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WHERE TO LOOK FOR GUIDANCE? ON THE NATURE OF “RELIGION AND SCIENCE”

by Willem B. Drees

Abstract. For moral guidance we human beings may be tempted to turn toward the past (scripture, tradition), toward present science, or toward future consequences. Each of these approaches has strengths and limitations. To address those limitations, we need to consider how these various perspectives can be brought together—and “religion and science” is an area in which this may happen. That makes the question of where to look for guidance potentially a central one for religion and science, setting the agenda differently from apologetic questions with respect to religion or to science. However, “religion and science” does not solve the issues, leading to a single normative perspective; the way that current knowledge is integrated with past wisdom is highly dependent upon ideals that relate to the future. Thus, rather than resolving the need for guidance, the religion-and-science conversation becomes one way of addressing our need for guidance, bringing into the conversation past, present, and future.

Keywords: axiology; consequences; cosmology; guidance; questions; religion and science.

Among the questions that might shape our future is one that I offer in the title: Where are we to look for guidance? Although reflections on religion in a scientific age often seem to be driven by other questions, I suggest that a moral and motivational interest may be more prominent than is often recognized and acknowledged.

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For instance, the debates on evolution associated with creationism and intelligent design seem to be about the explanation of life forms. But is that really driving the advocates of creation science or intelligent design? Is the explanatory issue not the surface, whereas concern about the authority of the Bible as guide in social and moral affairs is their real interest? Or, to refer to a quite different example, the interest in religion and ecology, about which Mary Evelyn Tucker spoke at this symposium (2003), is not merely about ideas regarding human relationships with nature but seems to be driven by the moral urgency of ecological problems. Another example would be the organized skeptics, whose interest is also, to a large extent, moral—exposing fraud and illusions. One of the last books by Carl Sagan (1996) was subtitled *Science as a Candle in the Dark*. Many engaged in religion and science might dismiss such a title and the wider movement of skeptics as “scientistic,” trusting too much in science—but they deserve respect from religious believers at least for their moral concern and engagement, if not also for many of their conclusions. As a fourth example, consider the Center for Theology and the Natural Sciences (CTNS) in Berkeley. Its primary interest may seem to be in theoretical issues in the sciences such as quantum physics and theological subtleties such as the Trinity. But on the CTNS Web site, Robert J. Russell (2003) asks for “an interaction which aims at serving the broader concerns of the global human and ecological communities.” Last but not least, the Zygon Center for Religion and Science itself describes in the brochure for this symposium as one of its major aims “how the joint reflection of scientists, philosophers, and theologians can contribute to the welfare of the human community.”

Let me distinguish the question Where to look for guidance? from other questions that may seem to drive projects in science and religion. Some agendas are apologetic and defensive for the sake of a given tradition. Questions may include: How to save the tradition? Is faith still possible? Is theology plausible? Other agendas may be revisionist in intent, seeking to formulate a “theology for a scientific age,” to quote the title of one of Arthur Peacocke’s major books (1993). Yet other religion-and-science agendas may not be interested in reflecting upon religion but rather in science communication and advocacy for a religious audience.

Given this variety of agendas, the question of where to look for guidance raised in the context of religion and science is closely related to a particular answer to the metaquestion What do we seek to do when we “do” religion-and-science? Or, to ask it differently, What is the nature of the *and* in religion and science?

The question regarding guidance may suggest a simplistic answer: Science needs guidance, and religion can offer it. For instance, in the Foreword to *The New Faith-Science Debate*—a book based on a conference on Cyprus with both the departing and the new director of the Zygon Center,

Philip Hefner and Antje Jackelén, among the participants—Paul Abrecht describes a shift in the interaction of science and theology near the middle of the twentieth century:

In the earlier confrontation the fundamental issue was the clash between Christian belief and scientific knowledge, especially between the scientific understanding of the world and Christian views on creation. In that debate the churches were generally on the defensive. . . . Today, as a result [of the rapid progress of modern science], science and science-based technology are on the defensive, and religious faith, speaking in the name of a troubled and anxious humanity, has begun to ask questions about the consequences of the scientific world view. (Abrecht 1989, viii)

I consider this too simplistic an understanding of our situation. It contrasts *guidance* and *worldview*. It puts science and technology on the side of the problem, downplaying their contributions to solutions, and makes religions the solution, whereas a realistic assessment of the contribution of religions in our time, whether Islamist or Christian varieties, may be that they often contribute also to environmental and military problems.

In this essay I explore three possible sources of guidance—past traditions, present science, and future consequences—and consider problems associated with each of these sources. I then discuss religion-and-science efforts as attempts to combine these various resources in a fruitful way. In that context I offer further reflections on the nature of religion, of science, of morality, and of their relationships—the *and* and the ends of religion and science.

GUIDANCE BY PAST TRADITIONS?

In debates on the social acceptability of genetic technologies, religious expressions (“playing God,” “sacredness of life,” “creation”) have been used alongside metaphors from the social and political domain (“boundaries”) and from mythic material and fiction (Frankenstein). “Playing God” is often invoked with negative connotations but may be appreciated theologically as the proper way of “playing human” in a perspective where creation is not finished and redemption or liberation is deemed more important than the conservation of an existing order (Drees 2002). Advocates of environmental responsibility also have drawn upon religious traditions (Tucker 2003). New developments in technology, economy, and society have resulted again and again in responses regarding desirability (or undesirability) that draw upon the past.

There are problems, however, in appealing to past traditions. Some problems are due to the standing of the traditions. If the plausibility of a tradition is itself challenged, should we nonetheless accept its moral recommendations as commandments? If God did not speak to Moses, why treat the Ten Commandments as given by God? Furthermore, why would we appeal to commandments of a particular tradition in cultures that have accepted religious pluralism as a political given? Such an appeal seems

politically useless in pluralistic cultures, even though their strong appeal to insiders may make them motivationally useful. Such motivational impact for insiders seems to be the primary ambition of the "Ecology and Religions of the World" series edited by Tucker and John Grim (1997–2004). Appeals to the past thus may be useful, not as a source of guidance in making choices but in strengthening commitment to choices already made.

Additional problems arise as a result of the distance between the original context and current needs. Historical-situational distance, for instance, is obvious when biblical statements about how humans ought to relate to "wild" nature are transplanted from a setting in which humans were threatened by wild nature to one in which humans are the main threat to wild nature. Furthermore, the traditions did not anticipate modern technological options and thus did not speak directly about cloning and similar possibilities. Applying certain notions in new circumstances, therefore, creates hermeneutical problems; the same word may not even have the same meaning in the new circumstances.

If one seeks guidance by going back to the original texts of a tradition, many such problems arise. Such a form of orthodoxy is thoroughly modern in style and strategy, treating language ahistorically in a fairly straightforward way, bypassing the rich tradition of interpretation and thus the dynamics that have always been present within religious traditions, whether those of longer ago—Jewish oral traditions, Islamic hadith, Christian patristic theology—or more recent developments. Religious visions and vocabularies are dynamic. Appealing to the past cannot settle the question of whether a particular traditional interpretation is legitimate or goes beyond its boundaries, and it cannot settle the question of whether past wisdom is applicable in present circumstances.

PRESENT SCIENCE AS GUIDE?

In pluralistic cultures, when guidance by one's own tradition has lost some of its hold, some may turn to science for neutral insights. These may be found at two quite different levels. On one hand, there is the appeal to science for factual and theoretical knowledge regarding our world. A good example is the research, summarized by the International Panel on Climate Change (IPCC), that analyzes available knowledge on global warming. This information is very important for determining environmental policies. The fundamental problem of such a strategy is, however, in the subsequent transition from facts to an evaluation—a transition many philosophers consider impossible ("the naturalistic fallacy").

On the other hand, there are more far-reaching proposals in the search for guidance in a science-informed view of the world. The journal *Zygon* has given space to such attempts, sometimes formulated in terms of "the evolutionary epic" (Rue 1999), "the sacred depths of nature" (Goodenough 1998) or "biophilia" (Wilson 1984). The gains in motivational impact

thus made, however, do have as a drawback that the authority of science behind it is compromised. The vision presented may be relevant and laudable, but its standing is not comparable to the standing of the scientific insights invoked.

FUTURE CONSEQUENCES AS CRITERION?

Consequences may well be an important consideration when it comes to moral and political decisions. This has been the conviction of utilitarians or consequentialists of various stripes but can also be defended in reference to religious traditions—for instance, as an interpretation of the command to seek the well-being of all our fellow beings (*agape*). Thus, one may hear the protection of biodiversity argued for because plants may contain important, yet-unknown pharmaceuticals useful to future generations. Or organ donation may be justified on the basis of its future individual value—its ability to afford someone a longer and healthier life (see the discussion in LaFleur 2002). Ronald Dworkin (1999) considers the use of religious metaphors such as “playing God” ways of articulating insecurity regarding the distinction between what is given and what is the domain of moral considerations, an insecurity that is transcended when we accept responsibility and seek to use new developments’ potential for good.

We need to take future consequences into account when considering our actions, and consequences of our environment-degrading policies, as discussed by the IPCC, are a good example. But such consequences by themselves are not enough to guide us. We still face the question of how we value the various possible consequences—morally? in terms of happiness or beauty? In his comparison of views of organ donation in the United States and in Japan, William LaFleur (2002) made clear the role of culture, including religions, in shaping the norms according to which we weigh possible courses of action and their consequences. Furthermore, utilitarian considerations always run the risk of being too restricted in terms of justice; distribution (of burdens and of benefits) may well be a separate, deontological desideratum (Frankena 1963). Also, emphasizing future consequences in moral considerations may not be enough to motivate us; the future consequences—and, even more, consequences remote in time or geographically distant—are beyond our horizon. Traditions from our past, which have shaped our identities, may therefore be valuable complements.

WHERE TO LOOK FOR GUIDANCE AS A QUESTION FOR RELIGION AND SCIENCE

In this brief tour of three possible orientations in the search for guidance—toward the past (tradition), the present (science), or the future (consequences)—we have seen that each has its limitations. They all are relevant, but none is sufficient. It may be that we need to think harder about how

these perspectives might be combined. That is precisely what we might do when we engage in reflection on religion and science in our time. Thus, asking where to look for guidance might be considered one major means of shaping reflections on religion and science in a way that differs from articulating questions in terms of religious apologetics or revisions, metaphysical interests, or advocacy for and communication of science.

Not that such reflection offers a quick and easy answer to the demand for guidance; problems similar to those considered here arise also when the matter is approached as a religion-and-science issue. What is the nature of the *and* in religion and science? How are such different human projects brought together? And what is the nature of the various contributors of current science, religious traditions from the past, and ideals regarding the future? What should we aim for? What should we try to avoid?

"Religion *and* science" makes the two linguistically parallel. This fits well approaches of those who treat religion as ideas (theology) that compete or partner with the sciences in understanding reality, as if the two offer competing or complementary understandings of our universe. Thus, one expects to come to a position in terms of conflict (metaphysical or methodological), separation, substantial dialogue, or integration, as articulated in the widely used classification by Ian Barbour (1990). Assumptions that often come with such a "symmetrical" understanding of science and theology are similarity in cognitive kind and status, an explanatory ambition for theology as well as for science, and expectations regarding "consonance." Such assumptions generate various problems, as I have argued elsewhere (Drees 2003).

A different reading of the *and* in religion and science can be achieved by expanding our view of science and of theology and allowing for asymmetries in the relationship. As for a wider view of science, there is a continuum within the sciences from cosmological disciplines to those that also study human beings, such as evolutionary biology and cognitive sciences and, beyond those, the social and psychological sciences. In consequence, we have to acknowledge that religious ideas and attitudes themselves are also involved as objects of research and reflection. This shifts the focus from theology and science to a "scientific understanding of religion," that is, from a quest for a joint understanding of the world to one where the role of religious beliefs and practices becomes the object of science. Thus, we have a science of the world *and* of humans, including their religions. Theology and science then moves on to become a "science of religion," or at least of religion in the light of the sciences. At the same time, I argue, it is possible to expand the scope of theology and envisage a theological understanding that incorporates all human understanding, including the sciences. This would be asymmetrical, too, but in this case it would become a theology that addresses scientific knowledge as well as our valuational intuitions.

A symmetrical understanding is challenged especially when we consider overly optimistic expectations regarding “consonance” (see Drees 2003, 117–18). One reason for questioning consonance is methodological: we do not *find* harmony between scientific knowledge and already given theological ideas but rather *reconstruct* our ideas to make them as coherent as possible. The other concern is not methodological but moral or praxiological: assuming consonance between our reality and theological ideas regarding a good God runs the risk of denying too much the ambivalences of our reality and the possibility of meaningful human action.

The dissonance discerned, morally and methodologically, may be an incentive for reconsidering religion and science as a creative and constructive project. *Constructive* may be understood in the intellectual sense, as any consonance we claim is a human articulation of the way we see and value the world, despite its unattractive features. It may also be understood morally, in that religious traditions are concerned not only with what is but also with what ought to be but is not—a recognition of disharmony that calls for action and has critical consequences for any easy claims about consonance between scientific insights and religious language. Thus, acknowledging “creative dissonance” calls our attention to constructive human action and thus to human creativity as manifest in culture, in art, and in technology. I consider both aspects in turn—the constructive character of our understanding (images) and the constructive character of our world (technology).

Appropriating the Past in the Present. Creative dissonance and its constructive implications can be appreciated as an understanding of human existence that sees human identity as unfinished and human beings as culture-creating animals. The project is, one might say, “poetical,” in the double meaning of poetry and of *poiesis*. The Greek verb in the word *poiesis* is about making things and images. We even need to change ourselves, as individual persons and as complex cultures. What would be the best way to proceed with images and concepts offered by religious traditions as part of our heritage? I think that the development of physics offers a helpful analogy (Drees 1998). When we consider major transitions, such as those from Newtonian conceptions of space and time to Einsteinian views or from classical to quantum conceptions of matter, we may be struck by the lack of continuity at the level of ontology, of conceptualization of reality. However, there is in these cases also continuity at less abstract levels of knowing, for instance with respect to predictions for the orbits of planets. The way from the earlier to the later view is not via a translation at the level of theories but through developing new theories that do better justice to experiences and experiments coded to a large extent also in the old theories.

Similarly in religion—we need not aim at continuity at an abstract level, one or more interpretative steps away from actual life. Continuity with the insights of earlier humans, including those found in the Bible and the writings of the early churches, should be sought at the level of life as lived. The more abstract levels, including notions such as the Trinity, the virgin birth, heaven, and even God, are constructions, and these constructions or interpretations may change drastically even though one seeks to be fair to the underlying experiences. Fundamentalists, and those who reject Christianity because they think it has to be fundamentalist, often make the error of conflating different levels. They take the original form of expression of human concerns and experiences to be as important as the experiences and concerns articulated in those expressions. One may attempt to develop new worldviews in which everything of old has an equivalent and end up in complete failure because the new images do not relate sufficiently to the experiences that led to their predecessors.

In my view, therefore, the best way to renew religious language and models is to think about images as they functioned for humans in earlier periods and uncover what the underlying concerns and experiences were. Insofar as we recognize those experiences and concerns and see them as our own, we can develop new ways of dealing with them in images and models that are credible in our time, in the context of all else that we take seriously, including science. If we create new images and models, we do not so much find guidance by the past but rather appropriate past experiences and insights insofar as they can be represented in ways recognizable and acceptable to us.

Creating Futures. Science offers more than understanding; it provides us with tools to change our world. Chemists seek not only to understand nature but also to make things not present before—artificial things. In our days almost all of the sciences have this active, creative side. Think of the creation of new materials with new properties, of electronics that have given rise to information and communication technologies, and of biotechnologies of various kinds that have had major consequences for food production and medicine. An active attitude is deeply rooted in human nature; we are as much *Homo faber* as we are *Homo sapiens*.

I doubt whether a morally sensitive person could wish that we had done without this active side. There is, of course, the mythical image of paradise, of an effortless pastoral life with fruit in abundance. But if we are realistic, we realize that we need our technology, and we need it for morally lofty purposes: to feed the hungry, clothe the naked, and care for the sick. If we speak of *co-creation* we distance ourselves from the idea that creation is in principle finished and from the idea that God bypasses human beings in arranging everything; the history of God's creation is one in which humans have responsibility. In this approach, we do theology not merely on

the basis of an appreciation of the past, of positive experiences of beauty and goodness, but rather out of engagement with justice, with love, with the idea of making this world better. But we cannot work for a better future without addressing the wealth of visions and values that have been handed down to us from the past, which help us articulate our judgments of better and worse.

THEOLOGY AS "COSMOLOGY AND AXIOLOGY"

If we look to science for guidance, we assume that science offers us not only an adequate understanding of phenomena within reality but also an answer to our search for moral guidance. However, there may well be aspects of reality that are intelligible but not acceptable, and these have traditionally been the focus of theological interest articulated in prophetic or soteriological terms. Typical of theologies as systematic positions seems to be that they offer views of the way the world is *and* of the way it should be, of the True and the Good, of the real and the ideal. Each theology is a particular mix of—a particular relationship between—a cosmology (in the metaphysical sense), a view of the way the world is, and an axiology, a view of the values that should be realized. Thus, as a heuristic to clarify and explore a complex area of discussion, I use the "formula" for understanding the nature of theologies: *a theology = a cosmology + an axiology*. The + sign is not a mere addition but the crucial issue: how the two are brought together.

Let me elucidate some aspects of this formula. I speak of *a* theology to indicate that there may be different theologies, not only in relation to different religious traditions but also within a tradition. By *theology* I mean not the academic discipline of studying religious convictions but the object of such studies—a complex of convictions. *A cosmology* is used here for a view of the way the world is. Theological interest in cosmology is not only in questions of origins ("creation") but in the whole way that reality is envisaged, including such issues as time and eternity, determinism and contingency, and divine and human action. Thus, cosmology is more than the astrophysical study of the universe, even though in our time the natural sciences determine to a large extent our cosmological visions. *Determine* may actually be too strong a term, because there is some leeway between scientific knowledge and the interpretations given. The sciences constrain rather than contain interpretations that deserve to be considered plausible. Belief in a flat Earth with the heavens above and the waters beneath is certainly untenable, as is belief in a young Earth (counting in terms of thousands of years rather than millions or billions). But the theories themselves do not tell us how to interpret quantum theories, general relativity, and their potential integrations with respect to determinism, contingency, and the nature of time.

An *axiology* is understood here as a view of moral and other values, of what is considered "the highest good." Our values have been influenced by lessons from history; slavery and discrimination between men and women are deemed unacceptable, as is cruelty against animals. Impartiality has become an important criterion in evaluating moral norms; the golden rule about loving our neighbor as we would like to be loved is in many ways part of human cultural and social history—not as a descriptive statement, as if we were to live accordingly, but as a constraint on acceptable proposals regarding the highest good.

Finally, there is the +, the *and*. A theology has both cosmological and axiological elements. This is essential. Theology is not only a theory or metaphysical explanation of the world; nor is it merely a view of values. Both are brought into relation, and philosophically such a relation is very problematic because of the *is-ought* distinction, but combining *is* and *ought* is characteristic of theologies. In this respect theologies are heirs of mythical thinking, as it grasped reality before the rise of philosophy and sciences of nature. The *and* is not an addition but a keeping together of two components that we humans like to keep together even though we cannot justify the way we do that, and even though we know that moral and intellectual gains have been made by distinguishing and separating values and facts. My scheme is a heuristic for exploring the field rather than a substantial thesis about the (singular) proper view of the relationship between theology, ethics, and the sciences. I do not consider atheists necessarily deficient in understanding or values; they simply hold a different existential position, a different view of the relation between moral criteria and natural characteristics. In my opinion, the attempt to combine *is* and *ought* statements is what makes theology both problematical and valuable. The difficulty finds expression again and again in the problem of evil, which typically concerns the relationship or tension between the two main components.

This tension is also present within religious naturalism, both in the introduction of normative elements in a naturalistic understanding and in the variety of positions adopted. Whereas some understand God primarily in ontological terms—as the most powerful reality upon which we are dependent, for instance, with all the moral ambivalence that is thereby imported into the concept of God (see Burhoe 1981)—others use the concept of God primarily valuationally, as a label for elements in reality that are deemed sacred, concentrating on that which is ultimately significant, on regulative ideals, and the like (Hardwick 1996; Stone 1992); their challenge is to articulate how this concept of God can be considered real and effective. My own program is naturalist in the sense that it views human existence, including human cultures, moralities, and religions, as the fruit of, or even as part of, nature. At the same time it is antinaturalist in atti-

tude, in that humans are seen as called to go beyond and against that which has been handed down by nature to us.

The definition of theology as cosmology-and-axiology allows one to respect the autonomy of science and also of moral discourse. One can further differentiate between science and any interpretation of science as a view of reality—that is, any cosmology, metaphysics, or philosophy of nature. A cosmology, in this sense, is a view of what the world (with its substances and relations and its conceptions of space, time, matter, forces, and causality) might be like, given what we know and what we know not to be the case (science may well be stronger in what it excludes than in what it includes). Any such metaphysics is an interpretation of scientific knowledge, constrained but underdetermined by the sciences.

As far as theology is concerned, the definition allows one to concentrate on existential issues, which become prominent when our reality is not in accord with what we think ought to be (the + in the formula), rather than on supernatural or magical elements. Religion need not be about that which upsets the cosmological order. It is about the way the axiological and the cosmological are related, in harmony or in tension. This means that a religious naturalistic theology need not be conservative and defensive; it can well allow for the longing for redemption and for improving reality—an attitude in which we envisage the sciences as involved not only in understanding our reality but also in transforming it.

WHERE TO LOOK FOR GUIDANCE AS A CENTRAL QUESTION FOR RELIGION AND SCIENCE

I have considered the possibility of turning toward past traditions, present science, or future consequences for guidance. I have argued that none of these can fulfill this role by itself. Seen thus, the role of theologies is to integrate these important dimensions of our thinking. Thus, religion-and-science could be seen as a major way of addressing the concern for orientation and motivation.

However, religion-and-science does not resolve the issues or lead to a single normative perspective, because the way current knowledge is integrated with past wisdom is highly dependent upon ideals regarding the future. Rather than resolving the need for guidance, religion-and-science becomes one way of addressing our need for guidance, bringing into the conversation past, present, and future.

NOTE

The second half of this article draws substantially upon Drees 2003.

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