213.

Winslow, Earle Micajah 1948, *The Pattern of Imperialism: A Study in the Theories of Power*, New York: Columbia University Press.

Wirtschaft und Statistik 1927a, 'Weitere Erbebnisse der Volks-, Berufs- und Betriebszählung von 1925: Erste Reichsergenisse der Berufszählung vom 16. Juni 1925', 7, no. 10, 2 May: 446–57.

Wirtschaft und Statistik 1927b, 'Deutschlands Bezugs- und Absatzländer in der ersten 9 Monaten 1927', 7, no. 24, 2 December: 1011–5.

Wirtschaftsdienst 1926a, John Maynard Keynes on the hunt for profits, i, around p. 775.

Wirtschaftsdienst 1926b, shortage of investment outlets in the United States of America, i, around p. 792.

Wirtschaftsdienst 1926c, table about mining techniques in the Ruhr, ii, around p. 899.

Wirtschaftsdienst 1926d, labour shortages in Africa, ii, around pp. 927–34.

Wirtschaftsdienst 1926e, flogging of native workers in South West Africa, ii, around p. 1010.

Wirtschaftsdienst 1926f, supply of native labour in the Belgian Congo, ii, around p. 1078.

Wirtschaftsdienst 1926g, Dr Greiling on the success of the American economic experiment, ii, around p. 1494.

Wolf, Julius 1892, *Sozialismus und kapitalistische Gesellschaftsordnung*, Stuttgart: Cotta.

Wolf, Julius 1928, 'Konjunktur und Krise', in *Beiträge zur Wirtschaftstheorie. Zweiter Teil: Konjunkturforschung und Konjunkturtheorie: wissenschaftliche Gutachten*, edited by Karl Diehl, Berlin: Duncker & Humblot, pp. 1–38.

Woytinsky, Wladimir Savelievich 1925, *Die Welt in Zahlen. In sieben Büchern. Populäre Darstellung der Ergebnisse der Forschung auf allen Gebieten der Statistik: 1. Buch: Die Erde. Die Bevölkerung. Der Volksreichtum*, Berlin: Mosse.

Woytinsky, Wladimir Savelievich 1926a, *Die Welt in Zahlen. In sieben Büchern. Populäre Darstellung der Ergebnisse der Forschung auf allen Gebieten der Statistik. 2. Buch: Die Arbeit*, Berlin: Mosse.

Woytinsky, Wladimir Savelievich 1926b, *Die Welt in Zahlen. In sieben Büchern. Populäre Darstellung der Ergebnisse der Forschung auf allen Gebieten der Statistik. 4. Buch: Das Gewerbe*, Berlin: Mosse.

Yaffe, David 1973 [1972], 'The Marxian Theory of Crisis, Capital and the State', *Economy and Society*, 2, no. 2: 186–232.

Zarembka, Paul 2002, 'Rosa Luxemburg's Accumulation of Capital: Critics Try to Bury the Message', in *Bringing Capitalism Back for Critique of Social Theory: Current Persectives in Social Theory, 21*, edited by Jennifer M. Lehmann, Oxford: Elsevir Science, pp. 3–45.

Index, including Abbreviations and Micro Biographies