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4 Utopianism in Anton Pannekoek's Socialism and Astronomy

Klaas van Berkel

Abstract

During World War II, Anton Pannekoek wrote two separate memoirs, one about his life in astronomy, another about his life in the socialist movement. Historians have often wondered what the deeper unity behind these two different accounts of Pannekoek's life may have been. Here it is claimed that the answer is utopianism. Pannekoek encountered utopianism in the work of the American novelist Edward Bellamy and this utopianism strongly resonated with the ideas of the socialist thinker Joseph Dietzgen, who was much admired by Pannekoek. Careful reading of the memoirs reveals that the ideal of purity, so common around the turn of the nineteenth century, was common to both Bellamy's picture of future society in Boston and Dietzgen's and Pannekoek's ideas about how to arrive at the socialist state.

Keywords: Anton Pannekoek, Utopianism, two cultures, Edward Bellamy, Joseph Dietzgen, purity

During the last, dark winter of World War II, Anton Pannekoek wrote two separate autobiographies, one on his involvement in the socialist movement, the other dealing with his career in astronomy.¹ By completely separating his scientific and his socialist memoirs, Pannekoek suggested that his work in astronomy was totally unrelated to his work in politics. On reading the

This contribution is a revised version of a presentation at the annual General Meeting of the Royal Netherlands Academy of Arts and Sciences in 1999. Present at that meeting was Anton Pannekoek's son, the geologist Antonie Johannes (Ton) Pannekoek (1905-2000), who in general agreed with my interpretation of the life and work of his father.

¹ Pannekoek 1982.

memoirs, one gets the impression that Pannekoek actually lived two different lives. On the one hand, he was a representative of the radical left, a critic of the communist Lenin and the Dutch social democrat Pieter Jelles Troelstra, on the other he was a noted astronomer, one of the founders of astrophysics in the Netherlands. Confronted with this curious phenomenon, historians of science will be tempted to think of Pannekoek as an almost pathological example of C.P. Snow's concept of 'the two cultures'.² Snow introduced this concept only in 1959, in the context of the ongoing debate about science policy in Great Britain after World War II, but the idea behind it dates back to the nineteenth century at least and therefore might indeed apply to Pannekoek. Of course, Pannekoek is an exceptional case. Although he strictly separated the two sides of his life, he was a representative of both the literary and the scientific culture, whereas Snow complained that in modern culture people belonged to either the one or the other.³ Still, Pannekoek's writing of two distinct memoirs raises some interesting questions: Did he indeed exemplify the rift between the two cultures, or was there, hidden somewhere beneath the surface of his memoirs, a common ground for his dealings with politics and science?

There are several ways to answer this question. First of all, we could try to demonstrate that Pannekoek the astronomer and Pannekoek the socialist had something in common. We could try to argue that both shared some fundamental ideas or that there was a common method in both Pannekoek's socialism and his astronomy, or that in the end Pannekoek the socialist and Pannekoek the astronomer were actually pursuing a common goal. We could, however, also try to analyse why Pannekoek wrote a double autobiography, what his motives were for doing so. In asking these questions, we do not concentrate on the contents of what he wrote, but on the literary means Pannekoek used to present his memoirs and the historical context in which he wrote them. Both of these ways of reading the memoirs, the internal and the external so to say, have their merits and the one is not inherently better than the other. In this essay, I will start with the biographical method, but I will also pay some attention to the 'common-ground' approach, as I believe that both approaches should be integrated.

2 Snow 1993.

3 Whether or not Snow's analysis was correct, is an altogether different matter. Snow introduced a catchy phrase for a widespread feeling (at least among scientists) that there was a fundamental lack of mutual understanding between the representatives of the humanities and those of science and technology. Scientists felt misunderstood and underrepresented in the political elite that decided about the future of England. Yet the actual situation was much more complicated and scientists were much more part of Britain's elite than Snow was prepared to acknowledge. See Edgerton 2006.

The basic facts of Pannekoek's life are well known and can be found elsewhere in this volume. Still, a quick recap, with special attention to those episodes that might illuminate how to interpret Pannekoek's two memoirs, may be helpful.⁴ Pannekoek was born in 1873 in the village of Vaassen, went to secondary school in Apeldoorn until 1888 and then, in 1891, took the state examination in Greek and Latin that was required to be admitted to university. A three-year period before passing this examination was rather long for a bright boy like Pannekoek. Most students needed only one or two years. The reason for this may have been Pannekoek's growing passion for a new kind of natural history that was becoming a favourite pastime for young schoolboys and students. In the Netherlands, this movement is usually associated with the names of Eli Heimans and Jac. P. Thijsse. These two young schoolteachers from Amsterdam wrote short accounts of their walking tours in the pastoral surroundings of Amsterdam for several newspapers, and in 1896 started their own journal called *De Levende Natuur* ('Living Nature'). Yet this new wave of emotionally experiencing nature, whether aesthetically or somewhat mystically inclined, had already been well on its way before the appearance of Heimans and Thijsse, and had taken hold of the young Pannekoek around 1890.⁵

In 1891, Pannekoek went to Leiden and studied mathematics, physics, and astronomy. He graduated in 1895, became an engineer at the national geodetic committee, switched to a position as observer at the Leiden Observatory, and defended his dissertation on the star Algol in 1902. In Leiden, Pannekoek at first moved in liberal circles, but his reading of the utopian books of the American author Edward Bellamy, especially his second book, *Equality*, published in 1897, convinced Pannekoek of the superiority of socialism over liberalism as a political philosophy. He became the central figure in the small and struggling Leiden chapter of the Sociaal-Democratische Arbeiderspartij (Social Democratic Workers' Party, SDAP), studied classic socialist texts, especially Joseph Dietzgen's books, and started to write articles for the socialist journal *De Nieuwe Tijd* ('The New Era'). He also published articles in newspapers and in German journals like *Die Neue Zeit* and the *Leipziger Volkszeitung*. The general strike of April 1903 was something of a watershed for Pannekoek. He disagreed strongly with the cautious tactics of the leader of the social democrats, Troelstra, and favoured a more radical course of action. After the strike, which ended in a heavy defeat for the labour movement, Pannekoek was for the first time in his

4 Sijes 1982; van Berkel 2013; van den Heuvel 1992.

5 On Heimans and Thijsse, see Theunissen 1993; van Berkel 1998.

life confronted with the political repercussions of his radicalism. He had urged workers to resist the government 'with all possible means',⁶ which was interpreted by government officials and the director of the Observatory as a call for violence and revolution, and thus inadmissible for a civil servant. All over the country, people were fired because of their support of the strike and Pannekoek, too, was faced with the prospect of dismissal. Pannekoek defended himself by saying that he had meant all possible *legal* means, but still Pannekoek had to go the Minister of the Internal Affairs (and Prime Minister), Abraham Kuyper, to explain his actions. Pannekoek was not fired, but urgently requested not to do anything that was against the law.⁷ Although in his memoirs Pannekoek does not make a great deal of this episode – in fact, he seemed rather proud of the way he defended his position towards Kuyper – it must have been an unsettling affair, for in the following years he distanced himself from party politics and restricted himself to theoretical work. A few months later, he married Johanna Maria Nassau Noordewier (1871-1957), with whom he had a son and a daughter.

Pannekoek loved astronomy, but working at the Leiden Observatory under the very conservative director H.G. van de Sande Bakhuyzen was depressing. Because of this, Pannekoek decided to accept an offer from the social democrats in Germany to become a lecturer at the party school in Berlin. This did not last long: already after a year, the Prussian government threatened to extradite him should he, as a foreigner, remain at the school. Pannekoek changed to journalism and became a correspondent for several socialist newspapers. In 1910, he moved to the free city of Bremen, where there were no objections against his theoretical instructions of members and leaders of the Sozialdemokratische Partei Deutschlands (Social Democratic Party of Germany, SPD). The trade unions, however, put a stop to this. They found him too radical and did not like his promotion of mass strikes as a political tool. As a result, Pannekoek had to resign again, once more becoming a newspaper correspondent.

The outbreak of World War I effectively ended any ideas Pannekoek might have had about making a career in Germany. In the summer of 1914, he was staying in the Netherlands with his family. He immediately returned to Bremen to arrange his affairs, while his wife and two children remained in Arnhem, with his father-in-law. He came back to the Netherlands in 1915 and became a secondary-school teacher in Bussum, not far from Amsterdam. By all appearances, he was finally settling down to a proper bourgeois existence.

6 Pannekoek 1982, 92

7 Pannekoek 1982, 92-93.

He contributed in discussions on the disciplines he was teaching (especially cosmography) and wrote several popular accounts of astronomy.⁸ In this period, too, he wrote a popular introduction to astronomy, *De wonderbouw der wereld* [*The Wonderful Structure of the World*].⁹ This contribution would prove instrumental in Pannekoek's return to academia. On the recommendation of Willem de Sitter, professor of astronomy at Leiden, Pannekoek was admitted as *privaatdocent* in the history of astronomy there (that is, as lecturer without remuneration). Two years later, a bigger opportunity offered itself, when De Sitter initiated a complete reorganization of the work at the Observatory and asked Pannekoek to become assistant-director. As science historian David Baneke has explained, in May 1919 the Prime Minister and the Minister of Education (Charles Ruijs de Beerenbrouck and J.Th. de Visser) unexpectedly blocked Pannekoek's appointment, because of some newspaper clipping which had informed them of Pannekoek's supposedly close ties to the socialist revolutionaries in Hungary, headed by Bela Kun.¹⁰ The source of this news has never been revealed, but I learned that the Pannekoek family later suspected that it had been a disgruntled brother-in-law of Pannekoek, Hendrik Jan Nassau Noordewier, who had passed the news to the government. Nassau Noordewier was a journalist in Berlin with an intimate knowledge of international politics (any news about Eastern Europe reached the Netherlands through news agencies in Berlin).¹¹ Still, whatever the source of the news, the government's refusal to appoint Pannekoek at Leiden's Observatory must have been a great disappointment to Pannekoek; it resembled what the Germans would later call a 'Berufsverbot'.

In his memoirs, Pannekoek is again remarkably mild about this episode in his life. In retrospect, he stated that he was glad that he did not get the job in Leiden because sooner or later he would have fallen out with De Sitter, who had struck him as a rather authoritarian person. Furthermore, instead

8 The *Weekblad voor Gymnasiaal en Middelbaar Onderwijs* (a weekly bulletin for secondary-school teachers) in the years 1916-1917 features a number of articles by Pannekoek discussing the method of teaching cosmology and the issue of salary increases for teachers. Apparently he took his teaching job very seriously.

9 Pannekoek 1916.

10 Baneke 2004. See also David Baneke, 'Pannekoek's One Revolution', in this volume, 87-108.

11 Stoop 1988, 14-16. Noordewier (whose family called itself Nassau Noordewier because one of their ancestors supposedly had been an illegitimate child of the Dutch king William II) had been a teacher at a secondary school in Leiden, but after a love affair with one of his students he was fired. After this affair, relations with his family became strained. Noordewier turned to journalism and in 1911 was hired as a news editor of the *Nieuwe Rotterdamse Courant* (NRC). He was responsible for reporting on World War I. From 1920 onwards, he was the NRC correspondent in Berlin.

of becoming deputy-director of the Leiden Observatory, he soon became first lecturer and then full professor at the University of Amsterdam, where he was completely free to decide on his own line of research. Yet, in April and May 1919, not having the advantage of foresight, the government's refusal must have been a great blow to him, if not a traumatic experience. Pannekoek must have felt hurt by politics intervening, once again, in his work as an astronomer. He had always dealt with astronomy and politics as two separate occupations, but now he had to conclude that others were not able to make this distinction. As a result, he decided to separate the two sides of his career even more strictly than before. Before 1919, Pannekoek signed both his astronomical and his socialist articles in his own name, but after that year, he increasingly used pseudonyms when publishing socialist articles, pamphlets or books. Shortly before World War II, Pannekoek wrote a book on Lenin under the pseudonym of J. Harper and even after the war, so after his retirement as professor of astronomy, he published his well-known book on the workers' councils under the pseudonym of P. Aartsz. Some years later, in 1951, Pannekoek published his widely read *De groei van ons wereldbeeld* ('The Growth of our Worldview'), which contains only superficial hints of his convictions. He does indeed pay some attention to the social context of astronomy, but only at the very end he gave the reader a hint of his socialist point of view: It is about time that man, by establishing a free, self-governing world community of productive labour and by assuring itself of material prosperity in abundance, liberates all spiritual forces for the perfection of its knowledge of nature and especially the science of the universe.¹²

When plans were developed to translate and publish this book in English (which eventually happened in 1961), it was rumoured that some Americans protested that it would be out of the question to translate a work written by a communist, although these anonymous critics would have been hard-pressed to point out any passage that was clearly communist by inspiration.¹³ Because of the events in 1919, it had become second nature to Pannekoek to act as if the astronomer and the socialist were two completely different persons. This, then, resulted in the two separate identities presented in the *Memoirs*.

12 Pannekoek 1951, 432. For a different reading of the book see Bart Karstens, 'Anton Pannekoek as a Pioneer in the Sociology of Knowledge', in this volume, 197-217; Jennifer Tucker, 'Popularizing the Cosmos', in this volume, 173-195; and Omar W. Nasim, 'The Labour of Handwork in Astronomy', in this volume, 249-283.

13 Personal communication of D.J. Struik. In reviews it was pointed out that the translation was sometimes rather clumsy and that Pannekoek himself may have been the translator (the name of the translator is not mentioned).

As is evident from the above, the strict separation of Pannekoek the astronomer and Pannekoek the socialist is a historical construction. Several historians have pointed out that in fact there were important similarities between Pannekoek's socialist theorizing and his astronomical research.¹⁴ The most fundamental similarity, however, is the *emotional* drive behind both his astronomy and his radical socialism. At the heart of both, I would like to argue, is Pannekoek's utopian longing for purity and community in both nature and society, of which his almost mystical approach to nature and his speculations about a utopia of worker's councils are just two manifestations.

Utopianism was a crucial element in Pannekoek's social ideas from the very beginning.¹⁵ I already mentioned his reading of *Equality*, the second utopian novel by Bellamy, published in 1897 and immediately translated into Dutch. *Equality* is a sequel to Bellamy's first novel, *Looking Backward 2000-1887* (1888), which was translated into Dutch in 1890 as *In het jaar 2000* and became an instant success. In his two novels, Bellamy imagined late twentieth-century Boston as a harmonious community, where people were free from capitalist exploitation, worked only until they reached middle age, were placed in the occupation they were best equipped for, and money was equally distributed among all; a community in which every material need was met, where women had the same rights as men, where everyone spoke a universal language in addition to their native language, and where everybody was a vegetarian. As a result of this system, all the problems of nineteenth-century America would be solved by the year 2000: all production would be regulated by the 'Great Trust', thus ridding society of wasteful competition. The world would be governed by technical experts, which would make political strife superfluous. Under these circumstances, the noble character of man would fully shine through, while the remaining criminals or offenders would be treated in a hospital. *Looking backward* was a short publication, in which the author was unable to address all the issues related to his grand scheme. Because of this, Bellamy published a more extensive second novel, in which he more fully developed the ideas of the original book.

It is not clear whether Pannekoek read *In het jaar 2000*, but he did read the sequel, which in Dutch appeared with a title that seemed to resonate

14 On this point see also Chaokang Tai, 'The Milky Way as Optical Phenomenon', in this volume, 219-247, and Omar W. Nasim, 'The Labour of Handwork in Astronomy', in this volume, 249-283.

15 The literature on utopianism is immense. For a recent survey, with a great deal of attention given to Bellamy, see Beaumont 2012. Very helpful is also: Kemperink and Vermeer 2010, which actually has the cover of the 1919 printing of the Dutch translation of Bellamy's *Looking Backward* on its cover.

with socialist ideas, *Gelijkheid voor allen* ('Equality for all'). In his memoirs, Pannekoek reveals that upon reading Bellamy's book in 1899, he suddenly understood the deceptive nature of capitalist logic and that – by implication – he now fully grasped the true meaning of socialism. Bellamy did not explicitly discuss socialism in his books – it would have weakened their appeal to the American public – but many readers drew the conclusion that the utopia pictured by Bellamy was actually a socialist society. Bellamy had not said much about how exactly the Bostonians had abolished capitalism and created their ideal society; he only suggested that instead of protracted negotiations and street violence a sudden mass conversion, triggered by a general strike, had taken place, resulting in a peaceful 'Revolution' or 'Awakening'.¹⁶ This did not bother Pannekoek: on the contrary, it was in line with his own temperament. In any case, the in reality rather dull book by Bellamy was a revelation to Pannekoek. 'All of a sudden I was no longer blindfolded', Pannekoek noted in his memoirs.¹⁷ In less than a month, after reading some additional literature, he had become fully committed to socialism. And he was not the only one in the Netherlands who upon reading Bellamy converted to socialism. The businessman Floor Wibaut (1859-1936), who would later become a prominent figure in the socialist movement in Amsterdam, was another example.¹⁸

Utopianism is also a key element in the work of Joseph Dietzgen, the German philosopher and socialist whom Pannekoek valued even more than Marx and Engels.¹⁹ What attracted Pannekoek to Dietzgen was the latter's conviction that the human mind had a certain autonomous role to play in bringing about the future socialist state.²⁰ Human thinking was not entirely determined by social circumstances, people had some degree of freedom. Socialist utopia would not be the product of impersonal social and economic developments alone; it would come about through people taking action against exploitation and injustice. In fact, Pannekoek was convinced that

16 Bellamy 1897, chapters 25, 28, 33, and 34.

17 Pannekoek 1982, 72.

18 On the reception of Bellamy's books in the Netherlands: Krips-van der Laan 2001. The author focuses completely on Bellamy's first book, *Looking Backward*, and mentions *Equality* only in passing. *Equality* was translated as *Gelijkheid voor allen* (The Hague: A. Abrahams, 1897) by A.C.B. Vincent. Crone 2007 refers to another edition, translated by A. Nolles-Heuff and also published in The Hague in 1897. I suspect that these two editions are identical. There was yet another edition published when Bellamy once again became popular in the 1930s: Edw. Bellamy, *Gelijkheid voor allen*. Nieuwe bewerking naar de Amerikaansche uitgave van 'Equality' door H.N. (Amsterdam: E. & M. Cohen, 1934).

19 Pannekoek 1903.

20 On this point, see also Tai and van Dongen 2016.

the workers of the world had to take action *themselves* in order to become truly free. They did not need the assistance of parties, bureaucrats, or trade unions. It remained unclear how exactly this utopia would come about, but this, of course, is typical of all utopias, including Bellamy's.

Pannekoek's memoirs display an increasing dissatisfaction with organizational structures. At the same time, they exhibit his deep love for unspoiled nature. During his years in Berlin, when he lived in the then still rural town of Zehlendorf between Berlin and Potsdam, he was fond of hiking through the forests and farmlands of Brandenburg. This landscape, he wrote, was 'larger, more carefree, and primitive with its large farms, than the well-kept Dutch garden-nature. It had huge fields surrounded by pine trees, birch wood, and country roads lined with old trees'.²¹ Also during his extensive travelling through Germany, from one series of lectures to yet another meeting, he took his time to roam around the countryside while the discussions of these lectures and party meetings were on his mind. 'This combination of brainwork and new impressions of living nature has always been a source of the greatest joy', he wrote.²²

This combination of thinking about society and directly experiencing nature was not coincidental, but points to a deeply felt need for Pannekoek. When he first discovered Dietzgen, back in 1900, he would seek out similar settings: 'I still remember how on Sunday mornings I went for a cycling tour, how somewhere in the dunes of Wassenaar, under a tree, I read [some of the smaller works of] Dietzgen and how intense this combination of a wonderful experience of nature and a growing sense of understanding was to me'.²³ In nature, Pannekoek experienced a sense of purity that was lacking in society. The impurity of the wheeling and dealing that is inherent in politics, with its revisionism and opportunism, was continuously criticized by Pannekoek. In doing so, he did not attribute revisionism and opportunism to political expediency, but to moral impurity. When he spoke of the communist Karl Radek, Pannekoek declared that opportunism in politics always led to inferiority on a personal level.²⁴ Yet, he of course also meant that opportunism was a result of inferiority on the personal level. Pannekoek's ideal of a society organized through workers' councils was to be attained by one giant leap, from the present situation of exploitation, to a future utopia of perfect equality and this would bypass all the intermediate imperfections

21 Pannekoek 1982, 121.

22 Pannekoek 1982, 130.

23 Pannekoek 1982, 76.

24 Pannekoek 1982, 200.

of representation, negotiations and tactics. It was an ambitious, perhaps helpless, attempt to hold on to purity under all circumstances.

After the defeat of the ideals of the worker's movement in 1914, after missing the appointment as assistant-director at the Leiden Observatory in 1919, and after his move to Amsterdam, Pannekoek did not dwell any further on the ideal of a combined experience of nature, scientific work, and social progress. Apparently, he had learned to suspend them in separate mental compartments. In 1929, however, when he visited the Observatory of Victoria in Western Canada to take photographs of a particular segment of the sky, his old unified ideal reawakened. In his *Memoirs*, Pannekoek mused about the advantages of taking photographs over observing with the eye through an optical telescope. When one took photographs, the only thing one had to do was to take care that the instrument was constantly directed at the same star. The mind, then, had the opportunity to freely contemplate the star of interest:

This star is not the meaningless dot of light that has to be kept on the thin black line, it is an object of meaning, with a long history, with a purpose, important for us too; an object of discussion perhaps for some, an object of study for others, a link in a long chain. This is how one feels, while this dot of light dances to and fro along this line, as a part, as a little organ, of the great community of astronomical researchers, who all together push forward in the unknown forest, a community in which each has his assigned role to play. And when, during a short break, one glances at the starry sky as a whole, with all the glittering, which reminds us of earlier hope, work and strivings, then, under the beautiful silent sky, with the sleeping earth all around us, one feels like a guard in the night, like a soldier in the enormous army of progressing mankind.²⁵

The sublime experience of observing the night sky once again went hand in hand with a sense of solidarity with all of mankind, as it had done in the times when Pannekoek had been a simple observer at the Leiden Observatory. Apparently, doing research in Canada rekindled thoughts and emotions he had stored away for a long time.

Our conclusion, then, is simple and straightforward. The notion of Pannekoek's split personality – Pannekoek the astronomer and Pannekoek the socialist – is misleading. Both his socialism and his science originated from

25 Pannekoek 1982, 262-263.

the same source, the utopian longing for wholeness and purity that was so popular at the end of the nineteenth century. In Pannekoek's particular case, it was triggered by reading Bellamy's utopia. The subsequent separation between the two domains of his thought is a historical construct, provoked by the dynamics of political repression and scientific specialization. Yet, in the pages of Pannekoek's double memoirs, the original unity of his thinking still shines through.

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