

IN DEFENCE OF THE FAITH: APOLOGETICS AND WORLDVIEW ANALYSIS – ANNOTATED BIBLIOGRAPHY

The second International Conference on Reformed Education (ICRE II), held in Sumas, Washington, in September 2007, decided to set up an international committee to develop guidelines for the teaching of apologetics in our schools. Such a course, it was agreed, should first of all serve as a means of helping students deal with the ongoing attacks upon the faith in our post-Christian society. It should not only, however, serve as a defensive strategy but also as an offensive one, enabling students to answer questions about and objections to the faith by outsiders (1 Peter 3:15). It was further agreed to begin the project with the publication of an annotated bibliography providing material for teaching the various aspects of a course in apologetics. The first version of this bibliography follows. It is, obviously, a work in progress. Over time some titles may be removed, and a good many additional ones added. All those interested in this work are invited to contribute.

The present version is divided into four parts, namely (1) worldview analysis, (2) the subjective element in knowing, (3) faith and science, and (4) apologetics proper. Some of the books and annotations are in the Dutch language. They will be placed separately, under the proper headings. These Dutch entries usually consist of an annotation based on the information provided by the publisher, but a more personal impression is sometimes added. The latter is placed in italics. An asterisk (*) will indicate books that are discussed in both the English and the Dutch sections. The initials at the end of each entry indicate the author of the preceding annotation. E.g., [HvL] denotes Drs. H. van Leeuwen, [JAvL] Ir. J.A. vanLoon, [FGO] Dr. Frederika Oosterhoff. Unless otherwise indicated, the introductions are by the last-mentioned author.

I WORLDVIEW ANALYSIS

INTRODUCTION

An acquaintance with the role of worldview is essential for the defence of the faith, and the bibliography therefore starts with this aspect.

What is a worldview?

A variety of definitions can be given:

- *A worldview is a way of looking at the world from a specific vantage point or perspective.
- *It is a comprehensive framework of one's basic convictions about ultimate matters – such as the existence of God, the nature, duty, and destiny of man, the meaning of life, the outcome of history.
- *It serves as a norm or ultimate standard by which to measure all things.
- *It gives context, direction, and meaning to life and life's experiences.
- *It is a more or less coherent system of thought, which unifies thought and life, and so helps one to see life as a whole.

*One author has compared it to the picture on the box of a jigsaw puzzle, which helps the puzzler to find a place for the many apparently unconnected fragments he encounters (Mark P. Cosgrove).

*Held consciously or not, its sway tends to be close to all-encompassing, determining or at least strongly affecting religious practice, social mores, politics, ethics, family life, education, and all other aspects of life.

*It is strongly influenced, also in the case of agnostics and atheists, by a person's religious convictions.

*It is pre-theoretical and may be held unconsciously, and serves as (coloured) lenses through which we look at reality.

*It may and often does take narrative form and so includes the recollection of past experience, becoming a means of linking the generations in a coherent story. This is evident also in the Christian context. God is the God of history, who has commanded his people to "tell the next generation" (Deut. 6:20-25, Joshua 4:21-24, Psalm 78). The narrative element underlines the fact that worldview is not just an intellectual concept, but concerns itself with praxis as well as understanding.

Synonyms

paradigm, metanarrative, symbolic world, spirit of the age (*Zeitgeist*), *Weltanschauung*, climate of opinion, presuppositions (Van Til).

Examples of worldview

Biblical or Christian Theism, naturalism, mechanism, nihilism, existentialism, Marxism, Islam, Hinduism, New Age.

The biblical worldview

The biblical worldview stresses the universal Lordship of Christ, and can be described in terms of creation, fall, grace and redemption, and the future restoration of all things. Like Christianity itself, the biblical worldview is not only about the saving of souls. It has cosmic proportions, for Christ is the creator, redeemer, and Lord of the entire universe. Therefore Reformed theologian Herman Bavinck could say that the follower of Christ must go through two conversions: from the world to Christ, and then from Christ to the world.

Based on the Bible, the Christian worldview must also be constantly tested by the Bible and reformed where necessary. While tradition is important, traditionalism is to be avoided. Areas wherein reformation of the Christian worldview has taken place in the past include slavery, racism, *Apartheid*, the position of women, social inequality.

The need to teach worldviews and worldview analysis in the Christian school

In today's post-Christian world, the biblical worldview is under attack by the non-biblical one(s) in our society. Students should learn first of all to articulate and defend their own worldview. This begins in the family, in the church, and in the lower grades of the elementary school, where the biblical narrative is taught. There is a close connection between worldview analysis and apologetics. In order to learn to test the spirits, understand their culture, and speak with others in a multicultural society, students must in time be taught to analyze and evaluate competing worldviews, and to do so with reference to the teachings of the Bible.

As mentioned, the prevailing worldview affects all areas of life and thought. In section 2 of this bibliography we will note how an acquaintance with the role of worldview helps in understanding the origin, nature, and demise of scientific paradigms. There are other connections between worldview and curriculum. Literature and history, apologetics and philosophy, geography, politics, art, and music are also affected by the prevailing worldview and, in turn, influence it. Some examples of the connection between worldview and culture: The classical Greek worldview can be described as humanistic, and this humanism was reflected in Greek literature, historiography, science, religion, politics, art, sculpture, architecture, and so on. The difference between God and man was relatively small: gods were portrayed in human form, and human beings were portrayed as godlike. A not dissimilar worldview prevailed during the Renaissance and much of the modern period, and was similarly reflected in the various aspects of the dominant culture. The very different character of late- and postmodern art, literature, music, religious attitudes, ethics, and views of history and science, reflects the non-humanistic, fragmented, and far more pessimistic worldview of today.

Evaluating a worldview

James W. Sire, *The Universe Next Door* (see Bibliography below), pp. 214-7, states that a worldview must

- * have inner intellectual coherence – that is, it must not contain sets of propositions that are logically inconsistent

- * have the ability to apprehend the data of reality – that is, the data of experience, science, the experience of others, and so on

- * truly explain what it claims to explain, and

- * be subjectively satisfactory by being true

Comparing the biblical worldview to competing ones, Sire concludes that the former comes closest to meeting these four criteria. He admits that also for the Christian questions and problems remain, but adds that biblical theism, far better than any other worldview, *explains* the presence of such questions and problems.

Thinking and living

Contemporary writers on worldview analysis emphasize, more so perhaps than writers of the past, the danger of assuming that an intellectual knowledge of the Christian faith and worldview is sufficient. They warn that right thinking does not necessarily lead to right living; that orthodox Christians may confess the faith and nevertheless walk in the way of the world. The warning is to the point and must be taken to heart: parents and teachers and other adults must not only *talk* the faith, they must also *walk* and model it.

Nevertheless, in an age that tends to elevate praxis and experience above intellectual comprehension, it is well to keep in mind that the intellectual element serves an important function. Allow me to conclude this introduction with a relevant quote taken from the well-known book by American historian Mark A. Noll, *The Scandal of the Evangelical Mind* (Eerdmans, 1994, p. 26). Noll quotes Charles Malik, a Lebanese diplomat and Eastern Orthodox Christian, who had been invited to speak at the opening of the Billy Graham Center at Wheaton College in 1980. Believing that the greatest danger facing American Evangelical Christianity was the danger of anti-intellectualism, Malik complained that among evangelicals

. . . People are in a hurry to get out of the university and start earning money or serving the church or preaching the Gospel. They have no idea of the infinite value of spending years of leisure in conversing with the greatest minds and souls of the past. . . . The result is that the arena of creative thinking is abdicated and vacated to the enemy. Who among the evangelicals can stand up to the great secular or naturalistic or atheistic scholars on their own terms of scholarship and research? Who among the evangelical scholars is quoted as a normative source by the greatest secular authorities on history or philosophy or psychology or politics? Does your mode of thinking have the slightest chance of becoming the dominant mode of thinking in the great universities of Europe and America which stamp your entire civilization with their own spirit and ideas? . . . For the sake of greater effectiveness in witnessing to Jesus Christ Himself, as well as for their own sakes, the evangelicals cannot afford to keep on living on the periphery of responsible intellectual existence.

While never ignoring the need to stress Christian praxis, the Reformed school may not forget that its specific educational function is to help students develop a Christian mind. It should, therefore, continue to deal with the question: What is the role of the school in helping students to move from the periphery to the centre of “responsible intellectual existence”? And how is this to be done?

BIBLIOGRAPHY

Beverluis, N.H. *Let Children Come: A Durable Vision for Christian Schooling*. Christian Schools International, 2001, 168 pp. Although it is not mentioned in the title, the author gives considerable attention to the role of the Christian worldview in education. In a very balanced exposition, he points out that Reformed thinking has always sought to combine “the intellectual vigor of Calvin” with his “religion of a burning heart,” and urges his readers to keep both aspects in mind in their life and teaching. Christ’s Lordship is all-encompassing, and students must learn this. They must also learn that “the biblical piety of knowledgeable worship must be bonded to sound learning about God’s many-splendored world. . . .” Curriculum is important: Christian schools are not mission agencies but academic institutions. An informative and inspirational booklet. [FGO]

Fernhout, Harry. “Christian Schooling: Telling a Worldview Story,” in Ian Lambert and Suzanne Mitchell, eds., *The Crumbling Walls of Certainty: Towards a Christian Critique of Postmodernity and Education*. Christian Schooling Series, 1997, pp. 75-98. Referring to Reformed philosopher Nicholas Wolterstorff and other authors, Fernhout warns against a single-minded stress on the intellectual aspect of the faith. Christianity is as much praxis as theory. Christian thinking is indispensable for a life of discipleship but does not by itself produce it; discipling, disciplining, and modeling also are needed. The intellectual implications of worldview teaching, moreover, may not fit the elementary grades or the more practical-minded among secondary students. Fernhout further stresses the importance of a narrative approach in the teaching of religion and worldview, in order to help students to order their experiences in a manner that is consistent with the larger story. Man is a story-telling being, who sees the present arising out of the past and heading into the future. By means of biblical instruction each new generation must be drawn into the plot of the story as told by the Bible. [FGO]

Holmes, Arthur F. *Contours of a Worldview*. Eerdmans, 1983, 240 pp. This is the first in a series of “Studies in a Christian World View” that was sponsored by the Institute for Advanced Christian Studies under the direction of Carl F.H. Henry. Holmes begins with a discussion of the nature of worldviews, and of the human need for a worldview that ties all things together. He proceeds by giving the contours of worldviews, pointing out the differences between the Christian worldview and competing ones. He gives much attention to the question of truth and emphasizes that the subjective element in knowing does not imply the non-existence of truth and true knowledge. (On this point see also the Introduction to section 2 of this bibliography.) [FGO]

Nash, Ronald H. *Worldviews in Conflict: Choosing Christianity in a World of Ideas*. Zondervan, 1992. 176 pp. The author, professor of philosophy and theology at Reformed Theological Seminary in Orlando, Florida, provides a helpful overview of the questions Christian teachers are bound to ask in connection with the topic under discussion, such as: What is a worldview, what is the Christian worldview, and how are we to choose a worldview? Nash looks at competing worldviews, including naturalism and the New Age movement. He deals with the problem of evil, as well as the Christian doctrines of Christ’s incarnation and resurrection, and concludes with a chapter entitled “Winning the Battle in the World of Ideas.” Throughout, the author stresses the superiority of the Christian worldview and urges Christians to arm themselves intellectually so that they can explain and defend the faith.[FGO]

Naugle, David K. *Worldview: The History of a Concept*. Eerdmans, 2002. 384 pp. This book, whose author turned from dispensational millennialism to the Reformed faith and now serves as professor of philosophy at Dallas Baptist University, is the most comprehensive study on the topic to have appeared in recent years. Deeply researched and clearly written, it delves into the history of the worldview concept, shows how the prevailing worldview affects not only everyday life but also a variety of academic disciplines, and analyzes the concept’s philosophical roots up to and including the rise of postmodern philosophies. The author devotes two chapters to the role of worldview in the natural and social sciences, summarizing in some detail the work of Michael Polanyi and Thomas Kuhn. As will be shown in section 2 of this bibliography, he also deals with the relationship between worldview and subjective relativism. Naugle further provides a description of the Christian worldview, noting as one of its central aspects the cosmic spiritual battle between the forces of light and darkness, and suggests criteria by which to evaluate worldviews. He concludes with mentioning the philosophical and theological dangers of worldview (making it into an idol, forgetting that Christ must be at the centre) as well as its undoubted benefits. Among the latter: The biblical worldview shows that Christianity can satisfy the standard test for truth that philosophy has devised; it gives cognitive confidence and provides an apologetic strategy; it warns against a theological reductionism, showing that creation is more than a doctrine against evolution and that sin and redemption affect more than people; and it provides a vision of wholeness, uniting the various experiences of our lives. *Worldview* is a rich book that should be read by anyone interested in the history, nature, and role of worldview. [FGO]

Pearcey, Nancy. *Total Truth: Liberating Christianity from its Cultural Captivity*. Crossway, 2005, 511 pp. Another excellent book on the role of worldview and worldview analysis. Pearcey’s theme is that Christianity is not simply about the saving of souls or the provision of truths that make the personal life bearable. Rather, it is a total truth and provides us with guidance and norms for every aspect of human

existence. In working out this theme, Pearcey gives considerable attention to Intelligent Design, suggesting that it can serve as an umbrella under which Christians can fight the enemy of secular naturalism. The reach of a worldview is illustrated with respect to the ideology of pan-evolutionism, which, she shows, affects every aspect of modern life, from ethics to education, from politics to philosophy. The book concludes with a fine chapter on “True Spirituality and Christian Worldview.” A study guide has been included in this edition to facilitate group discussions. [FGO]

Sire, James W. *The Universe Next Door: A Basic Worldview Catalog*. 2nd ed. IVP, 1988. 246 pp. This is a handy, concise, accessible textbook that could be used in secondary schools. The author discusses Theism (the biblical worldview) as well as Deism, Naturalism (including Marxism), Nihilism, Existentialism, Eastern Pantheism, and the New Age, and concludes with a brief chapter on the choice of a worldview. The criteria Sire suggests for the evaluation of worldview have been given in the introduction to this bibliography. [FGO]

Wolters, Albert M. *Creation Regained: Biblical Basics for a Reformational Worldview*. Eerdmans, 1985. 98 pp. The writer, who teaches religion and theology at Redeemer University College in Ancaster, Ontario, explains the worldview concept and provides a description of the reformational or biblical worldview, showing its significance for the Christian’s life and work. He points out that this worldview, which must be constantly tested with reference to Scripture, assumes the relevance of the Bible for the totality of our culture, not only for religion. Wolters devotes three chapters to an analysis of the reformational worldview with reference to the biblical histories of Creation, Fall, and Redemption. In connection with the fall, he distinguishes between structure and direction, writing that the structure of creational givens remains, in spite of the directional perversion as a result of the fall. Creation is not responsible for the ills of the world; there was a completely good creation, and creation will be restored. In the concluding chapter the author looks at some of the practical applications of the biblical worldview for the societal, cultural, and personal lives of Christians. Under the heading “Personal Renewal” he gives special attention to the areas of human aggression, spiritual gifts, sexuality, and dance. [FGO]

II THE SUBJECTIVE ELEMENT IN KNOWING

INTRODUCTION

From Descartes to Kuhn

In the modern period the belief took hold that we can find objective, universally valid, and therefore absolutely certain knowledge if, and only if, we followed the so-called scientific method. Whatever could not be observed, weighed, measured, and/or expressed in a mathematical formula was not knowledge but mere personal opinion. Religion belonged to that category. The name most closely connected with this theory of knowledge is that of René Descartes (d. 1650), who lived in a period of rising skepticism and made it his life’s task to find a method that countered skepticism (as well as religious divisiveness) by guaranteeing cognitive certainty in all fields, including religion. Although Descartes had no such intentions, his theory of scientific objectivism has become a major weapon against religious faith.

Its power is not as great, however, as it has been. In our postmodern times the modern theory is under attack. In fact, it was challenged already before the rise of postmodernism – by Reformed Dutch thinkers such as Abraham Kuyper, Herman Bavinck, Herman Dooyeweerd and Dirk Vollenhoven. But while the influence of these men was largely restricted to their own Christian communities, in the course of the twentieth century the critique has been joined by thinkers from elsewhere, non-Christians as well as Christians. Led by philosophers of science Michael Polanyi (1891-1976) and Thomas Kuhn (1922-1996), these thinkers demonstrate the subjective element in all knowing, including scientific knowing.

Whereas Descartes insisted that seekers for truth must place the personal element on hold, thinkers of the new school make clear that such objectivity is not possible; that scientists, like all human beings, look at reality through the lenses of their belief systems or paradigms. These thinkers further acknowledge that human beings are not omniscient and that scientists make mistakes. They also refer to the essential role that tradition, community, and authority play in the search for knowledge (as against Descartes' insistence that the individual scientist must start "from scratch"). Furthermore, some of them draw attention to other than scientific ways of finding truth and stress, for example, the role of belief in acquiring knowledge. As the above suggests, and as various authors have pointed out, there is among postmodern thinkers a renewed appreciation for aspects of pre-modern, pre-Cartesian views of knowledge.

The danger of subjective relativism

It is important that students at our schools become acquainted with this critique of the modern theory. The modern belief in scientific objectivism and infallibility has been a stumbling block for Christians long enough. Students should learn, as C.S. Lewis once put it, to respect scientific theories but never to idolize them. These theories are not avenues to absolute truth.

A warning is in place, however. Teaching the subjective element in knowing and the consequent fallibility of science could lead to the postmodernist conclusion that there is no truth and no objective reality, that all things are relative. This conclusion must be rejected: The fact that our knowing is influenced by subjective elements does not mean that objective reality is non-existent, or that our knowledge of it is by definition unreliable. Instruction in the postmodern view of knowing should therefore be accompanied by the constant reminder that there is an objective reality and that reliable knowledge can be found and is being found, in science as in other fields. What is to be rejected is the modernist assumption that, given the proper method, human beings can look at reality with the eyes of God.

The question remains how we are to deal with the relationship between objectivity and subjectivity. The answer is that we must keep in mind the difference between human knowledge of reality, and reality as it exists in itself and as it is known to God. I could also say that we must keep in mind the difference between the object of epistemology (theory of knowledge) and that of metaphysics or ontology (the philosophy that concerns itself with being). This type of difference has been discussed in some detail by two authors introduced in the first part of this bibliography, namely Arthur F. Holmes, *Contours of a Worldview*, and David K. Naugle, *Worldview: The History of a Concept*. Here follow summaries of their discussion.

Subjective knowledge of an objective reality

Holmes (p. 46) distinguishes between *epistemological* and *metaphysical* subjectivity and objectivity. *Epistemological subjectivity*, he writes, refers to the involvement of a person – his attitudes, values, desires, and beliefs – in his thinking and knowing. *Epistemological objectivity* would preclude that personal involvement. Such epistemological objectivity is impossible, however; the subjective element in thinking and knowing is unavoidable.

Metaphysical subjectivity, on the other hand, means that an object has no independent existence outside the thinker's mind, whereas *metaphysical objectivity* refers to the fact that things do have an independent existence and that truth exists, quite apart from what we may think, see, wish, or say.

If we keep these differences in mind, we will agree that “epistemological subjectivity is quite compatible with metaphysical objectivity.” In other words, the personal and cultural influences on our thinking do not imply the non-existence of an objective reality, nor do they imply that what we think is by definition untrue. There is a real world and an independently existing reference point, even though we, human beings, see the world from our particular vantage point.

Critical realism

Naugle (pp. 321-26) deals with the topic from the perspective of *naïve or common sense realism*, *antirealism*, and *critical realism*.

According to *naïve realism* our understanding of the cosmos is direct and accurate; there is no subjective element in our knowing, and hence there is no danger of an attitude of relativism. What we think we see is fixed, unchanging reality, the world as it is in itself. Opposed to this is *antirealism*, according to which an absolute disconnection exists between what is “out there” and our various human perceptions of it. Antirealists hold that an external world may exist but that its objective character remains forever unknown to us, and that therefore so-called truth about the world is not discovered and certain, but invented, socially constructed, and relative. *Critical realism* occupies a middle position between these two extremes. It affirms both the existence of an objective reality (and the possibility of reliable knowledge of it), and the subjective element in our knowing of that reality. In the words of another author (N.T. Wright): “Knowledge, . . . although in principle concerning realities independent of the knower, is never itself independent of the knower.”

Naugle calls critical realism a golden mean epistemology. It is, he writes, “a blend of objectivism and subjectivism, acknowledging both a real world and yet real human beings in all their particularities attempting to know it. It places neither too much nor too little confidence in human reason, but recognizes what human cognitive powers can and cannot do. This position avoids the arrogance of modernity [naïve realism] and the despair of postmodernity [antirealism], but instead enjoys a rather modest, chastened view of knowledge marked by epistemic humility. . . . The consequence of critical realism is neither dogmatism nor skepticism, and its mood is neither excessively optimistic nor cynical.”

The question as to whether there is, under critical realism, “a basis for affirming the possibility of a true experience,” Naugle answer in the affirmative. The real world can be known because God made knowledge of it possible, even though our knowledge is tempered by the epistemic limitations of human finitude and sinfulness. But because God exists, we are not misled. It is true that we see reality only dimly, as through a mirror; yet we do see it.

Critical realism then affirms two important new insights about the scientific endeavour. Firstly, it explains why, contrary to the modernist creed, science does not guarantee absolutely certain knowledge. Scientists are fallible, mistakes are made, corrections are frequently necessary. But secondly, critical realism shows that, contrary to the postmodernist opinion, the search for scientific truth and knowledge can and does lead to increased verisimilitude. In this sense science is exceptional among disciplines. There is scientific progress, so that much of past science is out of date, whereas new conceptions in art, literature, philosophy, or religion do not disqualify older ones in these disciplines. This is so because there are techniques of prediction, proof, and verification in science for which there are no equivalents in other disciplines (Chaim Perelman).

BIBLIOGRAPHY

Buber, Martin. *I and Thou* (German original *Ich und Du*, 1923; first English translation 1937). T.&T. Clark/Scribner, 1958, 137 pp. Martin Buber (1878-1965) was a Jewish existentialist philosopher who offered a philosophy of personal relationships and dialogue as a means to come to know others. Distinguishing between theoretical (scientific) and interpersonal knowing, Buber rejected the modern belief that only the former ensures reliable knowledge. In this connection he spoke of an I-It and an I-Thou relationship. The first applies when we treat someone or something as an *it*, an object that we can control and manipulate. In the second case we approach him/her/it as a *thou*, someone who addresses us and to whom we respond. Such interpersonal knowing is different from scientific knowing, but it is not less reliable. It is the only way to get to know the other, i.e., our human neighbor. It is also the only way to know God. [FGO]

Dooyeweerd, Herman. *A New Critique of Philosophical Thought*, 4 vols. Presbyterian and Reformed, 1953-58. (Original Dutch version: *De Wijsbegeerte der Wetsidee*, 1935.) To describe Dooyeweerd's philosophy in a brief paragraph is not possible. His work is complex. It is also controversial; Reformed thinkers, both in the Netherlands and in North America, have criticized various of its aspects. The great majority of these critics agree, however, that Dooyeweerd's theory of knowledge gives us much that can truly benefit Christian learning. Among Dooyeweerd's concepts are his analysis of "modal aspects" and his idea of "religious ground motives" (a concept that can be compared to worldview). These groundmotives, he points out, affect scientific work, so that it is never fully objective. Although Dooyeweerd's philosophy is not easy, a study of it will benefit all who are interested in the role of theories of knowledge. Related works by Dooyeweerd that are both shorter and easier to follow are *Roots of Western Culture* (Wedge, 1979), and *In the Twilight of Western Thought* (Presbyterian and Reformed, 1968). For a critique of Dooyeweerd's philosophy, see, *inter alia*, J. Douma, *Another Look at Dooyeweerd*, Premier, n.d. (original Dutch version *Kritische Aantakeningen bij de Wijsbegeerte der Wetsidee*, 1976). [FGO]

Kuhn, Thomas. *The Structure of Scientific Revolutions*, 2nd enlarged edition. University of Chicago Press, 1970, 210 pp. Thomas Kuhn is the philosopher of science whose name is most closely connected with the 20th-century challenge to the belief in full scientific objectivity. He was not the first to question that belief, but his work is the most influential. He introduces the concept of the scientific paradigm – the

system of theories and methodologies which, he claims, guide scientists in their scientific endeavour. Working within a certain paradigm (e.g., Newtonianism, Darwinism, quantum physics, and so on), the scientist's task is not to prove a theory true or false, but to gather further evidence on its behalf and to solve remaining problems. It is only when too many anomalies arise that trust in and loyalty to the paradigm decline and a new one may arise. In the birth and acceptance of a new paradigm, Kuhn claims, scientists are not motivated by evidence of its superior truth, but by subjective considerations, such as the idea of beauty, or the desire for simplicity. Both the scientist's own personality and the prevailing worldview play a role in the rise and acceptance of a new paradigm. [FGO]

Lewis C.S. *The Discarded Image: An Introduction to Medieval and Renaissance Literature*. Cambridge University Press, 1964, 232 pp. In this book, published a year after his death, Lewis writes about cosmic "images" (or models, or paradigms) and their interaction with the thought and culture of the period they serve. His concern is with the Ptolemaic model – that of a static, central earth and a revolving sun – which ruled from the classical Greek period until the end of the Middle Ages. In the concluding section, the "Epilogue," he comments on the temporary nature of all cosmic models and argues that it is not necessarily a battery of new facts that destroys one model and introduces a new one. A model is more likely to change "when, and because, far-reaching changes in the mental temper of our descendants demand that it should." Of course there will be true supporting evidence, but that evidence will turn up when the inner need for it is sufficiently strong. In short, there is an important subjective element in the establishment of cosmic models, as in all scientific theories. [FGO]

Lovejoy, Arthur O. *The Great Chain of Being: A Study of the History of an Idea*. Harper Torch, 1965, 376 pp. Arthur O. Lovejoy (1873-1962), an American historian, is the founder of the "history of ideas" as an academic subject, and was himself one of its most eminent practitioners. First issued in 1936, *The Great Chain of Being* continues to be relevant for historians of philosophy, theology, literature, and science. Particularly important from the point of view of the philosophy of science is Lovejoy's description of how prevailing systems of philosophical thought affect the rise and demise of scientific paradigms. His examples are, firstly, the switch from the earth-centred Ptolemaic System to the sun-centred Copernican-Newtonian one, which took place in the course of the 16th and 17th centuries; and secondly, the rise of evolutionism two centuries later. With respect to the change in cosmology, he shows how in the later Middle Ages and the Renaissance, well before Copernicus published his theory (in 1543), a rotating earth, a central, stationary sun, a plurality of solar systems, infinite space and an infinite number of stars were already common topics of discussion among non-scientists. Scientists followed suit. In a similar way, 18th-century philosophers and other non-scientists prepared the way for the acceptance of 19th-century theories of evolution by proposing novel concepts such as the idea of progress, the belief that the Golden Age lies in the future and not in the past, and the conviction that all things move from simple to complex, rather than the other way around. [FGO]

Oosterhoff, Frederika. *Ideas Have a History: Perspectives on the Western Search for Truth*. University Press of America, 2001, 357 pp. This book traces the roots of western ideas from the Greeks up to and including the postmodern era. A primary goal is to explain the rise of the modern theory of knowledge and to evaluate it. The author refers in this connection to the work of Abraham Kuyper, Thomas Kuhn, Michael Polanyi, and others. The book's conclusion: "Belief in the so-called objective ideal . . . is a false

belief, and can be shown to be so. Extra-scientific factors, including the scientist's own insights, presuppositions, and idiosyncrasies, as well as the expectations and beliefs of his culture, intrude at practically every stage of the work" (p. xiv). Special attention is given to the theories of knowledge proposed by Abraham Kuyper (ch. XX) and Michael Polanyi (chs. XXI-XXIII). [FGO]

Polanyi, Michael. *Personal Knowledge: Toward a Post-Critical Philosophy*. University of Chicago Press, rev. ed., 1962, 428 pp. Michael Polanyi (1891-1976), an Anglo-Hungarian scholar, was an internationally-known physical scientist who later turned to the philosophy of science and became one of the leading 20th-century thinkers to critique the modern theory of knowledge. That theory, he argues, has been responsible for poisoning our entire intellectual and moral atmosphere and has led to such bloody utopian schemes as the French revolution and communism – a major reason being the implied belief in automatism: the conviction that if one only applies the approved method, the desired result must follow. This did not happen, and the consequence was recourse to force and coercion. In the book under discussion, Polanyi proposes an alternative theory of knowledge, one that acknowledges the subjective element in all knowing and the necessity of personal commitment, and that admits the fallibility of scientific conclusions. This is not to say that Polanyi proposes a relativistic view of scientific knowing. There is an independent reference point, and truth can be found and is being found. There are also, in science as in other academic disciplines, ways and means of evaluation. What Polanyi is looking for is a theory of knowledge that retains the positive aspects of the modern theory (the belief that truth can be found) but avoids its pitfalls (the idolatry of method and the conviction that man can have a God's eye view of reality). [FGO]

Wolterstorff, Nicholas, *Reason Within the Bound of Religion*, 1976. Eerdmans, 1976, 115 pp. With Alvin Plantinga, William Alston and others, Nicholas Wolterstorff belongs to the circle of North-American Reformed philosophers who stress the rationality of theistic belief. In this booklet, Wolterstorff introduces the concept of control beliefs, a term that refers to the scholar's conclusion as to whether a theory is compatible with his philosophical, religious, and other convictions and values. He points out that all scholars, unbelievers as well as believers, hold and apply such control beliefs, and that the Christian should therefore not be hesitant to admit his own. While arguing that the believer's integrity requires him to use his religious commitment as controls in evaluating theories, he also admits that new evidence may cause that same believer to revise specific beliefs. The acceptance of the Copernican system serves him as an example. Such revision should occur only, however, in the case of new data or insights (scientific and biblical), not in the case of conflicting control beliefs. Wolterstorff's acceptance of the subjective element in human knowing does not mean that for him all things are relative and that "everything goes." Truth can be found, even though, in distinction from the modern period, theorizing must now be admitted to be "without a foundation of indubitables." [FGO]

III FAITH AND SCIENCE

INTRODUCTON

Apologetics, we saw, is the discipline that teaches Christians to explain and defend the faith. Because today many of the attacks upon the faith are made in the name of science, this bibliography includes studies that respond to scientific objections to Christianity. Chief among these objections is the belief that the universe and all it contains is the product of chance; that there is no design or purpose in creation; and that science itself proves that nature is “all there is” (ontological naturalism). Related to this view is the so-called Copernican Principle of Mediocrity, according to which the earth is a run-of-the-mill planet, unplanned, and very similar to millions of other planets, and that therefore we may expect to find intelligent life throughout the universe.

It is important to note that in our days it is becoming more and more difficult to maintain the latter view. In recent decades Christian and non-Christian scientists have shown that, contrary to scientific orthodoxy, there is overwhelming evidence of design and purpose in creation. They point, for example, to the exceptional fine-tuning of the *universe*, and to the fact that *planet earth* appears to be unique among the millions of planets, and uniquely fitted for the development and maintenance of complex life. These developments strongly suggest that the earth and the universe as a whole were created with the express purpose of supporting life. They therefore serve apologetic purposes, of which our students should be aware.

This bibliography gives various titles dealing with the topics mentioned. It also lists titles of works dealing with the question of origins. In a number of cases, the books are written by theistic evolutionists – that is, by authors who support the idea of evolution, but believe that the evolutionary process was part of God’s plan of creation. Many of us will disagree with this stance. I do so myself. The reason why I have nevertheless included the books in question is that they contain much information that is of value to Christian teachers.

Even so, there is room for additional titles that more specifically explain and promote other views of origins, and readers are invited to submit brief descriptions of such studies. One example would be the work of the *Intelligent Design Movement (ID)*. This movement accepts evolution, but holds that a supernatural agency (a Designer) intervened throughout the evolutionary process. Well-known ID authors are Phillip Johnson, Michael J. Behe, and William Dembski. Readers may also wish to draw attention to books that promote *young-earth creationism*. (It should be noted that the Dutch Language Section below lists several works on Intelligent Design and Young-Earth Creationism.)

BIBLIOGRAPHY

Barr, Stephen M. *Modern Physics and Ancient Faith*. University of Notre Dame Press, 2003. 312 pages. Theoretical physicist Stephen Barr has managed in this book to give a generally non-technical and very readable survey of the relationship between modern science and the Christian faith. He explains how especially since the early 20th century scientific evidence for a non-materialistic origin of life and of the universe has greatly increased (in this connection he mentions, among other things, the implications of

quantum physics, the theory of the Big Bang, and the discovery of the “Anthropic Coincidences”). Much attention is also given to the nature of man and to man’s place in the cosmos. Barr is a Roman Catholic and subscribes to the official view of his church on theistic evolution, although he admits that not everything in life and nature can be satisfactorily explained from a neo-Darwinists point of view. His treatment of doctrinaire materialism deserves special attention. He points out, for example, that when a materialist comes across something that is hard to define in materialistic terms (such as human rationality, purpose, consciousness, language, and aesthetics) he simply denies its existence. Also, having renounced belief in God because God is not observable, atheists are often driven to postulate not one but an infinitude of unobservables (one example being the theory of an infinite number of universes). These are only a few of many helpful apologetic “hints.” [FGO]

*Collins, Francis S. *The Language of God: A Scientist Presents Evidence for Belief*. The Free Press, 2006, 294 pp. Francis Collins, head of the Human Genome Project, became a Christian in early adulthood. In the book under discussion, which contains autobiographical sections, he relates that in turning to Christianity he was helped by the apologetic works of C.S. Lewis. In this bestselling, informative and very readable work, Collins describes his harmonization of faith in God with the acceptance of modern science, including modern biology. With respect to theories of origins, he discusses and rejects young-earth creationism and ID and opts for theistic evolutionism. Of special apologetic interest are his answers to such questions as: Is spirituality genetic? Is there a component of heredity in behavioural traits and in faith? Is there a “god gene”? His answer is that there is indeed a component of heredity in behavior and faith, but that it is by no means predictive. Far more important are environment, childhood experience, and free will. [FGO]

Denton, Michael. *Nature’s Destiny: How the Laws of Biology Reveal Purpose in the Universe*. The Free Press, 1998, 454 pp. Denton refers to the fine-tuning of the universe as an argument against the Copernican Principle of Mediocrity, arguing that the cosmos is uniquely fitted for complex intellectual life as it exists on earth. In his own words, “All the evidence available in the biological sciences supports the core proposition of traditional natural theology – *that the cosmos is a specially designed whole with life and mankind as its fundamental goal and purpose, a whole in which all facets of reality, from the size of galaxies to the thermal capacity of water, have their meaning and explanations in this central fact* (p. 389; italics in the original). Denton writes as a theistic evolutionist. [FGO]

Gingerich, Owen. *God’s Universe*. Harvard University Press, 2006, 139 pp. The author of this brief and popularly written book is professor emeritus of astronomy and the history of science at Harvard University. Noteworthy, among other things, are his description of the Copernican Principle of Mediocrity (which he rejects) and the evidence he presents of the fine-tuning of the universe and the uniqueness of planet earth. Like Collins and Denton, Gingerich is a theistic evolutionist. For him belief in the God of the Bible and in the supernatural design of the universe does not contradict a scientific practice that restricts itself to tracing only natural causes in a religiously neutral fashion (methodological naturalism). He discusses the ID movement, finds it interesting as a philosophical critique, but concludes that it cannot compare with mainstream science in producing theories with truly explanatory and predictive powers. [FGO]

Godfrey, W. Robert. *God's Pattern for Creation: A Covenantal Reading of Genesis 1*. P&R Publishers, 2003, 142pp. The author is professor of church history and president of Westminster Theological Seminary in California. As the title suggests, the book focuses on the theology of science and deals with the question of origins. The author's direction is not altogether clear. He seems to recommend the framework hypothesis (as proposed, for example, by Meredith Kline) but appears to have sympathy also for the so-called analogical day theory. (More about that theory below, in connection with Vern S. Poythress, *Redeeming Science*.) [FGO]

Gonzalez, Guillermo, and Jay W. Richards. *The Privileged Planet: How Our Place in the Cosmos is Designed for Discovery*. Regnery, 2004, 444 pp. Another, very powerful denunciation of the Copernican Principle of Mediocrity. The book comes with an overwhelming amount of evidence that planet earth is (1) uniquely fitted to support complex life, and (2) is in the best possible cosmic location for a study of the rest of the universe. Habitability appears to correlate with measurability – a striking concurrence, that cannot but resonate with Christians, underlining as it does the biblical message of a purposeful creation and of mankind's having received a cultural mandate. Strongly recommended, not in the last place to teachers. An excellent teaching aid is the 60-minute DVD that has been issued under the same title. [FGO]

Heeren, Fred. "Home Alone in the Universe?" *First Things*, March 2002, pp. 38-46. A popularly written and very informative account of the rise of the Copernican Principle, the extent to which that principle has influenced the Search for Extra-Terrestrial Intelligence (SETI), and the reasons why the SETI search has been unsuccessful and will probably continue to be unsuccessful (a major reason being the ever-increasing evidence against the Copernican Principle). This article can be understood by high school students and by students at the senior level of the elementary school. It is available on the Internet, under the author's name. [FGO]

Lewis, C.S. "Religion and Rocketry," *Fernseeds and Elephants*. Collins, 1975, pp. 86-95. In this brief essay Lewis discusses the oft-repeated claim by atheists that the discovery of extra-terrestrial intelligent life will be a fatal blow to Christianity, and shows why this claim is altogether unfounded. Very much worth reading. On the same topic see Lewis' study *Miracles*, ch. 7 and ch. 14. [FGO]

McGrath, Alister. *Dawkins' God: Genes, Memes, and the Making of Life*. Blackwell, 2005, 202 pp. In recent years a number of militantly atheistic scientists and philosophers have published a rash of books attempting to show that the Christian faith is a delusion, and a dangerous one at that. Perhaps best known among them is Richard Dawkins, a scientist at Oxford University, who has been called "Darwin's Rottweiler." Among his books in support of an atheistic Darwinism are *The Blind Watchmaker: Why the Evidence of Evolution Reveals a Universe Without Design*, 1986, *The Selfish Gene*, 1989, and the more recent bestseller *The God Delusion*, 2006. Prominent among Dawkins' Christian opponents is Alister McGrath, who has a Ph.D. in molecular biophysics and is professor of historical theology at Oxford University. McGrath analyzes (and rejects) a variety of Dawkins' assumptions, such as that of an ongoing war between faith and science, the "selfish gene" theory, the idea of "cultural genes" (memes), and Dawkins' denial of the meaning of life. The book is easily understood also by non-scientists. [FGO]

Morris, Tim, and Don Petcher. *Science and Grace: God's Reign in the Natural Sciences*. Crossway, 2006, 352 pp. The authors, professors of biology and physics respectively at Covenant College, look at the relationship between faith and science from a Reformed perspective. Reference is made to the theories of Reformed thinkers like Abraham Kuyper, Herman Dooyeweerd, and others. This book will be of interest to Reformed readers, especially to those among them who are searching for a Reformed theology of science. [FGO]

Poythress, Vern S. *Redeeming Science: A God-Centered Approach*. Crossway, 2006, 381 pp. A book on theology of science, specifically on creational theology. Poythress, who has doctorates in New Testament and mathematics, deals with a variety of issues, such as Genesis 1 and science, the age of the earth, and Christian interpretations of the "days" of Genesis 1, such as the mature creation view, the day-age hypothesis (concordism), the framework hypothesis, the analogical day hypothesis, and a number of other theories that seek to reconcile Genesis 1 and science. He rejects the day-age hypothesis, believes that the framework theory has merit, but settles for the analogical day view. According to that view the days of Genesis 1 and our days are analogous, but not identical and not of the same length. The days of divine work offer an *analogy* to the days of human work and rest. They provide a structure of seven days as a pattern for man to imitate. Various other topics are discussed in this book, which concludes with chapters entitled "A Christian Approach to Physics and Chemistry" and "A Christian Approach to Mathematics." [FGO]

Snoke, David. *A Biblical Case for an Old Earth*. Baker Books, 2006, 224 pp. The author teaches in the department of physics and astronomy at the University of Pittsburgh; he is an elder in the Presbyterian Church of America and is licensed to preach there. With respect to the question of origins he rejects both the young-earth position and the framework hypothesis in favour of the day-age (concordist) view. Snoke also pays attention to the position of Intelligent Design, and points out that whereas ID-scientists work within a non-Christian worldview in order to ask about things for which atheism does not have a reasonable explanation, he himself, as a day-age theorist, explores the interaction of faith and science within the Christian worldview. The author deals with a variety of topics, such as the likelihood of animal death before the fall, the likelihood of the Big Bang, the character of the Garden of Eden (which he maintains was a temporary place of protection in a wild and unsafe earth, very different from the new earth of Revelation 21 and 22), and the extent of the flood (he suggests it may well have been regional). There are interesting perspectives in this study, which should be of value to both those who agree with his conclusions and those who reject the old-earth hypothesis.[FGO]

Tamminga, Ard. "Intelligent Design. Wetenschappelijk of niet? Een wetenschapsfilosofische beoordeling van de Intelligent Design beweging." *Radix*, 32.4/2006, pp. 289-300. This is a Dutch-language evaluation of the ID movement, which ends in a rejection of that movement. ID scientists, the author writes, oppose the naturalistic method of scientific inquiry. Scientists, however, he insists, must begin by assuming that all natural phenomena have a natural explanation. As the history of science has shown, this is the only way to make scientific progress. The hypothesis of intelligent design cannot be falsified; its adherents assume that showing the absence of an evolutionary explanation is all that is needed to make their point. But ignorance is not an argument. Moreover, what has no scientific explanation today

may have one tomorrow. Christians should watch against a God-of-the-gaps approach. Tamminga's argument is similar to that made by other Christian scientists who oppose the ID movement. [FGO]

Ward, Peter D. and Donald Brownlee. *Rare Earth: Why Complex Life is Uncommon in the Universe*. Copernicus, 2000, 333 pp. Often secular scientists support the idea that complex life must be abundant in the universe. As the title of their book shows, Ward and Brownlee, both of them secular scientists, disagree with that conclusion. In this scholarly work they show that microbial life may be more common in the universe than has been supposed, but that the conditions necessary for the development and maintenance of complex life are very rare and may well be restricted to planet earth. These conditions are described in detail. They include the presence of liquid water, the existence of a temperature range allowing this phenomenon to continue, an oxygen-rich atmosphere, the size and gravity of our moon which stabilizes the tilt of the earth, thereby guaranteeing climatic stability, the fact that the moon, Jupiter, and other planets protect the earth against the deadly rain of meteorites and asteroids, the phenomenon of plate tectonics, and so on. Their conclusion: the search for intelligent life beyond the earth may well be in vain. It looks as if we are alone in the universe after all. [FGO]

Dutch Language Section

Andrews, Prof E.H., *Alles uit niets, begrijpend geloven in de schepping*, Uitgeverij Veritas, 1993, 142 pp. De evolutietheorie kan niet alles verklaren. We kunnen niet in God en evolutie geloven. Want he toeval kan niet gericht werken, Bijbel en evolutie theorie spreken elkaar tegen en de theorie bederft de harmonie tussen wetenschap en geloof. Bovendien is het een heel zwakke theorie omdat hij heel moeilijk te testen is. Waarom geloven toch veel geleerden die theorie? Dan hoeven ze niet in God te geloven. De auteur vertelt wat leven is. Hij onderscheidt drie soorten: lichamelijk, verstandelijk en Geestelijk leven. Geestelijk leven is niet te bestuderen door de wetenschap, maar het is wel de belangrijkste soort leven. Daarna gaat hij in op het lichamelijke leven. Hij vertelt over de wondere wereld van de cellen en over DNA als code voor het leven. Hij gaat vrij diep in op de chemische evolutie van moleculen tot de eerste cel volgens de evolutietheorie. Welke bijzondere voorwaarden ervoor nodig waren om de eerste cel te laten ontstaan. *Met behulp van een voorbeeld weet hij voor de lezer overtuigend duidelijk te maken hoe ongelofelijk onwaarschijnlijk het ontstaan van het leven is in 4 miljard jaar.* De theorie van Darwin wordt besproken. Variatie, natuurlijke selectie en mutaties passeren de revue en worden kritisch bekeken. In het hoofdstuk over de ouderdom van de aarde gaat het over de geologische kolom, fossielen, radioactieve klokken en andere dateringsmethoden. Steeds maakt hij duidelijk dat de grote tijdsduur die de evolutietheorie claimt niet juist hoeft te zijn. Hij pleit voor het serieus nemen van Genesis 1 als geschiedschrijving van een schepping in 6 keer 24 uur. Hij denkt wel, dat het heelal en de aarde daarvoor al zeer lang bestonden. Hij acht het mogelijk, dat God het heelal geschapen heeft door middel van de oerknal. *De schrijver heeft een eenvoudige, meeslepende stijl. Hij kan ingewikkelde dingen goed uitleggen met welgekozen voorbeelden. Jammer, dat hij niet ingaat op dingen als plaattektoniek en datering van boorkernen uit ijs. Wat meer begrip voor de kadertheorie was wel op zijn plaats geweest. Wat hij zegt over Genesis 1 is wel erg zwart-wit.* (JAvL)

Behe, Michael J., *De zwarte doos van Darwin*, Ten Have b.v., 1997, 353 pp. **Oorspronkelijke titel:** *Darwin's Black Box: The Biochemical Challenge to Evolution*. Behe is moleculair bioloog en biochemicus. *In een meeslepende stijl voert hij zijn lezers door de geschiedenis van de wetenschap, door het grensgebied van wetenschap, religie en filosofie maar vooral door het fascinerende terrein van de chemie van het leven.* In de tijd van Darwin was het bestaan van cel en celkern al wel ontdekt, maar de werking ervan vormde een zwarte doos. Pas door de ontwikkeling van de elektronenmicroscopie kon die zwarte doos echt worden geopend. Het bleek veel

ingewikkelder in elkaar te zitten dan men voor mogelijk had gehouden. Men ontdekte steeds meer zwarte dozen in zwarte dozen. De biochemische werking van de volgende zwarte dozen wordt besproken: het oog, de bombardeerkever, de trilhaar, de bacteriële flagel, de bloedstolling, het transport van eiwitten in de cel, het immuunsysteem en de biosynthese van AMP en de regulatie daarvan. Bij elk van deze voorbeelden is er sprake van een onherleidbaar complex systeem. Dat is 'een systeem dat samengesteld is uit diverse goed bij elkaar passende en samenwerkende delen die bijdragen aan de basisfunctie, en waarbij de verwijdering van één van de onderdelen van het systeem leidt tot een falen van het systeem'. Een onherleidbaar complex systeem kan niet direct worden geproduceerd door kleine opeenvolgende wijzigingen van een voorgaand systeem, want elke voorloper waaraan een onderdeel ontbreekt, functioneert per definitie niet. Omdat de natuurlijke selectie slechts reeds actieve systemen kan kiezen, zal zo'n biologisch systeem in één keer moeten worden geproduceerd als een geïntegreerde eenheid. Tussenschappen zullen immers als nutteloos weggeselecteerd worden. Een uitgebreide zoektocht in wetenschappelijke literatuur heeft Behe ervan overtuigd dat moleculaire evolutie niet wetenschappelijk gefundeerd is. Onherleidbaar complexe systemen laten een ontwerp zien (Intelligent Design). De naam van de ontwerper wordt niet ingevuld. Dit ligt buiten het terrein van de natuurwetenschap. *Het is een fascinerend boek, waarin wordt duidelijk gemaakt, dat de evolutietheorie vanuit biochemisch oogpunt onhoudbaar is.* (JAVL)

Beukel, A. van den, *De dingen hebben hun geheim*, Ten Have b.v., 2^e druk, 1990, 192 pp. De natuurkunde, denken sommige vooraanstaande fysici, is bijna klaar. Binnen afzienbare tijd zal 'alles' begrepen worden. Samengevat in compacte formules, die de wereld om ons heen en het menselijk bestaan doorzichtig zullen maken, vanaf de oerknal tot en met de toekomst. Als er een God is die van dit 'alles' deel uitmaakt zal hij vanzelf te voorschijn komen. Dat is dan de bekroning van het menselijk verstand. Wat is het echter voor werkelijkheid waar de natuurkundigen zich mee bezig houden? Is die 'objectief', dat wil zeggen onafhankelijk van de onderzoeker die haar waarneemt? Is het de hele werkelijkheid? Is de natuurkunde in staat een wereldbeeld te funderen, waarin de mens zijn plaats vindt en de weg naar de diepere zin van zijn bestaan? Of beschrijft de natuurkunde misschien alleen een aanblik, een aspect van de totale werkelijkheid, en is er meer dan dat tussen hemel en aarde? En hoort God daar dan bij? Waar en hoe is hij te vinden? Valt er over hem iets te bewijzen? Op zulke vragen wordt in dit boek een antwoord gezocht. (HvL)

Beukel, A. van den, *Met andere ogen*, Ten Have b.v., 1994, 227 pp. Voor wie zoekt naar zin en betekenis van het menselijk leven zijn de geluiden die te horen zijn uit de kring van de (natuur)wetenschap weinig bemoedigend. In het bijzonder kan men van de uitspraken van neo-Darwinistische biologen niet erg vrolijk worden. De mens, menen zij te weten, is het resultaat van de doelloosheid van materialistische processen. De mens is een (schitterend) ongeluk. In dit boek wordt nagegaan op welke wetenschappelijke basis dit soort uitspraken berusten. De conclusie is dat ze weinig met wetenschap en veel met metafysische vooroordelen te maken hebben. Wie zoekt naar zin zal de zonnebril moeten afzetten en 'met andere ogen' de wereld in kijken. Hij kan weer kleur ervaren. De schrijver neemt de lezer mee op zijn persoonlijke zoektocht, waarbij zijn christelijke geloof als zoeklicht dient. Dat loopt niet uit op een formule voor de zin van het bestaan. Hij kijkt alleen maar, met andere ogen, en vertelt wat hij ziet. (HvL)

Brink, Gijsbert van den, *Een publieke zaak, Theologie tussen geloof en wetenschap*, Uitgeverij Boekencentrum, 2004, 377 pp. Theologie in de oorspronkelijke betekenis van 'spreken over God' heeft geen vanzelfsprekende plaats aan de hedendaagse universiteit. Vanwege haar geloofsmatig uitgangspunt zou deze theologie niet voldoen aan de academische eisen van wetenschappelijkheid. Hooguit kan zij vandaag nog bedreven worden in de private sfeer van bijzondere kerkelijke instellingen. Deze voorstelling van zaken wordt kritisch onderzocht tegen de achtergrond van de omslag naar een postmodern levensklimaat. De auteur trekt veel ruimte uit voor de geschiedenis van de wetenschapsfilosofie. Daarbij wordt onder andere aandacht besteed aan de

Wiener Kreis, het positivisme, het confirmatiebeginsel, Popper, de these van Duhem en Quine, serendipiteit, Kuhn's paradigmabegrip, Lakatos en 'novel facts'. Hij bespreekt de theoriegeladen waarneming, de Theorie van de Fatsoenlijke Scheidslijn (TFS) en het maatschappij-kritisch perspectief van Adorno en Habermas. Ook de feministische wetenskapskritiek en de ideeën van Feyerabend komen langs. Wat is nu eigenlijk een bewijs? Hij bespreekt de plaats van de theologie in een positivistisch klimaat en spitst dat toe op de uitspraak 'God bestaat' en de christologie van Kuitert. Zowel in de wetenschap als in geloof spelen zaken als overtuigingen, vooronderstellingen, twijfels, getuigenissen, indrukken etc. een bepalende rol. In het voetspoor van Kuhn ziet hij christelijk geloof als paradigma. Op deze manier gezien is de theologie een echte wetenschap. Van den Brink tekent hierbij wel aan dat het aantal elkaar uitsluitende paradigma's in de wereld van geloof en theologie veel groter is dan in de natuurwetenschappen. Geloof en wetenschap kunnen zich volgens Barbour op 4 manieren tot elkaar verhouden: Conflict, Independence, Dialogue en Integration. Deze modellen worden uitgebreid besproken. Hij kiest voor het dialoogmodel. Ook trekt hij de conclusie dat verantwoord spreken over God in het licht van de huidige stand van zaken in de wetenschap bepaald niet achterhaald is. Van den Brink bespreekt recente onderwerpen in de theologie die het publieke debat zoeken over de christelijke geloofsinhoud. Hij betoogt dat geloofscommitment en wetenschappelijkheid niet op elkaar in mindering behoeven te komen. De atheïserende werking van de moderne wetenschap blijkt meer samen te hangen met haar uitstraling dan met haar methoden en resultaten. (JAvL)

Burgess, Stuart, *Ontwikkeling of ontwerp – bewijs van doelbewust ontwerp en toegevoegde schoonheid in de natuur*, Medema, 2003, 185 pp. Het idee van een 'grote Ontwerper' is al twee eeuwen oud; William Paley voerde dat pleidooi al; sindsdien hebben velen die gedachte met grote kracht afgewezen. Velen zijn wellicht onder de indruk gekomen van de scherpzinnige formuleringen van boeken als *The Blind Watchmaker* en andere boeken van Richard Dawkins – maar hielden tegelijk een onvoldaan gevoel over aan de kronkelige logica van zijn betoog. In dit boek schrijft Dr. Stuart Burgess in eenvoudige, helder verstaanbare taal over de complexiteit en schoonheid van levende schepselen om ons heen. Vanuit zijn wetenschappelijke ervaring en inzicht bouwt hij zijn betoog op. Hij toont aan dat de samenhang van onderling verweven mechanismen alleen te begrijpen is als we inzien dat levende schepselen, net als auto's en vliegtuigen, door iemand ontworpen zijn. *Het gaat eerst over mechanismen die we waarnemen in de natuur van de levende wezens, waarbij de waarschijnlijkheid van een ontwikkeling (herleiding) via een evolutionair proces besproken wordt. De mens als uniek schepsel wordt besproken en gewaardeerd. Naast dit lezen in het boek van de natuur gaat ook de Bijbel open, door te luisteren naar het verslag van de schepping en de betekenis hiervan in deze discussies.* (HvL)

Byl, John, *God en de Kosmos*, De Groot Goudriaan – Kampen, 2002, 349 pp. **Oorspronkelijke titel:** *God and Cosmos. A Christian View of Time, Space, and the Universe*. Welke kosmologieën zijn er allemaal al geweest? Door welk geloof worden ze gestempeld? Hoe is de moderne kosmologie eigenlijk ontstaan? Wat zijn haar sterke en zwakke punten? Is het heelal nu geocentrisch of heliocentrisch of nog weer iets anders? Is het heelal open of gesloten? Dijt het uit of staat het stil? En wat moet je eigenlijk vinden van de zoektocht naar buitenaardse intelligentie? Al deze vragen passeren in Byl's nuchtere, analytische schrijfstijl. Steeds legt hij uit hoe een theorie in elkaar zit en door welke levensbeschouwelijke achtergronden ze wordt gestempeld. Om uiteindelijk te concluderen dat de Bijbel zelf ons eigenlijk heel weinig zegt over de huidige structuur van het heelal, omdat de Bijbelse boodschap veel meer betrekking heeft op de relatie van de geschapen kosmos tot haar Maker. Het enige dat Byl zeker weet is dat hij in God gelooft en de Bijbel als Gods Woord aanvaardt. Voor hem betekent dat dat God hemel en aarde in 6 x 24 uur heeft geschapen. Hij is ervan overtuigd dat er nooit conflicten zullen zijn tussen de Bijbel en wetenschappelijke waarnemingen. Wat iets anders is dan conflicten met wetenschappelijke theorieën, want die zullen er juist altijd zijn. Omdat veel natuurwetenschap God negeert. Maar ook omdat die

natuurwetenschap er vooral is om hypothesen op te stellen en omdat geen enkele hypothese de werkelijkheid volledig kan verklaren. (JAvL)

*Collins, Francis S., *De taal van God – prominent geneticus verzoent geloof en wetenschap*, ten Have, 2006, 239 pp. Francis S. Collins is de Amerikaanse geneticus die met zijn *Human Genome Project* het menselijke DNA ontcijferde. Kan zo iemand in God geloven? Collins beantwoordt die vraag volmondig met ja. Hij gelooft, en legt verband tussen zijn wetenschappelijke ontdekkingen en het bestaan van God. Daarbij voert hij rationele gronden aan om te geloven in een schepper. Het geloof in een transcendente, persoonlijke God – en zelfs de mogelijkheid van een wonder – kan volgens hem goed samengaan met een wetenschappelijk wereldbeeld waarin ook evolutie een plaats heeft. Collins kent de bezwaren van zowel wetenschappers als van orthodox gelovigen (inclusief Intelligent Design), en weerlegt ze op een eerlijke en persoonlijke manier. (HvL)

Dekker, Cees e.a. (red.), *En God beschikte een worm, over schepping en evolutie*, ten Have b.v., 2006, 405 pp. De hoofdonderwerpen van deze bundel zijn: Schepping in bijbel en theologie, Scheppingsgeloof en evolutie, en Wetenschap en wereldbeeld. Zeer verschillende auteurs, bijvoorbeeld Jan Lever en Gijsbert van den Brink komen aan het woord. Dit boek bevat bondige, leerzame, wazige en wijdlopijge meningen, die elkaar soms overlappen, soms tegenspreken en die vaak niet of nauwelijks samenhang vertonen. Het poneert de mogelijkheid van Intelligent Design (ID), maar wat het is, wat er zo bijzonder aan is en hoe het de wetenschap kan dienen, blijft vaag. De term ID suggereert een eenheid die bij nader inzien een wirwar van opinies is. De redacteurs en medewerkers van deze bundel benadrukken keer op keer het verschil tussen ID en creationisme. Stefan Paas ziet ruimte voor een metaforische lezing van Genesis 1 (de kadertheorie) en volgens Van den Beukel en Nienhuis is de aarde miljarden jaren geleden ontstaan. Van den Brink is voorzichtiger. Als de aarde miljarden jaren oud is, als er nooit een goede schepping heeft bestaan en als de mens niet van één voorouder, Adam, afstamt, is het geloof in schepping en zondeval dan nog wel vol te houden? Hij houdt vast aan de afstamming van Adam. (JAvL)

Dekker, Cees e.a. (red.), *Omhoog kijken in platland, over geloven in de wetenschap*, ten Have, 2007, 432 pp. “Omhoog kijken in platland” is in zekere zin het derde boek in een reeks. Het eerste boek, “Schitterend ongeluk of sporen van ontwerp” ging vooral over de vraag of er zo iets als ontwerp in de natuur valt waar te nemen. (. . .) Het daarop volgende “En God beschikte een worm” ging in op de discussies rond intelligent design en de gedachte dat dit de enige manier zou zijn om scheppingsgeloof te funderen. Het handelde over de vraag hoe scheppingsgeloof en evolutie met elkaar te verbinden zijn. Dit derde boek stelt nog breder de vraag naar de verenigbaarheid van het christelijk geloof met modern wetenschappelijk onderzoek, nu echter niet toegespitst op schepping/evolutie maar op een veelheid van onderwerpen. Vanuit diverse disciplines worden bijdragen geleverd, waarbij de betekenis van de Bijbel de rode draad is. (HvL)

Derkse, Wil (red.), *Het heil van de natuurwetenschap?* Uitgeverij Gooi en Sticht, 1993, 122 pp. In onze samenleving bestaat groot geloof en vertrouwen in de heilzaamheid en objectiviteit van de natuurwetenschap en in de technologische toepassingen daarvan. De moderne wetenschap heeft inderdaad voor velen welvaart en genezing gebracht. Maar als alle mensenwerk kent ze beperkingen en consequenties die schadelijk zijn. A. van den Beukel belicht thema's uit zijn boek 'De dingen hebben hun geheim'. Hij maakt duidelijk, dat geloof berust op evidence, die bewijskracht heeft binnen de geloofsgemeenschap waarin men deze ervaringen bij elkaar herkent en met elkaar deelt. Een religieus paradigma vertoont alle kenmerken die Kuhn opsomt voor een wetenschappelijk paradigma. Sommigen verwachten dat de wetenschap ons een allesomvattende wereldbeschouwing zal leveren die ons zin en doel van het bestaan – als die er al zijn – duidelijk zal maken. Een 'Theorie van Alles'. Hij geeft een voorbeeld van de wetenschappelijke kijk op de werkelijkheid, die objectiverend, reducerend en mechanistisch is: het 'wippen' is wetenschappelijk onderzocht. Heeft niets meer met liefde te maken. De mens is een machine.

P. Bennema staat tegenover Van den Beukel. Hij benadrukt de consistentie van het gangbare wetenschapsmodel. De evidence in de rechtspraak lijkt op die in de natuurwetenschap maar niet op de evidence van geloofsgetuigen. Hij analyseert de wetenschappelijke methode en het verschil met de wereld van de religie, die met een veel diepere laag van de menselijke existentie samenhangt. P. Leenhouders noemt een aspect dat velen zorg baart: wetenschap en techniek als brengers van schade en onheil. Ze hebben dan hun dienende functie voor de mens verloren. W. Derkse benadrukt dat wetenschap mensenwerk is en dus wezenlijk beperkt. Wetenschappers moeten respectvol omgaan met de werkelijkheid waartoe de mens zelf behoort. Normering en perspectief van het wetenschapsproces komen wezenlijk van elders. Voor R.P.H. Munnik geldt dat de natuurwetenschap niet tot God leidt, maar evenmin tot godsontkenning kan leiden. In die zin zijn wetenschap en geloof zelfstandige domeinen. Maar ze bieden beide een beeld van de ene wereld. (JAvL)

Drees, Willem B. (red.), *Theologie en Natuurwetenschap: op zoek naar een snark?* J.H. Kok – Kampen, 1992, 82 pp. In Lewis Carrolls gedicht 'De jacht op de snark' mislukt de jacht om onduidelijke redenen: weten de jagers wel wat ze zoeken? Ook in de verhouding tussen natuurwetenschap en theologie is het doel van de jacht niet altijd duidelijk. In deze bundel worden vier manieren onderscheiden om natuurwetenschap en theologie op elkaar te betrekken: conflict, boedelscheiding, dialoog en integratie. A. van de Beek pleit voor ruimte voor religieuze ervaring. Ook de wetenschapper, inclusief zijn resultaten, staat in relatie met God. Hij ervaart geen conflict tussen natuurwetenschap en geloof. Spreken over de schepping is geen mededeling van wat er is gebeurd maar roept ons de handelende, levende God in gedachten. Creationisten zien de bijbel als gesloten overdracht van waarheid. Maar God is de ander, we krijgen Hem niet in handen. J. van der Veken streeft naar een omvattende synthese van ervaringen, de natuurwetenschappelijke ervaringen, de interpretatie van de geschiedenis, maar ook en vooral de ervaring van onze idealen en van de ethiek. A.F. Sanders ziet theologie als kennis op een hoog niveau van ordening van een bepaald domein van de werkelijkheid. *Verder heb ik zelden een onbegrijpelijker artikel gelezen.* A.L. Molendijk pleit voor een boedelscheiding. Hij onderscheidt geloof en theologie. De theologie mag geen uitspraken doen die in tegenspraak met de natuurwetenschap zijn. De theologie kan wel iets zinnigs zeggen over de ethische vragen waar de wetenschap de mens voor stelt. G. Nienhuis levert kritiek op het gebruik van natuurwetenschap in de andere essays. Drie basiselementen van de natuurwetenschap, de vrije onbeschoolde toegang tot de natuurlijke werkelijkheid, het geloof in orde, regelmaat en samenhang, en het primaat van de waarneming sluiten direct aan bij de voorstelling van God als schepper van de wereld, maar zelf niet in die wereld opgaand. God is niet onderworpen aan de natuurlijke gang van zaken. Geen gesloten wereldbeeld. (JAvL)

Drees, Willem B., *Van Niets tot Nu, een wetenschappelijke scheppingsvertelling*, Kok – Kampen, 3^e druk, 1996, 86 pp. Aan de hand van een gedicht worden verschillende thema's behandeld, zoals het begin van de tijd, antropische principes, het uitdijende heelal. De vertelling reikt 'van niets tot nu': vanaf de grenzen van ons weten, tot de verantwoordelijkheid die we nu moeten nemen. De oerknaltheorie, de biologische evolutie en de geestelijke evolutie met de ontwikkeling van ethiek en godsdienst worden als wetenschappelijke waarheden gebracht. Het boek wordt afgesloten met beschouwingen over theologie, wetenschap als uitdaging en geloof. In het stuk over theologie komt het kenmerkende citaat voor: 'Als mythen worden gezien als beschrijvingen van hetgeen ooit zou zijn voorgevallen, dan rest slechts de prullenbak of het museum. De mythen en maskers zijn dan curiosa uit een tijd toen men nog niet beter wist. Als vastgehouden wordt aan de feitelijke waarheid van de mythe, dan dreigt een conflict met de wetenschap'. Dat laatste is het ergste wat je kan overkomen. *De auteur is vrijzinnig-protestants en dat is aan alles te merken. Het boek lijkt mij niet in de categorie apologetische geschriften thuis te behoren. Hoogstens kun je hieruit afleiden hoe men in deze kringen capituleert voor de claims van de wetenschap.* (JAvL)

Hobrink, Drs Ben, *Moderne wetenschap in de Bijbel*, Gideon, Hoornaar, 2005, 356 pp. Bioloog Ben Hobrink laat in zijn uitvoerig gedocumenteerde boek onomstotelijk zien dat de Bijbel kennis bevat die de wetenschap

duizenden jaren vooruit is. Toepassing daarvan had miljoenen mensen het leven kunnen redden, zoals bij de epidemieën van melaatsheid, pest en cholera. Ook nu zou deze kennis talloze ziektegevallen kunnen voorkomen, zoals hart- en vaatziekten en geslachtsziekten. *De auteur leest de Bijbel en trekt daar lering uit op diverse wetenschappelijke gebieden: voeding, gezondheid, hygiëne, geslachtsziekten en epidemieën. Ook besteedt hij aandacht aan de natuurwetenschappen en de manier waarop de Bijbel daarover spreekt (de ark van Noach, een wereldwijde zondvloed, de waterhuishouding op aarde, de sterrenhemel) en aan vragen rond schepping en evolutie. Hij leest de Bijbel als een boek waarin betrouwbare informatie staat die ook betekenis heeft voor het 'alledaagse' leven. In een commentaar schreef prof. dr. J. Douma hierover: "Volgens de schrijver is de Bijbel de wetenschap 3500 jaar vooruit geweest. Dingen die in onze moderne tijd als 'nieuw' ontdekt worden, staan al lang in de Bijbel, als je maar goed leest. (. . .) Zoals ieder tegenwoordig weet, is de aarde een bol en geen plat vlak. Volgens Hobrink wist men dat in de Bijbel ook al. Het is volgens hem grote nonsens te beweren dat de schrijvers in de Bijbel de aarde als een plat vlak zouden hebben gezien. Ik ben zo vrij deze 'grote nonsens' te verdedigen (. . .). We zien hier een uitleg van Bijbelteksten, waartoe iemand komt als hij de Bijbel naar zijn moderne hand wil zetten. En dat is dan geen moderne hand van vrijzinnige maar van orthodoxe mensen, die niet kunnen leven met de gedachte dat in de Bijbel de aarde nog niet rond is. Terwijl ik niet aanvaard wat Hobrink hier beweert, wens ik het Woord van God intact te houden zoals het gebracht is aan patriarchen, profeten en apostelen in hun wereld." (HvL)*

Hooykaas, R., *Natuur en geschiedenis*, N.V. Noord-Hollandsche Uitgevers Maatschappij, 1966, 74 pp. *In deze verhandeling wordt ingegaan op het fundamentele verschil tussen natuurwetenschap en geschiedwetenschap. Wanneer dat verschil geen recht wordt gedaan, gaan er dingen fout in het trekken van conclusies en vormen van 'waarheden'. "Men kan erkennen dat de natuur well degelijk een geschiedenis heeft en dat er ook een geschiedschrijving van de natuur mogelijk is, als men maar voor ogen houdt dat deze geschiedenis wel één belangrijk kenmerk met de echte historie deelt (de onherhaalbaarheid der gebeurtenissen) en zich daardoor van de "typische" natuurwetenschap (fysica) onderscheidt, maar dat zij een ander kenmerk van wat men gewoonlijk onder geschiedenis verstaat, mist. [Gedoeld wordt op gedocumenteerde getuigenissen uit een verleden tijdperk, gegevens die contact met de mens uit het verleden mogelijk maakt]. Menselijke resten die in geen enkel verband gebracht kunnen worden met sporen van cultuur, zijn geen bron voor geschiedschrijving." (pag. 73) (HvL)*

Kalsbeek, L., *Schepping en wording*, Bosch en Keuning N.V., 1968, 111 pp. *De 'natuurwetenschappelijke' redenering die Kalsbeek tot de evolutietheorie doet besluiten is een voorbeeld van ongeoorloofde extrapolatie. Het gaat als volgt: men constateert micro-evolutie zoals bijv. in de kleuren van insecten – degene met de beste schutkleur heeft de grootste overlevingskansen; bij veranderende milieuomstandigheden is een andere kleur beter als schutkleur, waardoor het insect op die andere kleur overgaat. Zo is het dier geëvolueerd, wat dus niet per definitie vooruitgang betekent. Op grond hiervan besluit men tot macro-evolutie, waarbij men 'ruiterlijk toegeeft' dat de fossiele bewijzen hiervoor niet voorhanden of overtuigends zijn. Op deze manier is het duidelijk geworden dat de evolutietheorie niet een kwestie is van een 'waardevrije natuurwetenschappelijke theorie' waarmee ieder met wat gezond verstand wel móet instemmen, maar het is een geloof, een overtuiging, waarvan blijkt dat hij het geloof in een God die de wereld scheppend heeft gemaakt tot wat zij is niet naast zich verdraagt; dat geloof moet aangepast en dus weggevaagd worden. Hij wekt op z'n minst de indruk dat hij Genesis 1 – 11 niet ziet als geschiedenis die werkelijk zo gebeurd is, maar als een legende inspelend op het 'achterlijke' wereldbeeld van het oude Israël. (HvL)*

Pollefeyt, Didier en de Boeck, Ellen (red.), *Niet los van God? – geloof en wetenschap*, Acco, 2007, 359 pp. Er wordt aandacht besteed aan een geheel nieuwe tendens die we recent vaststellen, met name dat de tegenstelling tussen geloof en wetenschap stilaan achterhaald is. De slinger lijkt in de andere richting te gaan: geloof in God wordt door steeds meer wetenschappers vandaag als een aannemelijke en verdedigbare

intellectuele stellingname gezien. Mens en wereld verschijnen hier niet langer als een blinde en complexe samenloop van omstandigheden, maar als het resultaat van een geniaal ontwerp. De vraag daarbij is of we de ontwerper dan nog wel God mogen noemen? En dan nog wel de God van joden en christenen? Thema's in dit boek zijn onder andere: schepping en evolutie, de plaats van de mens in de kosmos, de discussie over de wereld als een intelligent ontwerp, vrijheid en determinisme. Verschillende perspectieven en argumenten komen aan bod, alsook antwoorden op de vragen hoe natuurwetenschappers over geloof kunnen spreken en hoe gelovigen naar wetenschap kunnen kijken. (Deze bundel is een schriftelijk verslag van leergangen aan de Faculteit Godgeleerdheid van de Katholieke Universiteit Leuven). (HvL)

Roth, Ariel A., *Oorsprong – wetenschap en Bijbel verenigd*, Groen, 2003, 408 pp. Zijn wetenschap en geloof onverenigbaar? Heeft de moderne wetenschap met haar evolutietheorie het bijbelse scheppingsverhaal terzijde geschoven? Als je het bijbelverhaal accepteert, moet je dan de wetenschap verwerpen? Ariel Roth is wetenschapper en christen. Zijn pleidooi is dat de combinatie van wetenschap en geloof een complete en goede verklaring geeft voor de wereld om ons heen. Het biedt ons als mens een beter zicht op de zin van het bestaan. Roth behandelt een scala aan onderwerpen, zoals de bewijzen voor schepping en evolutie, de zondvloed, de sterke en zwakke kanten van de wetenschappelijke methode en de betrouwbaarheid van de Bijbel. Hij concludeert dat het model van een recente schepping de gegevens beter verklaart dan het evolutiemodel of intermediaire modellen zoals geleidelijke schepping of theïstische evolutie. (HvL)

Ruse, Michael, *Darwin of God – een broedertwist*, Ten Have, 2007, 334 pp. De schrijver van dit boek is Darwinist. Hij stelt vast dat de aanhangers van de evolutieleer en het creationisme elkaar bestrijden met dezelfde bekeringsdrift, waarbij ook hun denkpatronen verrassend veel op elkaar lijken. Beide stromingen formuleren twee tegengestelde, maar aan elkaar verwante antwoorden op de teloorgang van het geloof sinds de Verlichting. Elke richting pretendeert de waarheid in pacht te hebben rondom filosofische thema's zoals de oorsprong van de mens, onze morele waarden en de aard van de werkelijkheid. "Ruse is een darwinist, maar wel eentje die goed nadenkt. Hij heeft een kritische visie, zowel op keiharde naturalisten en creationisten, als op Intelligent Design. Nergens wordt hij dogmatisch." *Ruse is een evolutionist en hij realiseert zich wel dat zijn mening in sterke mate bepaald wordt door zijn evolutionistische overtuiging [zie bijvoorbeeld pag. 295: "Mijn deskundigheidsgebied is de botsing tussen evolutionisten en creationisten, en mijn analyse is dat we niet te maken hebben met een simpele botsing tussen wetenschap en godsdienst, maar met een botsing tussen twee godsdiensten"], net zoals het christelijke wereldbeeld bepaald is door het christelijk geloof. Daar is hij duidelijk en eerlijk over.* (HvL)

Wisse, A.P. (red), *In het licht van Genesis, christelijke wetenschappers over schepping en evolutie*, De Vuurbaak, 1986, 141 pp. Hoe is het heelal en de aarde ontstaan, met alles wat daar leeft? De eeuwen door heeft zich die vraag aan de mens opgedrongen. De Bijbel geeft – in Genesis – een indrukwekkende beschrijving van de schepping van hemel en aarde, maar vertelt weinig over het eigenlijke gebeuren en geeft geen antwoord op tal van vragen die bij ons opkomen. Daarentegen worden ons steeds meer gegevens en verklaringen aangereikt van natuurwetenschappelijke kant. Volgens velen zijn echter de wetenschap en de Bijbel met elkaar in tegenspraak. Een te moeilijk en beladen onderwerp, waar niemand uitkomt? In dit boek komt de discussie opnieuw tot leven, onder redactie van A.P. Wisse. Voor een groot publiek vertellen vakmensen over hun omgang met vragen omtrent schepping en evolutie, geloof en wetenschap. Het zijn de geologen ing. H. Wiegers en ing. C. van der Louw, de bioloog drs. ing. P. Hessel, de geneticus dr. ir. C.J. Bos, de theologen prof. J. Kamphuis en prof. drs. H.M. Ohmann en de astronoom dr. T.A.Th. Spoelstra. (HvL)

IV. APOLOGETICS PROPER

INTRODUCTON

Apologetics, the discipline that teaches Christians how to defend the faith, is as old as Christianity. The apostle Paul, for example, writes about the wickedness of men who suppress the truth even though *what may be known about God is plain to them, because God has made it plain to them. For since the creation of the world God's invisible qualities – his eternal power and divine nature – have been clearly seen, being understood from what has been made, so that men are without excuse* (Romans 1:19f.). In his debates with Jews, Paul mentioned O.T. events and prophecies to substantiate his message; with pagans he did the same, but with them he also referred, as in Romans 1, to what people already knew about God from creation alone (see Acts 14:15-17; 17:24-28). Paul, in short, used “arguments” in support of the gospel. So did other inspired authors, and so did Christ Himself. We have been told to follow their example. Think of the exhortation of the apostle Peter, *But in your hearts set apart Christ as Lord. Always be prepared to give an answer to everyone who asks you to give the reason for the hope that you have. But do this with gentleness and respect. . . .* (1 Peter 3:15).

Different approaches

It is customary to recognize three schools in Christian apologetics, namely classical or traditional apologetics, evidential apologetics, and presuppositional apologetics. These approaches indeed differ, although apologists frequently combine aspects of all three. (This applies to several of the authors mentioned in this section.) Here follow brief descriptions.

Classical apologetics stresses the use of reason in defending the faith, and is the oldest of the three schools. It has been sanctioned by the Roman Catholic Church, but various Protestant apologists (including Reformed ones), follow the approach as well. Among them are the 19th-century Princeton theologians Charles Hodge and B.B. Warfield, and contemporary apologists such as R. C. Sproul and Norman Geisler. C. S. Lewis and others, who are usually categorized as evidentialists, use classical arguments as well (see under “Evidentialism,” below). Two well-known arguments of the classical school are the *cosmological* argument and the *teleological or design* argument. A classical apologist who used the *cosmological* argument was the medieval philosopher Thomas Aquinas, who attempted to prove the truth of the Christian faith with reference to the need for a First Cause, a First Mover, and so on. Proponents of the *teleological* argument reason that the order of the universe suggests purpose (Greek *telos*, hence teleological) and a designer, and that therefore it is reasonable to assume the existence of God.

Evidential apologetics has similarities with the previous school, but has flourished especially in recent centuries as a result of the growth of modern science and historiography. Apologists of this school (among whom are the Anglicans C.S. Lewis and N.T. Wright), refer to evidence from nature, archaeology, ancient history, biblical prophecy, biblical miracles, and Christ's resurrection. As indicated above, evidentialists can at the same time be classical apologists (and *vice versa*). Lewis, for example, made use of the moral argument, the epistemological argument, and the mental argument. (For definitions of these arguments see the ***Postscriptum*** at the end of this introduction.) Evidential

apologetics in its reference to creation, prophecies, miracles, and the resurrection, is similar to that used in both the Old and New Testament – by the prophets, by Christ Himself, and by the apostles.

Presuppositional apologetics (also called *Reformed apologetics*) is largely a 20th-century development, the brain child of Dr. Cornelius van Til (1895-1987) of Westminster Theological Seminary. This school recognizes that all human beings reason from certain presuppositions, that these serve as coloured lenses through which they look at reality, and that the presuppositions of believers are radically different from those of unbelievers. The apologist, who must base himself on the truth of the Bible, should aim at changing the unbelieving person's assumptions. This approach, presuppositionalism teaches, is essential; one can't reason with a non-Christian on the basis of a set of neutral assumptions. The apologist therefore has to urge the unbeliever to let go of his presuppositions, to believe the claims of the Gospel, to repent of his unbelief and turn to Christ. Well-known adherents of presuppositionalism are Greg L. Bahnsen, John M. Frame (with important qualifications), and Francis Schaeffer. For further details and for examples of the approach see Bibliography below under Greg L. Bahnsen, John M. Frame, Richard Pratt, and Cornelius van Til.

Criticisms of Christian apologetics

There have been objections to Christian apologetics. Among the critics were the 18th-century non-Christian philosophers David Hume and Immanuel Kant, the Christian existentialist Søren Kierkegaard, and 20th-century dialectical theologians like Karl Barth and Emil Brunner. Christian objectors argue, *inter alia*, that even if reason or nature can point to a first cause, a first mover, an intelligent designer, and so on, they do not reveal God as He has made Himself known in Scripture and in Christ. They also point out that the human mind, however brilliant, cannot reach up to the infinite God. If we are to know Him, He must reveal Himself to us. Other objections are that divine revelation does not need reasoned defence, and that faith is not simply a matter of evidence and logic, but also of the will. As the Lord told the Jews, certainty that His teachings were indeed true would come only by a spirit of obedience, that is, by their choosing to do God's will (John 7:17). Religious understanding does not precede a living faith but follows it. Yet another argument against the idea that unaided reason can provide a sufficient ground for religious conviction is that reason is not neutral, and that its pronouncements are not definitive. Counter-arguments can always be found.

Even if they agree with some of these objections, other Christians insist that a proper use can and should be made of rational and evidential arguments for apologetic purposes. John Calvin, who was certainly no rationalist or "natural theologian," nevertheless believed that arguments in support of the credibility of Scripture could be "useful aids." Evidence, in fact, could be seen as a confirmation of the faith and as a preparation for it. Calvin did not, however, speak of rational *proofs*, but of the *testimony* creation gives of God's wisdom and glory. And he made it clear that these "aids" could not, by themselves, lead to faith in revelation. ". . .The only true faith," he wrote, "is that which the Spirit of God works in our hearts." And ". . .unless this certainty, higher and stronger than any human judgment, be present, it will be vain to fortify the authority of Scripture by arguments, to establish it by common agreement of the church, or to confirm it with other helps. For unless this foundation is laid, its authority will always remain in doubt" (*Institutes of the Christian Religion*, I, vii, 5, viii, 1).

Nevertheless, Calvin agreed that creation gives witness to God. Scripture itself teaches this. In short, the choice for Christians is not between a rationalist or evidentialist apologetics on the one hand

and an extreme fideism (i.e., a belief that all religious knowledge depends on faith alone) on the other. Historian George Marsden is among those who have argued this point. Stating that arguments in support of Christianity are, especially since Darwin, not logically compelling unless one already believes in a benevolent Creator, he adds that they nevertheless “may have a great psychological and even intellectual force, particularly for those who are wavering in their resolution to deny the presence of God and his Word” (“The Collapse of American Evangelical Academia,” in Alvin Plantinga and Nicholas Wolterstorff, eds., *Faith and Rationality*, pp. 254f.). Another modern apologist makes a similar point by distinguishing between knowing and showing (William Lane Craig, *Reasonable Faith: Christian Truth and Apologetics*, 1994, p. 48). We know Christianity to be true by the witness of the Spirit; we show it to be true by pointing to the witness of creation and providence.

Postscriptum: The Mental, Moral, and Epistemological Arguments

as used by C.S. Lewis and others

**The mental argument.* It is used to attack the naturalistic notion that not God, but nature gave rise to the human mind (via evolution). On the naturalistic account, nature evolved by chance, is without intelligence or purpose, and could therefore produce mind only by chance. But if that is so, the mental argument asks, how can we trust our reasoning power? (Darwin himself struggled with that problem.) Doesn't it make more sense to postulate a Mind to have created our minds?

**The moral argument.* It deals with two related questions: (1) why do all human beings have a sense of right and wrong, and indeed seem to believe in a moral law, and (2) why do they fail to keep that law and feel guilty when they transgress it? The answer of apologists using this argument is that only the biblical doctrine of God as the origin of the moral law, and the biblical account of a human race fallen into sin, can truly explain the facts: mankind's awareness of a moral law, its failure to keep it, and its sense of guilt.

**The epistemological argument.* Those who use it argue that since we humans can make sense of nature and can even engage in scientific research, nature must have a rational structure that agrees with our mind. How is this to be explained? By chance and evolution? But then, who would have “invented” an evolutionary process (which is by definition a process of randomness and chance) that shows so much purpose and rationality? Does not the biblical confession of God, who made us in His image, explain the phenomenon better than the naturalistic hypothesis?

BIBLIOGRAPHY

Bahnsen, Greg L. *Always Ready: Directions for Defending the Faith*, ed. Robert R. Booth. American Vision/Covenant Media Foundation, 1996, 289 pp. Dr. Greg Bahnsen (1948-1995) was an ordained minister in the Orthodox Presbyterian Church, a friend of Cornelius van Til, an unwearied supporter of Van Til's apologetics, and a redoubtable philosopher and apologist in his own right. (He was also a leading proponent of the American Theonomy or Christian Reconstructionist movement.) The book under review explains Van Til's presuppositionalism and is heartily recommended to those who want to familiarize themselves with this approach to apologetics. As even his most ardent supporters agree, Van Til is at times hard to follow, whereas Bahnsen communicates clearly. Among the salient points of VanTil's system that Bahnsen brings to the fore are the following:

(1) there is no “neutral common ground” on which to reason with unbelievers

(2) this does not mean, however, that we can't reason with unbelievers

(3) we can reason with them because unbelievers share in a common light of nature, and because the unbeliever's assumption of autonomy is suppressed by the restraining power of common grace; these facts constitute "points of contact" between Christians and non-Christians

(4) another point of contact is that man was made in the image of God and has impressed on him the law of God; there is therefore a (suppressed) truth "deep inside" the believer

5) nevertheless, facts as such are not good enough, since the interpretation of facts depends on one's worldview or presuppositions.

The proper method, writes Bahnsen, following Van Til, is the "twofold" approach: One is to start from the unbeliever's position, show that it does not explain anything, and then move on to the Christian worldview – which alone make sense of the facts of nature, history, ethics, logic, and so on. [FGO]

D'Souza, Dinesh. *What's So Great About Christianity*. Regnery, 2007. 348 pp. D'Souza was born in India in 1961, is now an American citizen, a member of the R.C. Church, the conservative author of various best-selling books and a formidable public speaker. In this publication he reacts to the work of the "militant atheists" of the present decade (Richard Dawkins and associates). Among the many topics of this highly readable book is the author's taking issue with the militant atheists' tendency to portray religion, including Christianity, as the bane of history. He points out that the crusades came after Muslim aggression and were in that sense of a defensive, rather than an offensive nature. He also draws attention to the fact that the Inquisition and the historic witch trials, although regrettable, accounted for relatively few deaths, whereas atheism (most recently in the form of communism) has resulted in the death of untold millions. Also of interest is his suggestion that objections to Christianity are often not of a rational, but of a moral nature. For God is not as we would have invented him. In fact, He *demand*s things of us, difficult things, such as "purity rather than indulgence, virtue rather than convenience, charity rather than self-gratification." If Karl Marx called religion the opium of the people, then unbelief, D'Souza suggests, should be called the opium of the morally corrupt. [FGO]

Flew, Antony. *There is a God: How the world's most notorious atheist changed his mind*. Harper Collins, 2007, 222 pp. The title speaks for itself. Flew explains that his change of mind was not a result of supernatural revelation but of reasoning. Specifically, he looked for answers to such questions as (1) how did the laws of nature come to be? (2) how did life originate from non-life? and (3) how did the universe come into being? and concluded that the only reasonable answer was to postulate the existence of a divine Mind. He describes himself as a deist, not a biblical Christian, but he is not indifferent to biblical Christianity. Appendix B in his book consists of a dialogue with the Anglican New Testament scholar N. T. Wright, who attempts to answer Flew's questions regarding divine revelation, the divinity of Christ, and the evidence for Christ's resurrection. That Appendix alone is worth the price of the book. [FGO]

Frame, John M. *Apologetics to the Glory of God*. P&R, 1999, 265 pp. The author underlines Van Til's principle that Christian apologists are not to reason with unbelievers on a neutral basis. Unbelievers must be made aware of the fact that only by accepting the biblical worldview will they receive true answers to their questions. Frame disagrees with Van Til on a number of points, however. One of these

concerns the value of subsidiary *traditional* arguments. Frame believes that these can and indeed should be used, arguing that they do not necessarily conclude “with something less than the Biblical God.” Frame distinguishes between apologetics as proof and as defence. In connection with the latter, he gives much attention to the problem of evil. His analysis here is one of the best I have encountered. In an appendix, the author replies to the criticism of presuppositionalism by classical apologists R.C. Sproul c.s. (see below). He concludes that, although there are disagreements between presuppositionalism and traditional apologetics, the two have much in common as well, and they can supplement each other. Presuppositionalism reminds apologists of the need to stay with the truth of the Bible and avoid all neutrality; traditional apologists are correct in stressing evidence (“proofs” or “arguments” from nature, reason, history, archaeology, etcetera). [FGO]

Keller, Timothy. *The Reason for God: Religion in an Age of Skepticism*. Penguin, 2008. 293 pp. Keller is the founding pastor of Redeemer Presbyterian Church in Manhattan, New York, a church that attracts some 5000 listeners each Sunday. His target audience consists of young, skeptical, highly-educated urban professionals, and he has to spend much time dealing with modern-day objections to the Christian faith. A good impression of the criticisms he meets can be had from the chapter headings of the first part of the book, which deals with objections such as: There can't be just one true religion; How could an all-good and all-powerful God allow suffering or send people to hell; Christianity is a straitjacket; Christianity is responsible for much injustice; Science has disproved Christianity; One cannot take the Bible literally. Having dealt with this type of objection in the first part of the book, Keller concludes that there are *insufficient* arguments for rejecting Christianity. In the second part he goes on to show that there *are* sufficient reasons for believing in it. Throughout the book he refers to two central themes, namely: (1) all the skeptics' doubts about the truth of Christianity are based not on demonstrative proof but on belief, and skeptics therefore should test their own beliefs as rigorously as they test those of Christianity; and (2) Christianity makes more sense of life, nature, and history (gives a better “empirical fit”) than any alternative worldview. *The Reason for God* is accessible, well-written, and highly instructive. [FGO]

Lewis, C.S. *Mere Christianity*. Harper Collins, 1977, 189 pp. This is probably the best-known of Lewis's apologetic works and is as relevant today as it was when first published, more than half a century ago. The book is divided into four parts. The first gives an illustration of the so-called moral argument of the truth of Christianity, the second describes what Christians believe, the third deals with Christian behavior, and the fourth attempts to explain the doctrine of the Trinity. *Mere Christianity* is not, of course, Lewis's only work in defence of the faith. Practically all his Christian writings, including his space trilogy and his Narnia *Chronicles*, have an apologetic message. [FGO]

Pratt, Jr., Richard L. *Every Thought Captive: A Study Manual for the Defense of Christian Truth*. P&R, 1979, 143 pp. This booklet, which has a laudatory Foreword by John M. Frame, aims at presenting VanTillian apologetics to non-academics, including secondary school students. The book is divided into 14 lessons, all but the last of them concluding with a list of questions to facilitate discussion. The book follows VanTil's reasoning quite closely, but the more popular style makes it easier to understand the issues. Pratt agrees with VanTil that traditional arguments are of little use, unless they are looked at from a biblical perspective. He gives, unfortunately, few examples of actual apologetics, except for the

final chapter, which contains an “Apologetic Parable” aimed at showing the superiority of the “two-fold approach” of presuppositionalism over more traditional apologetic methods. [FGO]

Sproul, R.C. , John Gerstner, and Arthur Lindsey. *Classical Apologetics: A Rational Defense of the Christian Faith and a Critique of Presuppositional Apologetics*. Zondervan, 1984, 364 pp. This book consists of three parts. The first deals with classical natural theology (problem and method); the second with classical apologetics (theistic proofs, the deity of Christ, the infallibility of Scripture); and the third consists of a classical critique of presuppositional apologetics as promoted by Cornelius Van Til and, in a modified form, by John M. Frame and others. [FGO]

Stott, John. *Basic Christianity*. IVP, 2006, 179 pp. This small classic, which was first published in 1958, seeks to answer intellectual and other questions about the Christian faith. Stott begins with the historicity of Christ’s person, character, and resurrection, moves on to man’s need and Christ’s work to fill that need, and concludes with a section on man’s response – the need of counting the cost, of reaching a decision, and of obedient Christian praxis. Stott’s book can serve as an apologetic tool by itself or as an introduction to more complex works, such as those by C.S. Lewis and N.T. Wright. [FGO]

Van Til, Cornelius. *Christian Apologetics*, 2nd ed. Ed. William Edgar. P&R, 1976, 2003. 207 pp. Although it is rather heavy on dogmatics and philosophy (especially Greek and Idealist philosophy), and although an excessive amount of time is spent on debating the differences between Calvinism on the one hand and Roman Catholicism and Arminianism on the other, this book is helpful in that it contains a good outline of Van Til’s apologetics. As in Bahnsen, we read about the chasm between believers and unbelievers, the “points of contact” between them, and the methodology of the “two-fold approach.” It also becomes clear that Van Til does not deny the validity of using of evidence, although he insists that evidence makes sense only when viewed from Christian presuppositions. In his 15-page Introduction, editor William Edgar, himself a VanTillian, admits that Van Til’s is not the last word, and that his followers have to work with his heritage. Among the points that need the presuppositionists’ attention, according to Edgar, are the challenges of post-structuralism, the insights of the new Reformed epistemology, hermeneutical philosophies, cultural analysis, the history of science, world religions, and psychology. Much more attention must also be given to actual arguments – to both their form and content. Edgar further notes the somewhat forbidding academic character of presuppositionalism. “. . . We will,” he concludes, “need to apply the principles of presuppositional apologetics to social groups other than academics. How does it work with street children, with business people, with athletes?” I believe that Edgar’s comments and questions are to the point. [FGO]

Wright, N.T. *Simply Christian: Why Christianity Makes Sense*. HarperSanFrancisco, 2006, 237 pp. The title suggests similarities between this book and C.S. Lewis’s *Mere Christianity*. Moreover, just like Lewis, Wright discusses “evidence” for Christianity in the first part of his book. But whereas Lewis dealt in part I only with the evidence of a divinely given moral law, Wright speaks of four “arguments.” They are “echoes of a voice” that speaks of the human longing for justice, the quest for spirituality, the hunger for relationship, and the delight in beauty. Each of them, Wright says, ultimately points to God, to Jesus Christ, and to the new creation when things will at last be put to rights. Part II lays out the historical

Christian faith, beginning with the Old Testament, and Part III speaks of the believers' practice of following Christ and being instruments of God's new creation. [FGO]

Dutch Language Section

Green, Michael, *Dat geloof je toch niet! Twaalf veelgehoorde reacties op het christelijk geloof*, Uitgeverij Plateau, 2007, 206 pp. **Oorspronkelijke titel:** *You can't be serious*. De auteur gaat in op de volgende reacties op het christelijk geloof:

- a. Ik ben gewoon niet zo'n godsdienstig type.
- b. Je kunt tegenwoordig echt niet meer in God geloven.
- c. De wetenschap heeft het geloof verslagen.
- d. Jezus had toch een kind bij Maria Magdalena?
- e. Het maakt niet uit wat je gelooft, zolang je maar oprecht bent.
- f. Alle godsdiensten leiden naar God.
- g. Jezus? Die heeft toch niet echt bestaan?
- h. Jezus was gewoon een goed mens.
- i. Ik doe mijn best. Meer kan ik toch niet doen?
- j. Aan het verleden kun je niets meer veranderen.
- k. Dood is dood.
- l. Dat is nu eenmaal de aard van het beestje.

Green neemt de opmerkingen serieus en gaat op onderzoek uit. Hij daagt sceptische vragenstellers uit hetzelfde te doen. Als waarheid je aan het hart gaat, kun je Jezus niet negeren. Ga op onderzoek uit! Hij brengt onder woorden waar het in het geloof echt om draait. Wie is Jezus? Welke feiten zijn er over hem bekend? Wat doet en zegt hij in de Bijbel? Wat betekent dat voor jou? Bij uitstek een apologetisch boek. (JAvL)

Ouweneel, Prof. dr. W.J., *Wijs met de wetenschap*, Barnabas, 1997, 156 pp. De tijd is allang voorbij dat orthodoxe, bijbelgetrouwe christenen zich in de verdediging lieten drijven door bijbelkritische wetenschappers. Op bijvoorbeeld de Evangelische Hogeschool in Amersfoort wordt vrijmoedig onderwijs gegeven en studie verricht met de Bijbel als uitgangspunt. In dit boek wordt hieraan bijgedragen door Willem Ouweneel, docent aan die Hogeschool. Alleen al de titel wil de lezer doen nadenken. Er zit een drievoudige betekenislaag in. Ten eerste: wij moeten wijs 'omspringen' met de wetenschap. Ten tweede: als we dat doen, zullen we met behulp van de wetenschap wijs kunnen worden. Ten derde kan 'wijs met' soms ook de betekenis hebben van 'trots op', 'genoegen vindend in', en zo mag de vraag best gesteld worden of wij trots kunnen zijn op de hedendaagse wetenschap, en speciaal of we als christenen vreugde kunnen vinden in de wetenschapsbeoefening. (HvL)