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Shared Principles, Diverging Paths: Neo-Calvinism, neo-Thomism and the Natural Sciences, 1880–1960

Abraham C. Flipse

1 Introduction

The general public perception is that contemporary Roman Catholics have a more positive attitude towards science than orthodox Protestants. In October 2014, news media all over the world reported that Pope Francis, speaking at the Pontifical Academy of Sciences, had stated that evolution and the Big Bang theory were not incompatible with the existence of a Creator.¹ Pope John Paul II had already repeatedly attracted attention with his conciliatory statements about science, for example when he sent a message to the Pontifical Academy in 1996 in which he declared that the theory of evolution is no longer a mere hypothesis. Although positive statements by the pope about evolution always seem to draw attention and are seen as inherently newsworthy, the general impression is rather one of reconciliation between Catholicism and natural science.²

Orthodox Protestants, on the other hand, are often associated with radical rejection of evolutionary theory. This is particularly the case in the American context, where fundamentalists and their creationist organizations attract a great deal of attention. However, the heirs of neo-Calvinism are often also placed in the anti-evolutionist camp. In June 2014, for example, the theme of creation and evolution was a topic on the agenda of the synod of the Christian Reformed Church in North America (CRC). In reaction to a decision by the synod an article appeared by the science writer and scholar of science and religion, Karl Giberson, under the title “The Christian Reformed Church Still

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- 1 See, for example, Lizzy Davies, “Pope Francis: Evolution and Creation both Right,” *The Guardian*, 29 October 2014, <http://www.theguardian.com/world/2014/oct/28/pope-says-evolution-and-creation-both-right> (accessed 11 February 2021).
 - 2 John Paul II, “Message to the Pontifical Academy of Sciences, 22 October 1996,” *Papal Addresses to the Pontifical Academy of Sciences 1917–2002 and to the Pontifical Academy of Social Sciences 1994–2002* (Vatican City: Pontifical Academy of Sciences, 2003), 370–374, cf. xxix., 232; Alison Abbott, “Papal Confession: Darwin Was Right about Evolution,” *Nature* 383 (31 October 1996), 753.

Won't Stand up for Science."³ While it may be that Giberson's reaction does not do justice to the decision, it is nonetheless revealing as to the general perception of the debate.

This chapter will provide a comparative, historical analysis of the neo-Calvinist and Roman Catholic views of science in the late nineteenth century and the first half of the twentieth century, the period during which neo-Calvinism and neo-Thomism came into existence and flourished as frameworks for reflection on social, cultural and scientific issues.⁴ Both late-nineteenth-century neo-Calvinism and neo-Thomism can be viewed as attempts to appropriate the natural sciences, by criticizing them on certain aspects while also developing a synthesis of science and religion compatible with their own worldviews. Accordingly, this chapter will analyse the similarities and parallels of the foundational views of neo-Thomism and neo-Calvinism within their socio-cultural context.

Although neo-Thomism was a wide international movement during this period, this chapter will limit its focus to the Netherlands, where interaction between neo-Calvinism and neo-Thomism was particularly clearly manifest. While both neo-Calvinists and neo-Thomists developed an all-embracing view of science, I will use evolutionary theory as a case study, because the question of creation and evolution is viewed by many as the most controversial issue in the debate. As shall be seen, although there were important similarities between neo-Calvinists and neo-Thomists during the early period, contemporary neo-Calvinists are often more critical of evolutionary theory than Roman Catholics. This chapter will describe how the debate developed in the period until 1960, and explain where and why the ways diverged.⁵

3 Karl Giberson, "The Christian Reformed Church Still Won't Stand up for Science," *The Daily Beast*, 29 June 2014, <http://www.thedailybeast.com/articles/2014/06/29/the-christian-reformed-church-still-won-t-stand-up-for-science.html>; Roxanne Van Farowe, "Synod Rejects Request to Study Creation Account," *The Banner*, 18 June 2014, <http://www.thebanner.org/news/2014/06/synod-rejects-request-to-study-creation-account> (both accessed 11 February 2021).

4 Cf. Herman Paul and Johan de Niet, "Issus de Calvin: Collective memories of John Calvin in Dutch neo-Calvinism," in: Johan de Niet, Herman Paul and Bart Wallet (eds.), *Sober, Strict and Scriptural: Collective Memories of John Calvin, 1800–2000* (Leiden: Brill, 2009), 67–95, esp. 70–72.

5 This chapter is largely based on my Ph.D. thesis, *Christelijke wetenschap. Nederlandse rooms-katholieken en gereformeerden over de natuurwetenschap, 1880–1940* (Hilversum: Verloren, 2014). I will not discuss the so-called 'Reformational philosophy,' developed during this period by the Vrije Universiteit philosophers H. Dooyeweerd and D.H.Th. Vollenhoven, and their criticism of the 'scholastic' line in neo-Calvinism. This Calvinist philosophy played no role of any significance in the debate among the scientists.

2 The Dutch Context: Neo-Calvinist and Neo-Thomist Scientific Organizations

In the final decades of the nineteenth century, orthodox Protestants in the Netherlands, under the leadership of Abraham Kuyper (1837–1920), increasingly participated in contemporary culture. Active in many social domains, these neo-Calvinists sought increasing participation in the academic world. In 1880 Kuyper and his sympathizers founded the Vrije Universiteit in Amsterdam, a ‘free’ (private) university, alongside and in opposition to the public (state) universities. The Vrije Universiteit initially comprised three faculties – Theology, Law and Arts – but was intended to develop into a complete university including Faculties of Science and Medicine.⁶ In Kuyper’s view, the Vrije Universiteit should be the place where modern scholarship and science would meet orthodox faith. The aim was to develop a Christian science, founded on Calvinist principles, alongside and in opposition to the naturalistic science practised at the public universities. The foundation of the Vrije Universiteit did not mark the sudden birth of a complete ‘Christian science’ or a ‘Calvinist philosophy of science,’ but in the first decades of its existence various ideas towards that end were put forward by Kuyper himself and others. This included Herman Bavinck (1854–1921), his successor as professor of dogmatics at the Vrije Universiteit in 1902, after Kuyper had become Prime Minister in a coalition cabinet of Calvinists and Roman Catholics.⁷

The ideas aired by neo-Calvinism’s ‘founding fathers’ were of great importance to the ongoing discussion on science and religion in the Calvinist world. A Faculty of Science, however, was not established at the Vrije Universiteit until 1930. In 1896, however, Calvinist scientists had already established a Christian Society of Natural and Medical Scientists (hereafter: Christian Society), which aimed at practising science and medicine “by the light of God’s Word.”⁸ Most of

6 See especially Abraham Kuyper, *Souvereiniteit in eigen kring. Rede ter inwijding van de Vrije Universiteit, den 20sten October 1880 gehouden, in het koor van de Nieuwe Kerk te Amsterdam* (Amsterdam: J.H. Kruyt, 1880), 33–35. [English: “Sphere Sovereignty,” in James D. Bratt (ed.), *Abraham Kuyper. A Centennial Reader* (Grand Rapids: Eerdmans, 1998), 463–490.] See also: A.Th. van Deursen, *The Distinctive Character of the Free University in Amsterdam, 1880–2005, A Commemorative History* (Grand Rapids: Eerdmans, 2008), 5–9.

7 Johan Snel, *De zeven levens van Abraham Kuyper. Portret van een ongrijpbaar staatsman* (Amsterdam: Prometheus, 2020), 191–193, 225–227; James Eglinton, *Bavinck: A Critical Biography* (Grand Rapids: Baker Academic, 2020), 217–254.

8 Abraham C. Flipse, “Against the Science-Religion Conflict: The Genesis of a Calvinist Science Faculty in the Netherlands in the Early Twentieth Century,” *Annals of Science* 65 (2008), 363–391. “Christelijke Vereniging van Natuur- en Geneeskundigen in Nederland”; “bij het licht van Gods Woord.”

the members of this Society had been trained at one of the Dutch public universities, and as such were familiar with the practice of (naturalistic) science. At the same time, the inspiration they drew from neo-Calvinist ideals meant that the debate within this Christian Society was marked by neo-Calvinism.

Around 1900, a similar development took place in the Roman Catholic community in the Netherlands, although the Catholics thought in terms of 'emancipation' more so than the neo-Calvinists. During the nineteenth century the Dutch Roman Catholic population had been in a position of cultural backwardness. This standing aloof in cultural and academic life was partly due to intentional exclusion by the liberal Protestant elite, but it was also caused in part by the attitude of the Catholics themselves. They had a certain apprehension towards the modern world in general, and of the sciences in particular. The sciences were associated with an unchristian, naturalistic and materialistic worldview, which formed a threat to moral values and the truth of Christianity. Only around the turn of the twentieth century did this attitude slowly begin to change. In 1899 the Catholic writer and teacher Maarten Poelhekke (1864–1925) lectured on *The Shortfall of Catholics in Science*, referring not only to the small number of Catholic scientists but also hinting at what he saw as their shortcomings. He blamed his fellow believers for being too passive, and he called on them to 'invade' the academic world to make up this shortcoming. In particular, he exhorted them to follow the example set by Abraham Kuyper and his supporters.⁹

In the following decades, the Dutch Catholics' passive and hostile attitude towards the sciences gradually dissipated and a process of emancipation began. In 1904, a "Society for the Advancement of Science among Catholics in the Netherlands" (hereafter: Catholic Scientific Society) was founded for Catholic graduates.¹⁰ In the following year, the Dutch bishops founded the St. Radboud Foundation, which was intended to establish special chairs for Thomistic philosophy at public universities, and, in the long term, to work towards the foundation of a Catholic University. It was only in 1923 that this Roman Catholic University was established, in Nijmegen, with faculties of Theology, Arts and Law. Faculties of Science and Medicine were only created after the Second World War.¹¹ In the meantime, some professors at the Catholic seminar-

9 M.A.P.C. Poelhekke, *Het Te-kort der Katholieken in de Wetenschap* (Nijmegen: Malmberg, 1900), 27–28, 46.

10 Hans Bornewasser, *In de geest van Thijm. Ontwikkelingen in de verhouding tussen wetenschap en geloof. 1904–1984* (Baarn: Ambo, 1985). "Vereeniging tot het Bevorderen van de Beoefening der Wetenschap onder de Katholieken in Nederland."

11 Jan Brabers, *Proeven van eigen cultuur. Vijfenzeventig jaar Katholieke Universiteit Nijmegen. 1923–1998. Deel 1: 1923–1960* (Nijmegen: Valkhof Pers, 1998); Hub. Laeven and Lodewijk

ies also began to pay attention to the sciences. Some of the priests, especially Jesuits who had graduated in one of the sciences at the public universities, stimulated their students to attend university as they themselves had done. In 1894 the Dominican J.V. de Groot (1848–1922) was appointed to a special chair for Thomistic Philosophy at the University of Amsterdam and in 1909 J.Th. Beysens (1864–1945) became professor for Thomistic philosophy at Utrecht University. De Groot and Beysens can be viewed as the founding fathers of neo-Thomism in the Netherlands. Both men were influenced by the work of (the later cardinal) Désiré-Joseph Mercier, founder of the Higher Institute of Philosophy at the Catholic University of Louvain, Belgium, the international centre of neo-Thomism.¹²

The Catholic Scientific Society aimed at “promoting the sciences amongst Dutch Catholics,” an aim that points to the dominant motive of emancipation. Thus, over the years many more or less specialist scientific lectures were delivered at the Society’s meetings. However, efforts were also made to find specifically Catholic, neo-Thomist answers to the questions of the age. The aim of the University was more comprehensive and its statutes stated that “the R.C. university recognizes, for all its scientific work, as the highest authority God’s revealed truth, of which the R.C. Church is acknowledged to be the bearer.” Many Catholic graduates who had studied at one of the public universities and who were members of the Catholic Scientific Society were initially rather critical of the foundation of a free, Catholic university, fearing that it would lead to isolationism. However, in 1923 some of the Catholic Society’s critical members decided to devote themselves to the Catholic University when they were appointed professors.¹³

3 Neo-Calvinist and Neo-Thomist Views of the Sciences: Foundational Ideas

The neo-Calvinist and neo-Thomist ideals of science had important similarities, which distinguished them from the liberal view. In addition, several

Winkeler, *Radboudstichting 1905–2005* (Nijmegen: Valkhof Pers, 2005).

12 Joep van Gennip and Marie-Antoinette Th. Willemsen (eds.), *Het geloof dat inzicht zoekt. Religieuzen en de wetenschap* (Hilversum: Verloren, 2010); Laeven and Winkeler, *Radboudstichting*, 143–155.

13 Bornewasser, *In de geest van Thijm*, 46–48; Brabers, *Proeven van eigen cultuur*, 14: “De R.K. Universiteit huldigt bij de beoefening en bevordering der wetenschap als hoogste gezag de door God geopenbaarde waarheid, waarvan zij de Roomsche Katholieke Kerk als draagster belijdt.”

elements of the neo-Calvinist view of science were derived from neo-Thomism. Alongside this, the way neo-Thomism took shape in the Netherlands was also influenced by neo-Calvinism. When Bavinck published a brochure under the title “Christian science” in 1904, he referred expressly to the neo-Thomist view advanced by Pope Leo XIII in the encyclical *Aeterni Patris*. Bavinck wrote: “Amongst Roman Catholics, particularly since the encyclical issued by Pope Leo XIII on August 14, 1879, recommending the study of Thomas, a zeal has awakened to pursue science in accordance with Thomistic principles, which must put faithful Protestants to shame.” Bavinck’s brochure was reviewed with approval in the Jesuit periodical *Studiën*.¹⁴

In the area of academic teaching and research the Dutch Calvinists and Catholics had similar interests, and thus stood together in opposing the liberals. The public debate flared up in 1904, when as the Minister responsible, Kuyper proposed an amendment to the Law on Higher Education that facilitated religious initiatives in academia (namely, the establishment of free universities and special professorships).¹⁵ Calvinists and Catholics now jointly and publicly defended the right to establish Christian universities, and the development of a ‘Christian science.’ From their debates with the liberals it appears that the neo-Calvinists and the neo-Thomists did not reject modern science, but rather that they were not willing to adopt it *simpliciter*. They viewed mainstream ‘modern science’ as part and parcel of the liberal, non-Christian culture, to which neo-Calvinists and neo-Thomists proposed their own alternative views of science and society. Alongside ‘liberal science,’ they argued, an equivalent ‘Christian science’ should be allowed to develop.¹⁶

Both neo-Calvinists and neo-Thomists contested the view that faith and science should be kept separate and that they were in conflict. Religion should be allowed – if necessary, through the mediation offered by philosophy – to have a normative role in the sciences. Kuyper advanced these ideas in his *Encyclopaedia*

14 H. Bavinck, *Christelijke wetenschap* (Kampen: J.H. Kok, 1904), 6–7: “Met name is er bij de Roomsche Christenen, vooral na de encycliek, door Paus Leo XIII den 4den Aug. 1879 uitgevaardigd tot aanbeveling van de studie van Thomas, een ijver tot beoefening der wetenschap overeenkomstig diens beginselen ontwaakt, die geloovige Protestanten diep moet beschamen.” Review: “Christelijke wetenschap, door Dr. H. Bavinck,” *Studiën. Tijdschrift voor godsdienst, wetenschap en letteren* 37 (1904), 312–316. On Bavinck and neo-Thomism: J. Veenhof, “De God van de filosofen en de God van de bijbel. Herman Bavinck en de wijsbegeerte,” in G. Harinck and G. Neven (eds.), *Ontmoetingen met Herman Bavinck* (Barneveld: de Vuurbaak, 2006), 219–233.

15 C. de Ru, *De strijd over het hoger onderwijs tijdens het Ministerie-Kuyper* (Kampen: Kok, 1953).

16 Flipse, *Christelijke wetenschap*, 67–79.

of *Sacred Theology* (1893–1895), his *Stone Lecture* on ‘Calvinism and Science,’ which he gave at Princeton Seminary in 1898, and in his *Common Grace in Science and Art* (1905).¹⁷ In these works Kuyper emphasized – in contrast to proponents of the idea that there had always been ‘warfare’ between science and faith – that such a conflict did not exist. The ‘conflict view,’ the idea that science and (orthodox) religion were necessarily antagonistic, was widespread in the late nineteenth century. It was advocated by scientific naturalists like Thomas Huxley and John Tyndall, and by the German monist Ernst Haeckel. It was also the *Leitmotiv* in such books as *History of the Conflict between Religion and Science* (1874) and *A History of the Warfare of Science and Theology in Christendom* (1896).¹⁸ According to Kuyper, however, there was no conflict between science and religion. The real conflict was the “antithesis” between “normalism” (a naturalistic worldview) and “abnormalism” (a theistic worldview). Kuyper argued that science is not religiously neutral, but is, rather, affected by faith: “Every science in a certain degree starts from faith, and, on the contrary, faith which does not lead to science, is mistaken faith.” A conflict between Christian and non-Christian science was inevitable because they proceeded from different religious presuppositions or principles.¹⁹

A similar voice was heard in Catholic circles. Like the neo-Calvinists, the neo-Thomists were strongly opposed to the idea that there was an essential

17 Abraham Kuyper, *Encyclopaedie der Heilige Godgeleerdheid. Deel 2. Algemeen deel* (1894; Kampen: Kok, 2nd edn 1909), 97–161. Abraham Kuyper, “Calvinism and Science,” in *Calvinism: Six lectures delivered in the Theological Seminary at Princeton* (New York: Fleming H. Revell, 1899), 143–188. Abraham Kuyper, *De gemeene gratie in wetenschap en kunst* (Amsterdam: Höveker & Wormser, 1905).

18 J.W. Draper, *History of the Conflict between Religion and Science* (New York: D. Appleton, 1874); A.D. White, *A History of the Warfare of Science with Theology in Christendom* (New York: D. Appleton, 1896).

19 Kuyper, “Calvinism and Science,” 173. A great deal has been written about Kuyper’s ideas on science and the university. See e.g.: Del Ratzsch, “Abraham Kuyper’s Philosophy of Science,” in Jitse M. van der Meer (ed.), *Facets of Faith and Science, Vol. 2: The Role of Beliefs in Mathematics and the Natural Sciences: An Augustinian Perspective* (Lanham: University Press of America, 1996), 1–32; J. Klapwijk, “Abraham Kuyper on Science, Theology and University,” in Steve Bishop and John H. Kok (eds.), *On Kuyper: A Collection of Readings on the Life, Work & Legacy of Abraham Kuyper* (Sioux Centre, Iowa: Dordt College Press, 2013), 221–245 (also published in *Philosophia Reformata* 78 (2013), 18–46); George Harinck, “Twin Sisters with a Changing Character: How neo-Calvinists Dealt with the Modern Discrepancy between the Bible and Modern Science,” in Jitse M. van der Meer and Scott Mandelbrote (eds.), *Nature and Scripture in the Abrahamic Religions: 1700–Present, Vol. 2* (Leiden: Brill, 2008), 317–370; Flipse, *Christelijke wetenschap*, 56–59, 84–93.

conflict between science and faith.²⁰ Therefore, with respect to the Catholic University and the Catholic Society, the question arose: is the only aim of these Catholic organizations to stimulate participation in mainstream science ('emancipation'), or should Catholics develop their own 'Catholic science' – and if so, what should it look like? Although most Catholic intellectuals admitted that to a certain extent science was independent of faith, they also agreed that faith should play an evaluative role in science, for example in interpreting results, developing theories, and formulating or judging hypotheses. The bridge between faith and science was, they agreed, the philosophy of neo-Thomism. As early as 1879, in the encyclical *Aeterni Patris*, Pope Leo XIII had recommended the study of St. Thomas Aquinas in order to achieve a new synthesis of science and faith. This new synthesis was denoted (also among Catholics) as 'Christian science' or 'Catholic science.'²¹

In particular, the neo-Calvinists and the neo-Thomists opposed what they called the 'mechanist' character of nineteenth-century science. This was also the reason for their criticism of the (Darwinian) theory of evolution, as will be discussed later in this chapter. For the neo-Calvinists a machine-like, autonomous view of nature was irreconcilable with God's providence and involvement with this world. For neo-Thomists the stumbling block was particularly the mechanist concept of matter, which clashed with that of Aristotle and Thomas in which teleological notions play an important role. For both groups their ideal of science implied renewed positive valuation of teleological thinking in opposition to mainstream science.

4 Neo-Calvinist and Neo-Thomist Views of Evolution

What did this general view of science mean for their attitude to evolutionary theory? Abraham Kuyper's view, which he formulated eloquently and persuasively

20 S. van den Anker, "Draper's geschiedenis van de worsteling tusschen godsdiensdienst en wetenschap," *Studiën* 11 (1878), Vol. 11, 305–369. See also, Don O'Leary, *Roman Catholicism and Modern Science* (New York/London: Continuum, 2006), 22, 41.

21 Bornewasser, *In de geest van Thijm*, 52–54; Brabers, *Proeven van eigen cultuur*, 73–75; Flipse, *Christelijke wetenschap*, 125–128; Kaat Wils, *De omweg van de wetenschap. Het positivisme en de Belgische en Nederlandse intellectuele cultuur, 1895–1914* (Amsterdam: Amsterdam University Press, 2005), 346–354. Concerning the (seeming) differences between the neo-Calvinist and neo-Thomist views of reason, see: Eduardo J. Echeverria, "Fides et Ratio. The Catholic and the Calvinist: Prospects for Rapprochement," *Philosophia Reformata* 65 (2000), 72–104.

in his rectorial address on 'Evolution' in 1899, is well-known.²² A few points in this lecture are relevant here. First, Kuyper did not adduce the text of the book of Genesis against evolutionary theory. Indeed, his lecture only contains one remark about the Genesis story, which seems to support a kind of developmental view on creation: "Scripture states that '*the earth brought forth herb yielding seed after its kind*' and also that '*the earth brought forth the cattle and everything that creepeth upon the earth;*' not that they were set down upon the earth by God like pieces upon a chessboard."²³ Alongside this, he was very critical of "Darwinism," i.e. the theory of natural selection. He pointed to the scientific problems in the Darwinian theory of evolution at the time, such as the lack of an adequate theory of heredity, and the incompleteness of the fossil record. He was not alone in this opinion. Many scientists around 1900 felt that natural selection was unsatisfactory. This was the period of the 'eclipse of Darwinism,' in which many opted for alternative theories, such as neo-Lamarckism, saltationism, or some form of orthogenesis. Kuyper also fundamentally criticized the principle of natural selection because it was naturalistic, mechanistic, and a-teleological. As such, it could not be combined with belief in a providential and interventionist God, "who first prepares the plan and then omnipotently executes it."²⁴ He was especially critical of those who made Darwinism into a worldview. According to Kuyper, especially the monist philosophy of life advocated by Ernst Haeckel and the evolutionary ethics of Herbert Spencer were systems that repudiated the essence of ethics, aesthetics, and religion.²⁵

Bavinck's publications on science and scholarship include a contribution to a pamphlet in which opinions 'pro' and 'contra' evolution were discussed.²⁶

22 Abraham Kuyper, "Evolution," in: Bratt (ed.), *Kuyper Centennial Reader*, 405–440. Originally published as *Evolutie. Rede bij de overdracht van het rectoraat aan de Vrije Universiteit op 20 October 1899 gehouden* (Amsterdam: Höveker & Wormser 1899). In the course of time, different interpretations of Kuyper's address have been put forward, including: Clarence Menninga, "Critical Reflections on Abraham Kuyper's *Evolutie* Address," *Cabvin Theological Journal* 33 (1998), 435–443; Ratzsch, "Kuyper's Philosophy of Science," 15–16; Peter S. Heslam, *Creating a Christian Worldview: Abraham Kuyper's Lectures on Calvinism* (Grand Rapids: Eerdmans, 1998), 104–111; Gijbert van den Brink, "Evolution as a Bone of Contention between Church and Academy: How Abraham Kuyper Can Help Us Bridge the Gap," in Gordon Graham (ed.), *The Kuyper Center Review, Volume 5: Church and Academy* (Grand Rapids: Eerdmans, 2015), 92–103, on 94–98.

23 Kuyper, "Evolution," 438–439.

24 Kuyper, "Evolution," 427–428, 437. For the scientific crisis in Darwinism around 1900: Peter J. Bowler, *The Eclipse of Darwinism: Anti-Darwinian Evolution Theories in the Decades around 1900* (Baltimore: Johns Hopkins University Press, 1983).

25 Kuyper, "Evolution," 431–435.

26 H. Bavinck, "Contra," in P.G. Buekers and H. Bavinck, *Pro en Contra Evolutie* (Baarn: Hollandia, 1907); a translation is included in John Bolt (ed.), *Essays on Religion, Science and*

Bavinck defended the ‘contra’ position, but like Kuyper, his criticism of evolutionary theory concentrated on its “mechanistic character.” Because of this, Bavinck argued, “it leaves no room for a plan or goal, but has a random character.”²⁷ The “mechanistic worldview” which, according to Bavinck, underlies the Darwinian view of evolution, *a priori* excluded supernatural interventions and prescribed that everything “should be reduced to mechanical motion.” Therefore, Darwinists claim that humankind is descended from animals, and that life emerged spontaneously from inorganic matter. How could it have happened otherwise?²⁸ If the mechanistic, or naturalistic worldview were to be abandoned, Bavinck believed, an alternative worldview could produce a different theory. Such a theory might contain elements of Darwinism and would still be in harmony with belief in creation.²⁹

On the Catholic side, Beysens developed a similar view. For Beysens, the issue of creation and evolution was also particularly relevant in the context of the opposition between mechanicism and teleology. In his view, Darwinism clashed head-on with the teleological view of nature, which was precisely the cause of its popularity in “anti-theist” circles. Darwinism, the theory of “physico-mechanical adaptation to external conditions; the struggle for life and the concomitant natural selection,” was, according to Beysens, a theory with a “*concretized mechanist random*” character and therefore it was reprehensible.³⁰

In a brochure on evolution published in 1902, Beysens argued that there was as yet insufficient evidence to accept evolutionary theory, but left open the possibility that this might well be found in the future. He indicated certain *a priori* conditions that any evolutionary theory would have to satisfy in order to be acceptable to Catholics. It had to assume essential boundaries in nature between, what he called, “philosophical species” and it had to involve teleological concepts. “Darwinism,” the theory of natural selection, was therefore an

Society: Herman Bavinck (Grand Rapids: Baker, 2008), 105–118. On Bavinck and science: Al Wolters, “Herman Bavinck on Faith and Science,” in van der Meer (ed.), *Facets of Faith and Science* Vol. 2, 33–56; Willem J. de Wit, *On the Way to the Living God. A Cathartic Reading of Herman Bavinck and an Invitation to Overcome the Plausibility Crisis of Christianity* (Amsterdam: VU University Press, 2011), 52–94.

27 Bavinck, “Contra,” 26: “Van een plan en een doel [...] is geen sprake, [maar ze draagt] een toevallig karakter.”

28 Bavinck, “Contra,” 36: “De dingen [moeten] tot mechanische bewegingen herleid kunnen worden.”

29 Bavinck, “Contra,” 37–38.

30 J.Th. Beysens, *Theodicee of natuurlijke Godsleer* (Amsterdam: C.L. van Langenhuisen, [1907]), 211–212, 220: “fysisch-mechanische aanpassing aan de uiterlijke omstandigheden; strijd om het bestaan en de daaraan verbonden natuurkeus”; “*geconcretiseerde-mechanistische-toevalstheorie*.”

unacceptable theory: it could not be reconciled with a teleological conception of nature.³¹

In their general approach to science, and also in their views on evolution, there are many similarities between neo-Calvinism and neo-Thomism around 1900. Both groups aimed at offering an alternative, based on their own worldview, to nineteenth-century science which had, in their view, gone off the rails in various respects. This concerned in particular its naturalistic and mechanistic character, which was most clearly visible in Darwin's theory of evolution, which seemed to exclude any form of goal-directedness.

However, there might seem to be a difference between the neo-Calvinist and neo-Thomist views of the Bible. As is well known, the absolute authority of Scripture played a central role in neo-Calvinist theology.³² Was this perhaps different in the Catholic tradition? And is this not the point at which the greatest problems in the debate on creation and evolution arise? However, the view of the Bible as infallible, as found in Kuypers and Bavinck, is not fundamentally different from the equivalent views found in the relevant Catholic documents on this issue, especially the encyclical *Providentissimus Deus* of 1893. The more precise guidelines of the Pontifical Biblical Commission of 1909 for a literal-historical exegesis of the first chapters of Genesis are reminiscent of the (later) declarations of the Reformed synod of Assen of 1926.³³ It is true, however, that Kuypers and Bavinck discussed the relation of the Bible and science more explicitly than the neo-Thomist natural philosophers, but like most orthodox Protestants in the Anglo-Saxon world, Dutch neo-Calvinists were inclined to harmonize the findings of modern geology with the creation account in a 'concordistic' way, for example by using a day-age interpretation

31 J.Th. Beysens, *De ontwikkelingsgeschiedenis der organische soorten* (Leiden: Théonville, 1902), 19, 45, 95 and passim.

32 Koert van Bekkum, "Zekerheid en Schriftgezag in neo-calvinistische visies op de historiciteit van de bijbel," in Koert van Bekkum and Rien Rouw (eds.), *Geloven in zekerheid? Gereformeed geloven in een postmoderne tijd* (Barneveld: de Vuurbaak, 2000), 77–108; Dirk van Keulen, *Bijbel en dogmatiek. Schriftbeskouwing en schriftgebruik in het dogmatisch werk van A. Kuypers, H. Bavinck en G.C. Berkouwer* (Kok: Kampen, 2003).

33 Leo XIII, *Providentissimum Deus* (http://www.vatican.va/content/leo-xiii/en/encyclicals/documents/hf_l-xiii_enc_18111893_providentissimus-deus.html); Pontifical Biblical Commission, "Concerning the historical nature of the first three chapters of Genesis - June 30, 1909" (<http://www.philvaz.com/apologetics/p100.htm#Response>) (both accessed 11 February 2021); O'Leary, *Roman Catholicism and Modern Science*, 68–72, 124–126. Cf. Koert van Bekkum, "In More or Less Figurative Language: The Dutch neo-Calvinist Fascination with the Encyclical *Providentissimus Deus* (1893) and its Aftermath," in this volume, 21–45.

of Genesis 1.³⁴ Moreover, the worldview approach was dominant among the neo-Calvinist theologians. It is also noticeable that both groups were more precise in their criticism of the positions they rejected than in the formulation of their own favourite alternatives. It was up to the scientists to develop these alternative scientific theories.

5 Scientists and Theologians in the Interbellum Period

How did the scientists appropriate the neo-Calvinist and neo-Thomist foundational views? How did they try to flesh them out? In the Netherlands, both Calvinist and Catholic scientists took the views of their communities as their starting point, and thought about the relation of faith and science within this framework. What were the results of this reflection? For the interbellum period, I will give two examples: the views of the Reformed biologist J.P. de Gaay Fortman and of the Catholic biologist A.C.J. van Goor. They both used the options provided in the view of science developed in their traditions in order to move forward, without making a break with the neo-Calvinist and neo-Thomist traditions.

The Calvinist scientists who were active in the 1920s and 1930s had learned from the neo-Calvinist leaders that ‘the mechanistic worldview’ and naturalistic science were in conflict with Christianity. However, encouraged by some ideas of the late Bavinck, who had shown more openness to modern culture, they stressed that the contemporary situation was different from its nineteenth century antecedent. ‘Naturalism’ was a thing of the past, they believed, and mainstream science could not be considered suspect simply because it was based on non-Calvinist principles. Moreover, many of the practising scientists increasingly demarcated a domain of ‘pure’ scientific research, in which religion does not play a direct role, from the domain where it does. They continued to discuss the proper relation between science and religion for this domain of ‘natural philosophy,’ where religion is involved.³⁵

34 See, for example, Abraham Kuiper, “Van de voleinding,” *De Heraut*, 3 November 1912 – 5 January 1913. The series is partly included in Abraham Kuiper, *Van de Voleinding*, Vol 11 (Kampen: Kok, 1929). See also W. Geesink, *Van 's Heeren ordinantiën* Inleidend deel (1907; Kampen: Kok, 2nd edn 1926), 245–246. Cf. Abraham C. Flipse, “The Origins of Creationism in the Netherlands: The Evolution Debate Among Twentieth-Century Dutch neo-Calvinists,” *Church History: Studies in Christianity and Culture* 81 (2012), 104–147, on 113–116.

35 H.R. Woltjer, “Natuurkunde en natuurfilosofie,” *Orgaan van de Christelijke Vereeniging van Natuur- en Geneeskundigen in Nederland* (1927), 1–14. Flipse, “Against the Science-Religion Conflict,” 379; Flipse, *Christelijke wetenschap*, 155–157.

This allowed some of the Calvinist scientists to go so far as to accept the biological theory of evolution. One such Calvinist scientist was J.P. de Gaay Fortman (1887–1983), a zoologist by training, biology teacher and co-author of a series of biology textbooks for Christian secondary education. In several lectures and articles for the Christian Society and for Calvinist student groups, he argued that if it is used purely scientifically, there is no objection to the idea of evolution. He expressly wanted to follow in Bavinck's wake, but he developed concrete ideas to fill the space that Bavinck had created. In his dissertation (1918) he made the following claim, which he had discussed with Bavinck himself: "In the theory of evolution, if it is conceived in a non-mechanistic way, there is a truth that has to be recognized from the theistic point of view."³⁶ In 1926 he argued that Bavinck had been too critical of evolutionary theory, certainly in the light of developments in science. It was perhaps understandable, he said, that Bavinck had identified evolutionary theory with the mechanist worldview, but such an identification was not justified. In his view, it was quite possible to accept "the fact of evolution" without accepting the mechanistic worldview. He regretted that Bavinck and others had simply identified evolution with the mechanistic worldview, although that had been understandable thirty years previously.³⁷

A similar step was made on the Catholic side. A.C.J. van Goor (1881–1925), a young scientist who had received a doctorate in biology from the University of Amsterdam and had worked in that field as a researcher, argued for the Catholic acceptance of the "theory of descent." In this effort, he attempted to coordinate his view with the neo-Thomist approach, and in particular Beysens' publications. In his view, however, Beysens had been too critical in 1902, and the time had now come to accept some form of evolution. In contrast to de Gaay Fortman, van Goor did not have to take this step on his own, but rather was publicly supported by Beysens himself. In 1916, together with the seminary professor in dogmatics, G. van Noort (1861–1946), van Goor and Beysens published a book entitled *The Evolutionary History of Organic Life, From the*

36 J.P. de Gaay Fortman, *Onderzoekingen over de ontwikkeling van de wervelkolom der amphiënen, in 't bijzonder bij Megalobatrachus maximus* (Leiden: Brill, 1918), proposition xv: "In de evolutieeler, mits niet mechanistisch opgevat, ligt een waarheid, die ook van het standpunt van het theïsme dient te worden erkend." J.P. de Gaay Fortman, "De evolutie-gedachte"; and "Wederwoord," *Orgaan der Societas Studiosorum Reformatorum*, January 1930, 88–92, 150–153, esp. 150.

37 J.P. de Gaay Fortman, "Evolutie en christelijke wetenschap," in *Gedenkboek der Societas Studiosorum Reformatorum ter gelegenheid van haar 8ste lustrum 1886–1926* (Rotterdam: J.H. Donner, 1926), 107–112.

Perspective of Philosophy, Science and Theology.³⁸ In that book they argued that neo-Thomist philosophy and Church doctrine were not hostile to the idea of evolution in the natural world as such – as long as one held on to a teleological evolutionary mechanism, a hylemorphic concept of matter, and the belief that God had created the “potentiality for life” in the beginning. The immaterial, immortal human soul was excluded *a priori* from the process of evolution: it was created immediately by God. Subsequently the authors discussed the “facts” of geology, palaeontology, embryology, morphology and genetics. It had been shown, they explained, that in successive geological ages more and more groups of increasingly complex plants and animals had emerged, with a number of theories having been proposed to explain these facts. The authors concluded that “monophyletic evolution” and not, for example, an ongoing creation of new species by God, was the most probable explanation of the phenomena. Moreover, they argued that the “ongoing creation hypothesis” would be at odds with St. Thomas’s rule, “not to assume miracles or supernatural interference when a natural explanation is available.”³⁹ Van Goor was anxious to give his view a strong Thomistic foundation. Besides having been influenced by Beysens, he also used the ideas of the Belgian Catholic geologist Henry de Dorlodot. When corresponding on evolution in 1913–14, de Dorlodot had assured him that belief in God as the *Causa Prima*, who worked *indirectly* in the created world by means of *causae secundae*, had always been an article of faith for the Church.⁴⁰

However, the ideas of de Gaay Fortman and van Goor were a bridge too far for the majority of orthodox Calvinists and Catholics, and as such, both met with ecclesiastical resistance. De Gaay Fortman even left the Reformed Churches after the Geelkerken Case (which will be discussed later in this chapter), although he remained an active member of the Christian Society, and after the Second World War he was even appointed as a lecturer at the Vrije Universiteit. Van Goor’s ideas were also rejected by the Church. Despite the strong Thomistic foundation that the authors had provided for their views, Church Censorship, influenced by anti-modernist advisors, withheld the ‘imprimatur’ for the 1916 book, for which reason it could not be published for the general

38 J.Th. Beysens, A.C.J. van Goor, and G. van Noort, *De ontwikkelingsgeschiedenis van het organische leven. Wijsgerig, natuurwetenschappelijk en theologisch beschouwd* (Leiden: Théonville, 1916).

39 Beysens, van Goor and van Noort, *De ontwikkelingsgeschiedenis*, 40 and passim.

40 De Dorlodot to van Goor, 2 January 1914, Van Goor Archive, Katholiek Documentatiecentrum Nijmegen. On de Dorlodot, see O’Leary, *Roman Catholicism and Modern Science*, 126–129.

public.⁴¹ Nevertheless an adapted version of van Goor's book was published in 1918 and discussed in the relative seclusion of the Catholic Scientific Society. Here the reactions varied from qualified approval to indignant rejection. The majority of the members, however, were prepared to accept a Thomistic evolutionary theory for the plant and animal world.⁴² Internationally, the Catholic Church was equally reluctant to accept evolutionary theory, as is apparent from the way de Dorlodot was thwarted behind the scenes.⁴³

Whereas the tensions regarding creation and evolution in the Catholic world remained largely behind the scenes, a fierce public controversy flared up in Reformed circles during the 1920s and 1930s. The second generation of neo-Calvinist theologians, who were active in this period, were in several respects stricter than the founding fathers had been. They were inclined to reject the outcomes of scientific research and also held stricter views on the authority of Scripture and the interpretation of the first chapters of Genesis.⁴⁴ In this period, the notorious 'Geelkerken Case' took place. The Reverend J.G. Geelkerken (1879–1960), a Reformed minister, had publicly doubted whether the story of the Fall (Genesis 2–3) should be taken literally. In 1926 the Synod of the Reformed Churches decided to suspend Geelkerken. Contemporaries compared it with the Scopes 'monkey trial' that had taken place in Dayton, Tennessee, one year before.⁴⁵ At first sight, the parallel seems only superficial. The Geelkerken Case was an ecclesiastical process about the interpretation of Scripture, and was not about the teaching of evolution in public schools. Nevertheless, at a deeper, cultural level, there are parallels. The Dutch Calvinists, like the American Evangelicals, were in a process of reorientation in

41 L.J. Rogier, *Katholieke Herleving. Geschiedenis van Katholiek Nederland sinds 1853* ('s-Gravenhage: Pax, 1956), 493–494; L.J. Rogier and N. de Rooy, *In vrijheid herboren. Katholiek Nederland, 1853–1953* ('s-Gravenhage: Pax, 1953), 574–575.

42 A.C.J. van Goor, J. Hoogveld, and G. van Noort, *De afstammingsleer en de tegenwoordige stand der natuurwetenschap. Wijsgerige gegevens. Theologische Inleiding. Praeadvies* (1918); *Annalen Vereeniging tot het bevorderen van de beoefening der wetenschap onder de katholieken in Nederland* (1918), 123–160.

43 Raf de Bont, "Rome and Theistic Evolutionism: The Hidden Strategies behind the 'Dorlodot Affair,' 1920–1926," *Annals of Science* 62 (2005), 457–478.

44 Maarten Aalders, *125 jaar Faculteit der Godgeleerdheid aan de Vrije Universiteit* (Zoetermeer: Meinema, 2005), 161–163; C.M. van Driel, *Gewantrouwd gereformeerd. Het omstrede leiderschap van neocalvinist Arie Noordtzij (1871–1944)* (Barneveld: de Vuurbaak, 2010), 18–26, 266–295.

45 "De 'monkey trial' in Nederland," *Het Vaderland*, 8 September 1925; "Fundamentalisme in Amerika en Nederland, I. Meester Scopes en ds. Geelkerken," *Nieuwe Rotterdamsche Courant*, 20 October 1925; "Fundamentalisme in Amerika en Nederland, II. 'Bryan is not dead,'" *Nieuwe Rotterdamsche Courant*, 21 October 1925.

the interwar years. There was a group that favoured greater openness towards modern culture, although many church leaders tightened the reins and initiated more conservative, ‘fundamentalist’ policies.⁴⁶

Theologians at the Vrije Universiteit like G.Ch. Aalders (1880–1961) and V. Hepp (1879–1950) were inspired in this approach by American fundamentalist writers. In their efforts to advocate the ideal of a ‘Christian science,’ they appealed to anti-evolutionistic writers like the Canadian amateur-geologist and Seventh Day Adventist George McCready Price (1870–1963). Nowadays, Price is considered the founding father of twentieth century ‘young-earth creationism.’ Price did not believe that there was a natural order in the fossil-bearing rocks, but instead held that the Earth was only 6000 years old, and proposed that all the fossils were deposited during a worldwide flood.⁴⁷ In 1930 the professor of dogmatics, Hepp, gave the *Stone Lectures* in Princeton in which he sketched the outlines of a Calvinist natural science. His ideal of a ‘Christian geology’ he derived largely from Price’s book *The New Geology* (1923).⁴⁸ Price’s influence is also apparent in the influential exegetical work of the Old Testament professor Aalders. In 1932, he published *Divine Revelation in the First Three Chapters of Genesis*, in which, page after page, he discussed the “theory of descent” alongside a variety of geological issues. Aalders also relied heavily on Price’s theories, which saw no need of “many millions of years,” but instead posited the flood as the explanation of fossils and geological strata.⁴⁹

In the meantime, Calvinist scientists realized that the young earth creationist ideas advanced by theologians were unworkable. In their view, these ‘young earth’ theories had nothing to do with science, but rather were pipe dreams.⁵⁰ These scientists (and some theologians) who showed more

46 Maarten J. Aalders, *Heeft de slang gesproken? Het strijdbare leven van dr. J.G. Geelkerken* (Amsterdam: Bert Bakker, 2013), 307–313; George Harinck, “De kwestie-Geelkerken en de moderne cultuur,” in George Harinck (ed.), *De kwestie-Geelkerken. Een terugblik na 75 jaar* (Barneveld: de Vuurbaak, 2001), 69–86; Cf. Stuart Mathieson and Abraham C. Flipse, “Religious Controversy in Comparative Context: Ulster, the Netherlands and South Africa in the 1920s,” *History: The Journal of the Historical Association* Vol. 106, Issue 371 (2021): 429–55.

47 Ronald L. Numbers, *The Creationists: From Scientific Creationism to Intelligent Design. Expanded Edition* (Cambridge, Mass.: Harvard University Press, 2006), 88–119.

48 V. Hepp, *Calvinism and the Philosophy of Nature: The Stone Lectures Delivered at Princeton in 1930* (Grand Rapids: Eerdmans, 1930), 183–223; G. McCready Price, *The New Geology* (Mountain View, Cal.: Pacific Press, 1923).

49 G.Ch. Aalders, *De Goddelijke openbaring in de eerste drie hoofdstukken van Genesis* (Kampen: Kok, 1932), esp. 284–298.

50 W.J.A. Schouten, “Calvinisme en natuurphilosophie (Een beoordeling van prof. Hepp’s Stone-lectures),” *Orgaan van de Christelijke Vereeniging van Natuur- en Geneeskundigen in*

openness to evolutionary science were relegated to the margins or left the neo-Calvinist fold altogether. Consequently, the relative openness towards science (including evolution and historical geology) of the turn-of-the-century founders of neo-Calvinism was replaced with a restricted, young earth doctrine.⁵¹

The Calvinist biologist de Gaay Fortman and the Catholic biologist van Goor believed that some form of evolution could be accepted within their respective neo-Calvinistic and neo-Thomistic frameworks. However, this claim was not met with overwhelming acceptance amongst their co-believers and churches. For this reason, the discussion on creation and evolution came to a virtual standstill between 1930 and 1950, and was largely limited to discussions among the scientists themselves. In particular the approach taken by the Reformed theologians restricted the elbow-room available to neo-Calvinist scientists, although those in Catholic circles had slightly more space to develop novel ideas. The Vatican was not particularly fond of evolution, but did not seek an alternative in the direction of young earth creationism.⁵²

6 Neo-Calvinist and Neo-Thomist Scientists in the 1950s

Only after the Second World War was this thread picked up anew. Both Reformed and Roman Catholic scientists claimed room for further reflection on the theme of creation and evolution, independently of theologians and the church. They also began to write about the topic for a wider audience.

Within neo-Calvinist circles in the Netherlands, the Vrije Universiteit professor of biology Jan Lever (1922–2010) played a central role in the discussion. His great achievement (or, according to others, his fault) is sometimes taken to be that he rejected the traditional Reformed view of the Bible, before many theologians of the Vrije Universiteit did so.⁵³ However, Lever's focus was different. During the 1950s, Lever published on a range of topics. His first articles in 1945 concerned Kuyper's *Evolution* address, in which Lever did not discuss

Nederland (1931), 51–81; A. de Graaf, *De wereld in den loop der tijden* (Zutphen: G.J.A. Ruys [1938]), passim.

⁵¹ More extensively in Flipse, "The Origins of Creationism," 122–130.

⁵² Stefaan Blancke, "Catholic Responses to Evolution, 1859–2009: Local Influences and Mid-Scale Patterns," *Journal of Religious History* 37 (2013), 353–368; Gijsbert van den Brink, "Meer dan een hypothese.' Patronen in de rooms-katholieke receptie van de evolutietheorie," *Tijdschrift voor Theologie* 58 (2018), 135–152.

⁵³ Hittjo Kruijswijk, *Baas in eigen Boek? Evolutietheorie en Schriftgezag bij de Gereformeerde Kerken in Nederland (1881–1981)* (Hilversum: Verloren, 2011), 233–236; Van Deursen, *The Distinctive Character*, 266–267.

the Bible.⁵⁴ In the period 1948–1950, together with the philosopher Herman Dooyeweerd, Lever co-authored a series of articles on the concept of species in *Philosophia Reformata*.⁵⁵ In his inaugural lecture (1952), Lever continued this approach, and in his best-known book, *Creation and Evolution* (1956), he did of course discuss Genesis, but dismissed what he called the ‘fundamentalism’ of Aalders, Hepp, and others. This dismissal, however, only occupied a few pages.⁵⁶ Most of the book deals with philosophy and biology. He used the neo-Calvinist conceptual tool kit to argue that there is a place for evolution within all kinds of worldviews, both Christian and naturalistic. Lever explained that it was possible to accept the biological theory of evolution and at the same time adhere to belief in a providential God who guided the evolutionary process. Referring to Kuyper, he called this “divine evolutionistic creation.”⁵⁷ He believed that the theory of evolution could be incorporated in the Christian worldview, and did not necessarily imply “evolutionism,” a worldview that conceives the process of evolution as autonomous and independent of God.⁵⁸

As such, Lever used the resources available within neo-Calvinism in an effort to make evolution acceptable. The reaction to this on the part of Reformed theologians was cautiously positive, although they did not engage with Lever’s philosophical approach.⁵⁹ Instead they threw themselves into a debate on the authority of Scripture. As a result, in the public discussion about creation and evolution in the Netherlands, the original neo-Calvinist voice was to be heard less and less from the 1970s onwards.⁶⁰ For decades, the debate would be dominated by young earth creationists and their opponents, with the Netherlands even attracting attention as a hotspot in the global creation-evolution debate.

54 J. Lever, “Evolutie. Dr. A. Kuyper, 20 October 1899,” 1–IV, *Polemios*, 17 November 1945, 1 December 1945, 19 January 1946, 2 February 1946.

55 See Harry Cook and Abraham C. Flipse, “Jan Lever: Challenging the Role of Typological Thinking in Reformational Views of Biology,” *Philosophia Reformata*, 82:1 (2017), 3–25.

56 J. Lever, *Het creationisme. Rede uitgesproken bij de aanvaarding van het ambt van hoogleeraar aan de Vrije Universiteit te Amsterdam op 22 september 1952* (Wageningen: Zomer & Keunings, 1952); J. Lever, *Creatie en evolutie* (Wageningen: Zomer & Keunings, 1956), 10–14. [English: J. Lever, *Creation and Evolution* (Grand Rapids: Grand Rapids International Publications, 1958).]

57 Lever, *Creatie en evolutie*, 190.

58 J. Lever, “Evolutionisme,” in F.W. Grosheide and G.P. van Itterzon (eds.), *Christelijke Encyclopedie. Tweede geheel herziene druk* Vol. II (Kampen: Kok, 1957), 686–689.

59 See Gijsbert van den Brink, “All the More Reason to Exercise Caution while Discussing Genesis: G.C. Berkouwer on Scripture and Science,” in this volume, 93–113.

60 Abraham C. Flipse, “Natuuronderzoekers dagen de kerk uit: Natuurwetenschappers, theologen en de kerken in de jaren vijftig,” in George Harinck and Paul van Trigt (eds.), “*In de vergifkast*”? *Protestantse organisaties tussen kerk en wereld in de jaren vijftig* (Zoetermeer: Meinema, 2013), 119–137, on 132–133.

Indeed, it was only recently that thorough new studies from a Reformed perspective defending ‘theistic evolution’ have appeared within this tradition.⁶¹

In the meantime, views on evolution were changing within the Catholic tradition as well. A variety of ideas on the reconcilability of creation and evolution began to circulate among intellectuals, in reaction to which Pope Pius XII promulgated the encyclical *Humani Generis* (1952). This was the first time a declaration was made about evolutionary theory in an official document. Within a Thomist framework evolution was denoted as a valuable, although unproved hypothesis. Some restrictions were formulated concerning human origins. Nonetheless several intellectuals seized at the opportunity to create more room for the acceptance of evolutionary theory.⁶²

One of these was the ‘natural philosopher’ Andreas van Melsen (1912–1994), professor at the Catholic University of Nijmegen since 1945. Van Melsen played a role in Catholic circles similar to that played by Lever in the Calvinist world. His books on the relation between faith, science and society – among them *Evolution and Philosophy* (1964) – were read by a wide audience.⁶³ Van Melsen achieved a reconciliation of evolution and faith by giving a Christian interpretation of the evolutionary process. Following in the wake of the pre-war neo-Thomist natural philosophers, he assumed that God had created potentialities in matter, which had unfolded in the course of the evolutionary process. Van Melsen even suggested that it might not be necessary to think of a direct creation of the soul in the development from animal to the human being. On the other hand he stated that evolutionary data easily compels us to believe “that human origins should be viewed as a descent of the spirit into the body.”⁶⁴ Although he did not indicate clearly how this approach to the evolutionary process should be conceived of scientifically – neo-Darwinist evolutionary theory is difficult to combine with the idea of the unfolding of potencies that

61 Stefaan Blancke, Abraham C. Flipse, and Johan Braeckman, “The Low Countries,” in S. Blancke, H.H. Hjerimitslev and P.C. Kjærgaard (eds.), *Creationism in Europe* (Baltimore: Johns Hopkins University Press, 2014), 65–84; Gijsbert van den Brink, *Reformed Theology and Evolutionary Theory* (Grand Rapids: Eerdmans, 2020).

62 Pius XII, *Humani Generis*, http://www.vatican.va/content/pius-xii/en/encyclicals/documents/hf_p-xii_enc_12081950_humani-generis.html (accessed 11 February 2021); O’Leary, *Roman Catholicism and Modern Science*, 149–159.

63 A.G.M. van Melsen, *Evolutie en wijsbegeerte* (1964; Utrecht: Aula, 2nd edn 1968); Taede Smedes, “Denken over dansen: Het constitutieve verschil tussen geloof en wetenschap,” in Palmyre Oomen and Taede Smedes (eds.), *Evolutie, cultuur en religie. Perspectieven vanuit biologie en theologie* (Kampen: Kok, 2010), 123–151, on 134–136.

64 Van Melsen, *Evolutie en wijsbegeerte*, 95–105, 124–142, on 131: “dat de gedachte, dat de menswording als een indaling van de geest moet worden opgevat, zich gemakkelijk opdringt.”

are already present – for many Catholics his ideas provided a convincing synthesis of faith and science.

In the 1960s, other Catholics were rather taken with the ideas of the Jesuit palaeontologist, Pierre Teilhard de Chardin (1881–1955). Before the Second World War, Teilhard de Chardin had tried to reconcile evolution and faith in creation by propounding a mystical-evolutionist philosophy. However, his ideas deviated too far from official Catholic doctrine, and they were condemned by the Vatican. This did not prevent his books from gaining great popularity after his death.⁶⁵ That particular development, however, takes us far beyond the framework of neo-Thomism.

7 Conclusion

In summary we can say that neo-Calvinist and neo-Thomist attitudes towards the natural sciences around 1900 were less different than might be imagined today. Both can be viewed as attempts to come to terms with modernity, including modern science. On the whole, neo-Calvinists and neo-Thomists approached science positively, although they were critical of certain aspects of it. They developed a philosophical tool kit that enabled them to create a synthesis of science and religion that fitted in with their own worldview. Within these philosophical frameworks natural scientists tried to reconcile creation, faith and evolution. These scientists were increasingly willing to grant a certain degree of autonomy to science. Nevertheless, they did not break with neo-Calvinism or neo-Thomism but rather thought through the consequences of their traditions, in the process using some concepts in novel ways. In my view, there is a continuous line from the ‘founding fathers,’ via the debate during the interbellum period among scientists, to the syntheses that were put forward in the 1950s by the Calvinist Jan Lever, and the Catholic Andreas van Melsen.

The view of the Reformed theologians in the interbellum period ought to be seen as an aberration, which arose due to an unfortunate combination of factors. Historians have analysed the social and cultural conditions in the Reformed community in the Netherlands that caused the theologians to opt for a more conservative line.⁶⁶ From the above analysis, it has become clear that

65 O’Leary, *Roman Catholicism and Modern Science*, 158–159; B. Delfgaauw, *Teilhard de Chardin* (1964; Baarn: Wereldvenster, 1974 14th edn); Marcel Sarot, “De waarheid is één. De Rooms-Katholieke Kerk en de evolutietheorie,” *Radix* 45 (2019), 112–122.

66 Cf. George Harinck (ed.), *De kwestie-Geelkerken. Een terugblik na 75 jaar* (Barneveld: de Vuurbaak, 2001); Aalders, *Heeft de slang gesproken?*, 297–313.

this move also had implications for the way the neo-Calvinists approached the sciences. The second generation of neo-Calvinist theologians combined two aspects of neo-Calvinism that, until then, had to a large extent remained separate: on the one hand, the ideal of a Christian science – an approach to science from a worldview perspective – and on the other, a strong belief in the authority of Scripture, including a more or less literal-historical interpretation of the first chapters of Genesis. As a result, young earth creationism became part of the Dutch neo-Calvinist tradition. The road to a straightforward acceptance of ‘theistic evolution’ was blocked and it was only after the Second World War that the debate among neo-Calvinists was resumed and brought to a higher level. Nevertheless, among neo-Calvinists, the discussion about ‘creation or evolution’ was to flare up again and again in the second half of the twentieth century, whereas the Roman Catholics continued on their course towards reconciliation.

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