Pedagogy in Religion and Science

with Timothy Gibson, "Between Knowing and Being: Reflections on Being Taught Science and Religion by Professor Christopher Southgate"; Louise Hickman, "Modeling the Cosmos: Transformative Pedagogy in Science and Religion"; Willem B. Drees, "God, Humanity and the Cosmos: Challenging a Challenging Textbook"; and Christopher Corbally and Margaret Boone Rappaport, "Teaching Science and Religion in the Twenty-First Century: The Many Pedagogical Roles of Christopher Southgate."

GOD, HUMANITY AND THE COSMOS: CHALLENGING A CHALLENGING TEXTBOOK

by Willem B. Drees

Abstract. Christopher Southgate has been the editor of the text-book God, Humanity and the Cosmos. I consider this textbook fair on science and wise in intertwining issues in theology and science with ecology, climate change, and technology. It might also be challenging for students, as it introduces them to a variety of perspectives and a rich palette of literature. I wonder whether such a book, with its strong theological, "cognitive," orientation will remain relevant in European contexts, given shifts in society away from Christianity and changes in understanding what it is to be religious.

Keywords: education; God, Humanity and the Cosmos; religion and science; secularization; Christopher Southgate; teaching; Linda Woodhead

Were this book to be rewritten in ten or twenty or thirty years, what would be its main emphases? (Southgate 1999, 393)

Christopher Southgate has been the "co-ordinating editor" of *God, Humanity and the Cosmos: A Textbook in Science and Religion* (Southgate et al. 1999, xv; Southgate 2011, xv). The third, revised, and expanded edition (Southgate 2011) has him on the title page as the "General Editor." Hence, this textbook is worthy of consideration in this issue of *Zygon* dedicated to Southgate's contributions to discussions on religion and science. What is

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the specific contribution of this textbook? What was its audience? Is it still relevant, almost twenty years after its initial publication?

Before embarking on the discussion, let me first acknowledge the importance of the development of such textbooks. Books that aim at a general audience are often popularizations of science with a pious or an antireligious gloss at the end. And academics working on religion and science in the context of the modern research university need to focus on a well-defined and limited issue. Their scholarly work finds its way in articles in journals such as *Zygon*, in books with scholarly publishers such as the university presses, and in chapters in multi-author volumes, preferably also with such publishers. The textbook genre is in between, more reflective than popular science exposition, but more accessible than a specialized monograph. This particular textbook introduces many important topics, but also refers the students to scholarly analysis on these issues. A most welcome contribution.

As my question about the relevance today to a large extent has to do with ideas about students of today and tomorrow, let me inform the reader of my own biased experience in teaching about religion in the Netherlands. In the years since 2001 I have taught courses to students with different backgrounds. (1) I taught philosophy of religion to students in a theology program; upon completion of the program at the public university, these students could go on to train for ministry in the main Protestant Church in the Netherlands. (2) I also taught such courses to students in religious studies. Some had a well-defined religious identity, including quite a few second-generation Dutch Muslims, but also an occasional Wiccan. Most of these students would not self-identify as "religious," but as students with human religion as their object of study. (3) And I taught electives on religion, on religion and ecology, and on religion and economics to undergraduate students in a liberal arts and sciences program or an international area studies program. For most of the students, religion was something of an earlier generation. "My grandmother used to go to Church." "My parents had me baptized, but it does not mean anything to me." These students hardly have a vocabulary to speak of religion, except for the way "religion" is depicted in the media. I wonder whether we in "religion and science" cater mostly to students of the first category, those religiously involved? What about the third category, those for whom "religion" hardly has any meaning?

To get a better understanding of the textbook, I will compare it with one of the most widely used books on religion and science, by Ian Barbour. Thereafter, I will focus on the way Southgate and his co-authors envisage their audience. And last but not least, I will consider the brief chapter that concludes Southgate's textbook, "A Look to the Future," which provides an opportunity to consider current trends, illustrated with some recent publications in *Zygon*.

COMPARING GOD, HUMANITY AND THE COSMOS WITH BARBOUR'S RELIGION IN AN AGE OF SCIENCE

To understand its character, a point of comparison might be books by Ian Barbour, such as his *Religion in an Age of Science* (1990), and its expanded version *Religion and Science: Historical and Contemporary Issues* (1997). In the 1990s, Barbour's work seems to have been the most widely used text in courses on religion and science, at least in the United States. An indicator for this is a list of most frequently used texts in science and religion courses, compiled from courses considered eligible in the 1995 Templeton Science and Religion Course Grant competition, an award program coordinated by the Center for Theology and the Natural Sciences (CTNS) in Berkeley, California. According to a census of the bibliographies of those courses which I once received from CTNS, Barbour's book was assigned in 59 out of 121 courses; in places two and three were books by Arthur Peacocke (1993) and by John Hedley Brooke (1991), each assigned in 15 of those courses.

Compared with Barbour's book, Southgate's book has more authors. There are eight in the first edition—aside from Southgate himself, Celia Deane-Drummond, Paul D. Murray, Michael Robert Negus, Lawrence Osborn, Michael Poole, Jacqui Stewart, and Fraser Watts. For the third edition, four more have been added—John Hedley Brooke, Geoff Dumbreck, Andrew Robinson, and David Wilkinson. Despite the number of authors, God, Humanity and the Cosmos is a fairly coherent textbook, rather than a collection of chapters. In the first edition, the names of the authors of the various chapters are not listed in the table of contents; in the third edition they are given with each chapter. At the time the book was produced, all contributors were based in England; in addition to those from Exeter we find Birmingham, Cambridge, Chester, Leeds, London, and for the third edition there was also Oxford and Durham (Southgate et al. 1999, xv-xvi; Southgate 2011, xv-xvii). Most of the authors seem to be Anglican or Roman Catholic. And most of them are theologians who initially trained in one of the natural sciences, a background that applies equally to Ian Barbour.

There is much that the two books have in common. As similarities, I notice the positive appreciation of the natural sciences, the engagement with scientific theories (especially physics and evolutionary biology), and with philosophical reflection mainly drawing on philosophy of science. For both, the later edition offered additional material on the history of science in relation to religion. Both offer a survey of different positions, as might be expected for a textbook, but in each of these books the authors do not hide their preferred position. The discussion focuses mainly on Christian theology in its Western development. In these books, natural theology is an important legacy from the eighteenth and nineteenth centuries, though Barbour (1990, 24–28) and Southgate et al. (1999, 8–9) prefer

to understand their work as "theology of nature" rather than as "natural theology." With their emphasis on the theories of science, on philosophy of science, and on natural theology/theology of nature, both books are typical of Anglo-American discussions on science and religion. This stands in contrast with German Protestant theology (Evers 2015), which might spend more time on hermeneutics (the role of interpretation) and prolegomena.

A difference—parallel to the difference between the United Kingdom and the United States—is in the implicit opponent. In Barbour's book the discussion with creationists and others who reject evolutionary views is implicitly there. For the British textbook, the confrontation with "New Atheists," and in particular Richard Dawkins, seems to be more urgent. In the third edition, "new atheism" receives a chapter of its own (Southgate 2011, 315–29), as one of the "pressing contemporary issues."

Another difference is in the position of technology. Barbour has written as a separate book *Ethics in an Age of Technology* (1993). When taken together with his *Religion in an Age of Science*, he seems to describe the field with two major word combinations: "religion and science" and "ethics and technology," the first pair dealing with ideas, and the second pair with social practice. In the textbook by Southgate, we find chapters titled "Technology and Christianity" and "Biotechnology: A New Challenge to Theology and Ethics"; the later edition adds a chapter on climate change, as an issue about the acceptance of science as it relates to social justice. A major chapter in both editions deals with theology "in an ecological age" (Southgate et al. 1999, 199; Southgate 2011, 225). Thus, the Southgate volume addresses more explicitly also "religion in an age of technology," crossing the neat distinction between "religion and science" and "ethics and technology."

AUDIENCES

The UK textbook is "designed principally as a resource for teachers and students on undergraduate-level courses," though it "should be of considerable interest to the general reader" as well (Southgate et al. 1999, xvii; Southgate 2011, xviii). In a private letter, Southgate wrote to me on June 5, 1999 that he thought it could be used "for church groups as well." With respect to the undergraduate students, there is a further description of the intended audience:

No scientific background is presumed. It will be expected that most students will have some theological background, but where a theological term is used for the first time an explanation is provided. (Southgate et al. 1999, xvii; Southgate 2011, xviii)

Thus, the project prioritizes the explication of science to students who have some knowledge of theology, probably by personal acquaintance with

Christianity. I wonder whether by making such assumptions about the readers, the textbook might bypass major conceptual issues about the understanding of Christianity, of religions, and of religion.

Christianity

The expanded edition (Southgate 2011) addresses in its second chapter the "significance of the theology of creation within Christian tradition." The authors of this chapter, Paul D. Murray and David Wilkinson, write on narratives rather than doctrine in Scripture and hence the need for interpretation (46–54) before turning to the historical development of doctrines and systematic theology, such as *creation ex nihilo* and the five ways in which Thomas Aquinas argued for the existence of God (54–60). After Aquinas, Jean Calvin and Martin Luther are introduced, and authors included for the modern period are Friedrich Schleiermacher, Karl Barth, Jürgen Moltmann, Wolfhart Pannenberg, and various contemporary authors (60–66).

Thus, some of the diversity within Western Christianity is displayed, and with that the complexity of its sources and diversity of arguments. Nonetheless, the chapter conveys an understanding of Christianity that is basically unified, despite some internal disagreements of a theological nature. I would have loved to see more on the complexity of its sources as uncovered in historical-critical studies, on the risk that exegesis becomes reading something into a text, on the political dimensions of disputes over orthodoxy and heresy, and on major disagreements on what it is to be Christian. I recently used Linda Woodhead's Christianity: A Very Short Introduction with students. In this slim book, she introduces students to the global variety in Christianity. One scheme (2014, 57) is the distinction between three fundamental types of Christianity on the basis of their main understanding of authority (1) in continued tradition and apostolic succession (Church Christianity), (2) in the aspiration to return to the sources (Biblical Christianity), or (3) in the appeal to personal experience (Mystical Christianity). Whereas an insider may assume a normative Christianity and dispute its details, and many outsiders also assume coherence and a clear essence, historical and sociological studies uncover a wide variety of Christianities. Students who think they know Christianity might be offended, but un-learning one's initial ideas is part of the learning process as well.

Religions

Aside from the question of how one approaches Christianity, part of the modern mindset is also pluralism; we know there are other traditions, and these may deserve as much respect as our own. To some extent, the book addresses this, with a chapter on Islam and science (Southgate 2011,

350-70) and on "theological thinking on God and the world from outside the Christian tradition" (2011, 255-73), with sections on Judaism, Hinduism, Taoism, and Buddhism, as well as the Gaia hypothesis, deep ecology, and "new paradigm" thinking; the last one referring mainly to Fritjof Capra. Thus, it is acknowledged that ideas may differ from tradition to tradition. However, the textbook speaks of "theology," including a wide range of traditions. As Southgate writes, the discussion focuses "upon the mystical and metaphysical aspects of the traditions rather than upon mythology, ritual or popular worship" (2011, 260). This way, the various religious traditions are treated as similar in kind, though different in some of their substantial beliefs. Those differences are deemed useful for the Christian theological reflection that is central to this book, as those other traditions may offer additional metaphors and models (2011, 443). However, that "religions" are far more diverse in character and practice is not so clearly conveyed to the students. The quick tour of Eastern religions suggests that these stand side by side, just like Judaism, Christianity, and Islam. That an individual in Japan may practice rituals at Shinto shrines, Buddhist temples, and Christian churches at different crucial moments in life is hard to accept if one comes at it with an understanding of Christianity shaped by creeds and membership of congregations.

Religion

Last but not least, aside from a plurality of Christianities and the coexistence of Christianity alongside other great traditions that may be quite different in kind, there is something else confusing about religion today: what "being religious" means may have become something other than it was for earlier generations. One of the changes has to do with secularization, not only in the sense that there is less involvement in religion, but in the sense that religious orientations seem to have become a matter of personal choice.

Alongside this transition from religions as something most adherents are "born into" toward religions as options one might choose, there seems to be another observable shift—at least in European countries such as the Netherlands and the United Kingdom. As I learned from my students, many do not identify as religious or nonreligious. This is not under the weight of criticisms such as those articulated by the New Atheists; it is not that we now have atheists rather than believers in our classes. To me it resembles more the way a language might become irrelevant and be lost, if it is no longer spoken. For many of my students outside the theology program, the language of church-based Christian faith is one they have heard of only from a distance. Surveys in Europe show a declining number of people who identify as Christian, or with another well-defined religious identity (Drees 2015). Sociologist Grace Davie has a book subtitled *Believing without Belonging* (1994), while Paul Heelas and

Linda Woodhead, with co-workers, wrote *The Spiritual Revolution: Why Religion Is Giving Way to Spirituality* (2005). Such literature tends to focus on religious practice, and its disappearance or transformation, rather than on theology and the desire for intellectual clarity and consistency.

It makes me wonder whether we in "religion and science" with our engagement with ideas, with systematic theology and philosophy of religion, are out of tune with the time, anachronistic. We tend to treat "being religious" in terms of beliefs, as if the question is whether those beliefs are compatible with science or not. The possibility that involvement in religion might be significant for other reasons, as expression of attitudes and emotions, as identities one adopts and communities one belongs to by shared rituals and taboos, as living with gratitude, hope, and trust, comes hardly in sight. Are we in "religion and science" sufficiently relevant in a time and place where for many "religion" seems to be something of the past, in a fairly encompassing way, not just any particular belief, but the whole phenomenon, the whole culture of lived religion? This seems to be a different level of discussion than one that focuses on theories from the natural sciences. And with these changes in what it means to be religious, we also witness a "subjective turn" within Christianity.

We need both types of disciplinary windows, the sociology of religion and the more systematic "religion and science" or even "theology and science" approach. It seems to me to constrain the relevance of a textbook if it bypasses such developments about lived religion in our social reality. But for now, let us consider the future through the "theology and science" lens of the textbook.

FUTURE

Southgate ends the textbook in both versions considered here with "A Look to the Future." The chapter opens with a paragraph that concludes on the basis of the preceding chapters "there is a conversation between different sciences and religion which need not be on the basis of conflict" (Southgate et al. 1999, 391; Southgate 2011, 441). There is a more dynamic interaction, as scientific and theological models may change. There is a conversation, and it is not merely about conflict, but also about the nature and substance of these two human activities. The second main observation offered is that the interaction is mostly one-way traffic, from science to theology, though occasionally innovative scientific proposals in the past have been inspired by aesthetic or religious preferences. "New scientific narratives inform and constrain what can be thought theologically" (Southgate et al. 1999, 392; Southgate 2011, 442).

Southgate does not want to predict where the dialogues on current issues will be in a few years but asks what will be "the matters of pressing concern," at least to those teaching and writing about science and religion (Southgate

et al. 1999, 393). In the 1999 version, he lists four developments. One is the interest in religions other than Christianity. This is expected to nuance claims about an exclusive role for Christianity in the history of science. Focusing on science in interreligious meetings provides participants with common material to consider. And other religious views may provide scientists (and theologians?) with new images and metaphors (1999, 394). As I read these possible fruits of involving other religions, I find these expectations fairly self-centered. In our pluralistic world, understanding our neighbors seems to be of importance in itself. Intellectually, considering these other points of view might be more unsettling than listed here, they provide alternatives which, merely by their existence as genuine options, challenge strong commitments to the truth of one's own tradition. Zygon: Journal of Religion and Science has increasingly opened up to contributions on other religions, including the perspective from within those traditions; the March 2016 issue was dedicated to "East Asian Voices on Science and the Humanities" (Hastings 2016).

The second development Southgate lists is the rise of new genetics and new medicine. This will have a major impact on understanding humans and will raise anthropological and ethical issues because we are not merely passive recipients of a genetic heritage, but could reshape intentionally the genetic legacy of future generations. What might have been included, but is not, is the rise of artificial intelligence and expectations about a technologically enhanced or transformed form of human existence. Interweaving technology and theology, however, is listed by Southgate as a major need. Discussions on transhumanism have become important in recent issues in *Zygon* (Dumsday 2017), alongside discussions on evolution and genetics (e.g., Watts and Reiss 2017; Depew and Weber 2017).

The third development envisaged regards nonhuman animals; Southgate expects that their status will become a more significant issue. We have seen in *Zygon* some signs of this with a set of articles on David Clough's study of animals in theology (e.g., Fergusson 2014; Adam 2014; Clough 2014). With the increasing concerns about ecology, we have published various contributions on "biodemocracy and the Earth Charter" (Riley 2014a, 2014b; Tucker 2014; Eaton 2014), climate change (Hulme 2015; De Witt 2015; Stenmark 2015; Moo 2015; Tucker 2015) and related topics as well.

The fourth development listed in the 1999 edition regards the study of consciousness, and its implications for the understanding of human agency and sin. Consciousness has become a live issue, though perhaps more particularly in the form of cognitive science of religion, that is, the contribution that a better understanding of human cognitive capacities might make to understanding human religious beliefs and practices (Brown 2017; Teske 2017).

Southgate et al. (1999, 396) remark that, if we have a better understanding of human agency, we might also have a better understanding of

divine agency, which is often modeled after human agency. This parallel I consider misguided, as the mind–body relationship is an issue within the created order, whereas issues of divine agency regard the relationship between the Creator and creation; this relates to contributions we have had on Eastern Orthodoxy, naturalism, and "the causal joint" (Knight 2016; Lane Ritchie 2017).

The third edition adds three theological projects (Southgate 2011, 445–46), eschatology in conversation with science (especially Robert John Russell and John Polkinghorne), with a related area of exploration, and the theology and ethics of extraterrestrial life (which *Zygon* had in June 2016; e.g., Losch 2016; Peters 2016; Smith 2016).

CONCLUDING COMMENT

Southgate called my approach "intensely intelligent, theologically skeptical" (Southgate et al. 1999, 6; Southgate 2011, 6). On "intelligent": I am happy to return the compliment. Skeptical? His word. My basic perspective is different from his. I am less an insider, less convinced that we know Christianity, more in favor of a broad understanding of human religions and religiosity, and of engagement with secularization and pluralism (Drees 2010). I think that students might be served with a textbook that would approach theology and religion from anthropological and contextual as well as philosophical and theological approaches. However, herewith I want to thank Chris Southgate for all his contributions, including this textbook.

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