

# ADEQUACY OR ORTHODOXY? CHOOSING SIDES AT THE FRONTIER

by *Lindon Eaves*

*Abstract.* Arthur Peacocke's seminal contribution to the dialogue between science and theology is considered along three dimensions: epistemology, anthropology, and the concept of God. It is suggested that his view of a "hierarchy of disciplines" (1) may not completely characterize the way theology interacts with science, and (2) could limit the creative friction between them. His emphasis on humans as "more than" DNA could result in an anthropology that fails to exploit insights that biology could shed on theological puzzles as the impact of genetics is more widely appreciated. His concept of God may also need to be modified more radically to express our understanding of nature in an age of genetics.

*Keywords:* biology; DNA; evolution; genetics; God concept; theological anthropology.

---

For someone within the tradition of Christianity who functions daily outside the relative security of the seminary and presbytery, the words of David Tracy (1988, 4) carry particular significance: "When all is said and done, one finds that he can abandon neither his faith in the modern experiment nor his faith in the God of Jesus Christ." As a priest-geneticist, who has sometimes found it lonely trying to live religiously in the community of science, I cannot help but respect the path-breaking contributions of Arthur Peacocke as I have tried to answer the perplexing question: How does a geneticist maintain his or her integrity while standing at the altar on Sunday talking *to* (not merely *about*) God?

It is humbling and ironic to recall that it is almost a quarter of a century since I sat in a class on science and religion he gave to a group of Anglican seminarians at Cuddesdon College, Oxford. It is humbling because his systematic and dedicated contribution to the

Lindon Eaves is Distinguished Professor of Human Genetics at the Medical College of Virginia, Virginia Commonwealth University, P.O. Box 33 MCV Station, Richmond, VA 23298-0003. He is an Anglican priest, licensed in the Episcopal Diocese of Virginia.

[*Zygon*, vol. 26, no. 4 (December 1991).]

© 1991 by the Joint Publication Board of *Zygon*. ISSN 0591-2385

dialogue between science and theology spans almost his entire working life. Indeed, it is impossible for any serious student of the dialogue to reckon without his name and contribution. It is ironic because I still remember asking a question that, I am sure, did not have the same significance for him as it did for me, a young geneticist-would-be-priest. The question was something like this: "Dr. Peacocke, where in your treatment of genetics and evolution do you place the evolution of moral behavior?" His simple reply was: "We are more than cows in a field."

Twenty-five years later, as I reflect on his approach to the dialogue between science and theology, I am still haunted by that question. I believe it still symbolizes a difference between us. There is so much that is right and creative and helpful about Peacocke's work that even to voice discomfort makes me feel like an ungrateful upstart! We are both scientists. We both spent part of our careers at the same universities, Birmingham and Oxford. We are both Anglican priests. We both believe that scientific and theological propositions are attempts to characterize reality. We pray no more than local variants of the same liturgy. He founded a religious order (The Society of Ordained Scientists), and I was set to become a monk (before late-adolescent sexuality intervened).

Arthur Peacocke's contribution must be assessed along three dimensions: the epistemological foundations of science and theology, the doctrine of humanity, and the concept of God and the God-world relation. Inasmuch as this brief commentary cannot even hope to précis Peacocke's position, I will try to give a personal perspective on the question, Are his views of the relationship between science and theology, the nature of humanity, and the concept of God really adequate to my experience and productive for living on the frontier between science and theology? First, however, it may help to summarize my own view, then concisely expand each point.

Overall, I believe Peacocke's position demands less than it could of theologians and more than it should of scientists. Specifically, (1) his conception of the relationship between science and theology allows greater autonomy of the disciplines than I believe can ultimately be productive; (2) his doctrine of humanity lengthens the biological leash on culture to the point where possible biological insights about theological issues become virtually irrelevant; (3) his concept of God formulates the problem (i.e., "God's action in the world") in terms that leave little room for a more radical restatement of the concept of God. That is, by conceiving the task of theology in the way he does, he is able to rescue a fairly traditional theological anthropology and a fairly traditional concept of God. This position,

which is a matter of judgment and degree rather than kind, leaves unaddressed some truly painful questions that science continues to lay before theology and may not exploit some scientific insights that might inform theological discussion. In short, I believe his position has sometimes sacrificed adequacy for orthodoxy.

#### THE RELATIONSHIP BETWEEN SCIENCE AND THEOLOGY

Peacocke's starting point anticipates—indeed facilitates—his subsequent anthropology and theology. He makes it clear that “the scientific and theological enterprises [are] interacting and mutually illuminating approaches to reality” (1984, 54). He reminds us that both science and religion employ concepts, models, and metaphors in a critical dialogue with reality, and that religious concepts, models, and metaphors have a life of their own in communities within each culture. In emphasizing his approach of “critical realism,” he has striven, as have many theologians from Schleiermacher to Pannenberg and Tracy, to bring theology out of the castle of confession into the marketplace of public discourse. Further, he writes that “theology should neither be immune from the changing outlook of the sciences of man and nature nor should it be captive to them” (1984, 54). Thus he allows for some mutual interchange between theology and the sciences. He is opposed to naive reductionism and so recognizes a “hierarchy of the complexities that constitute reality.”

His sound common sense in detailing some of the epistemological connections between science and theology has been a great service to the interdisciplinary dialogue. Besides helping theologians ask themselves how they would ever know if they were wrong, he reminds scientists that “facts” are forever embedded in a matrix of theory and interpretation.

I am concerned about Peacocke's view that theology is concerned with the “highest level” in the hierarchy of disciplines—that is, the relation “nature-man-and-God”—for three reasons. First, it amounts to a “preemptive strike” in limiting the public who can be admitted to the discussion to those who have some concept of a God to which nature is related. Second, to make theology even a “constitutional” queen of the sciences leaves science and theology so much autonomy that creative abrasiveness, which is typical on the frontier between disciplines, may not occur. Third, even though it is true that theology is concerned with the integration of experience (hence with the “highest level” in the hierarchy), it is no less concerned to analyze

the ultimate in *every* experience. Thus, for example, there is an ultimate dimension to genetics that theology might articulate and genetics might help us understand. There are areas in which biology may actually illuminate and resolve crucial theological speculations by providing “model systems” of a relatively simple kind that focus and address theological issues. That is, an imaginative and self-critical “reductionism” may sometimes be theologically productive.

The view of theology as concerned with the “nature-man-and-God” relationship presupposes the shape of answers to much that is questionable and already enshrines a model of reality that is much harder to work with in the “DNA era.” A description of the task of theology in terms of the “God-world relation” is not clearly commensurable with a description of the other sciences. For example, genetics may be represented as the exploration of the “DNA-world relation.” In this description, however, *DNA* and *world* are characterized quite clearly, although the relationship between them is obscure. It is far from obvious that the same can be said of *God* in the God-world relationship. Peacocke does not consider the question of God in him/herself. Although it is clear that a good definition of theology may help clarify the meaning of the word *God*, the question of *God* is still antecedent to the question of the God-world relation.

*Biology and Human Nature.* Peacocke’s view of human nature, summarized in his essay “From DNA to DEAN,” was epitomized by a personal experience at a conference in Loccum, Germany, a few years ago. We were out walking with a number of others; he was a little ahead of me and responding to a question I had asked—I suspect about the theological implications of sociobiology. The company reached a point where it had to go up some narrow steps, and so we had to go one at a time. I still picture Arthur taking the lead up the steps and gesturing upward in response to my question: “But man has taken *off* like a *rocket!*” I know this is what social anthropologists and theologians often seem to believe, but I wonder if it is true. More than that, would even theologians think it true if they knew any genetics? To disconnect human life from its DNA, or rather to consign the place of DNA to a necessary substrate of culture (much as the launchpad is left below after lift-off) may be to miss the most important fact that is theologically illuminating about genetics. That is, DNA is not so much the launchpad as the rocket’s power source and guidance system.

Recognition of the biological ground of human behavior resolves the apparent absurdity implied in Clifford Geertz’s model (as summarized by Tracy 1988, 92) of religion as “a system of symbols which

acts to establish powerful, pervasive, and long lasting moods and motivations in men by formulating conceptions of a general order of existence, and *clothing these conceptions with such an aura of factuality that the moods and motivations seem uniquely realistic*" (my italics). An alternative view sees religion as providing a symbolic and metaphorical framework for speaking (inadequately) of an overwhelmingly powerful and mysterious prevenient biological reality whose origins are lost in the mists of evolution and hidden from language and logic in the genetic code.

Whitehead (1966, 137) wrote: "The final principle of religion is that there is a wisdom in the nature of things." Eaves and Gross (1990, 15 ff.) presented a preliminary enumeration of several issues in which an appreciation of evolutionary genetics imparts coherence to theological questions that otherwise are left ungrounded. A few of these issues may be stated to illustrate the closer interaction between biology and theology that might be envisioned.

First among these issues they cite the fact that the very processes of evolution and human development, grounded as they are in the genetic code and not in language, limit the capacity of language and logic to grasp all the reality in which humans find themselves. Humans bring to the few thousand years of culture several million years of evolution. Much information from this evolutionary past is encoded in the DNA. Because this information is encoded, it is only secondarily accessible to language and logic. That is, the experience of the "ineffable" begins in the structure of human reality itself, because language struggles to make conscious the coded imperatives of our evolutionary history. Thus when theologians inquire about the limits *to* and *of* experience (cf. Tracy 1988), they are responding, *inter alia*, to questions that have their origin in the power and obscurity of our biological history, unpacked during the ontogenesis of every individual.

Eaves and Gross (1990) also consider the fundamental mechanisms of inheritance: mutation, genetic recombination, interaction between novel combinations of genes—a structural basis for the theological realities of grace and evil. They also observe that the evolutionary history of the human species, occurring in an ecosystem quite unlike that into which we are projected by our global culture, and still imprinted upon our genetic code, may provide a basis for a concept of "original" sin. Other issues are cited by these authors, but these examples illustrate the possibility of a more intimate connection between scientific and theological discourse than is implied by the "hierarchical" model that Arthur Peacocke has proposed.

The claim that humans are "more than DNA" should probably be

replaced by a model that does not risk replacing a “body-soul” dualism with a “gene-culture” dualism. One model-metaphor is to regard humans as “*ecstatic DNA*.” This model is more unified than the “more-than-DNA” model because it emphasizes the unity of the *process* of reflection on self and nature with the *matter* that is engaged in reflection. It does not deny that humans are “DNA’s way of making more DNA.” To deny that is probably to deny some of the more illuminating possibilities to come from modern population biology. The “ecstasy of DNA” allows humans an occasional and tenuous glimmer of an alternative world, such as is seen in the great “incarnational” figures of religious history. It is this property of DNA that has the capacity, still awaiting its universal historical reality, to integrate humanity and the ecosystem into a single adaptive unity. At this point, however, this integration is only realized fragmentarily.

*The Concept of God.* Arthur Peacocke defines theology in terms of the relation “nature-man-God.” Spinoza presents a limiting case of that relation. A fully transcendent monotheism represents another. When the problem of the “God-world relation” takes the form of a discussion of “God’s action in the real world,” so much is already implied that it is hard for the honest biologist to know where to step into the dialogue. The picture of a God who “acts in the real world” forces us into a series of images that go beyond the data in directions that the data do not seem to suggest. If theology and science are to stand side by side in the academy as culture enters the third millennium C.E., they have to agree that their first task is adequately to characterize the reality in which humans are embedded, upon which they depend, and within which (at least locally) they are capable of wreaking great havoc.

Perhaps the apophatic tradition was less an attempt to defend the transcendence of God than a defense of divine immanence through recognition that integrity demands silence a whole lot sooner than many theologians would admit. This does not mean that our fundamental attitude toward reality should be anything other than humility and gratitude. Neither does it mean that the reality in which we are embedded is without its mystery. However, with its slow building up of models for reality from a central core of theory and experiment, and with its demand for simplicity and adequacy to experience, science is the inheritor of the apophatic tradition. There are times when science remains justifiably silent before reality because there is nothing that can be said. To speak of “God’s action in the world” may be to break silence prematurely. In the Darwinian era, it may be more appropriate to picture “the world’s action in

God” than “God’s action in the world,” but even this may be affirming too much. Julian of Norwich (1978, 264) may have come closer to a more tractable understanding when she reflected on her experience of suffering and her vision of the crucified Christ: “I saw very truly that all our endless friendship, our place, our life and our being are in God.”

Ralph Burhoe (1981, 21) formulated what sounds like a modern version of Spinoza’s identity by relating God to “selection” (“*Deus sive selectio?*”). If there was an error in his making too simple an equation between theological and biological models of reality, it was probably less serious than the error promulgated in preserving an “external” referent in both his biological and theological models. Even Darwin was compelled to compromise with “natural selection” as his metaphor for the mechanism of evolution. Thus he too combined elements of an immanent (hence “natural”) reality with a transcendent reality (the “hand” of “selection”). Just as we believe that there is no “selecting hand” acting on the real world, as the referent of “selection” in Darwinian theory, it no longer helps me to understand nature in its past, present, or future by referring to God as the agent of action in the real world. Reality shapes itself.

Certainly, many religious traditions distinguish “nature” from “nature’s God.” Ibn al-Arabi (1980), writing in the Sufi tradition of Islam, makes a distinction between “reality” (*al-Haqq*) and “God” (*Allah*). Why is such a distinction necessary? The glimmer of a biological answer to that question is that we cannot live simply in a world of “is.” The process of natural selection also produces an “ought” within nature, in the form of the DNA-coded history of many past experiments with nature. The capacity to “dream,” however fragmentary the dreams, and to conceive of an alternative world, may also be the DNA’s solution to potentially inhospitable environments. The “ought” and the “dream” are experienced as “nature’s God,” that is, as the existential pole of an evolutionarily adaptive “is” embedded in nature. The “ought” is embedded in nature and embodies some of nature’s history. Nature “dreams” by experimenting with the “ought,” just as nature experiments with every other part of herself. The process of revelation may be conceived as *nature experimenting with her “ought.”* Gerd Theissen (1984) uses “mutation” as a metaphor for the focal events of the Judeo-Christian tradition. Recognizing this fact in no way minimizes the power or the significance of the “ought.” It remains, in Burhoe’s words, “that to which we must bow our heads and adapt” (1981, 21). This reality *makes hopeful our inhabitation of nature.* It is, at least in part, the ground, origin, and referent of our talk about God.

However important it may be to talk intelligibly *about* God the ultimate puzzle has to be the coherence (or otherwise) of talking *to* God. Unless both theology and science address this step, they will not be dealing with the anthropological reality of religious practices that address themselves to a “thou” conjured by repetition of sacred stories and sacred drama. Clearly, the “thou” is metaphoric. But the puzzle for biology is accounting for the power of the “thou” compared with the “it.” That is, even if the “thou” is metaphoric, something is lost when we attempt to translate the religious reality to the language of “it,” much as the joy of sex is not always enhanced by understanding the neurobiology of orgasm.

Science and theology may have been overpersuaded by the “enlightened” view that anthropomorphism is “primitive.” Perhaps we should substitute the good evolutionary term *adaptive* and recognize that “primitive anthropomorphism” may be a primordial necessity. Under this model, talking “to” God could represent an *adaptive (in the evolutionary sense) personification of reality*. The use of personal language is forced on us by the character of the reality in which we are embedded and by the character of our engagement with that reality. The concept of God is significant for survival (i.e., *adaptation* in the biological sense), precisely because it is better able to characterize the way we live in reality. It makes possible the appropriation of history; it articulates our dependence on nature/history, the ambiguity of our experience of reality, and the connectedness between ourselves and nature that is indispensable for life in an unfinished universe. Reality as mere “it” may excite our fascination, but it is only when reality becomes “thou” to us—when we meet it as parent, judge, friend, lover, lord—that we become caring and respectful toward it. If this be true in its broad features, and we must recognize that all *is* speculation, there is no final antagonism between religious metaphor and biological reality, because the power of the one derives from the other.

#### REFERENCES

- Burhoe, Ralph Wendell. 1981. *Toward a Scientific Theology*. Belfast: Christian Journals.
- Eaves, Lindon J., and Lora M. Gross. 1990. “Theological Reflection on the Cultural Impact of Human Genetics.” *Insights: The Magazine of the Chicago Center for Religion and Science* 2:15-18.
- Ibn al-Arabi. 1980. *The Bezels of Wisdom*. Trans. R. W. J. Austin. New York: Paulist Press.
- Julian of Norwich. 1978. *Showings*. Trans. Edmund Colledge, O.S.A., and James Walsh, S.J. New York: Paulist Press.
- Peacocke, Arthur. 1984. *Intimations of Reality*. Notre Dame, Ind.: Univ. of Notre Dame Press.



- . 1991. "From DNA to DEAN." *Zygon: Journal of Religion and Science* 26 (December): 477-93.
- Theissen, Gerd. 1984. *Biblical Faith: An Evolutionary Perspective*. Philadelphia: Fortress Press.
- Tracy, David. 1988. *Blessed Rage for Order*. San Francisco: Harper and Row.
- Whitehead, Alfred North. 1966. *Religion in the Making*. New York: Meriden.