

Review

Biotheology: A New Synthesis of Science and Religion. By MICHAEL CAVANAUGH. Lanham, Md.: University Press of America, 1995. 361 pages. \$41.00 (paper).

In *Biotheology: A New Synthesis of Science and Religion*, Michael Cavanaugh constructs an apology for a biologically based theology, provides a broad conceptual foundation for it, and then explores its ethical and moral implications. *Biotheology* is an ambitious project, but it is a well-researched, well-organized, and well-written book, and, if it occasionally sacrifices depth for breadth, it still fulfills its author's announced intention "to make theology plausible again, by placing it on the strong foundation provided by modern biology" (p. 3).

Cavanaugh, an attorney, active member of the University Baptist Church of Baton Rouge, Louisiana, board member of IRAS, and frequent contributor to *Zygon*, seems to be addressing individual believers, lay and clergy, in *Biotheology*, and his concerns are largely practical. He wants to restore the credibility and relevance of theological explanation by replacing supernatural concepts with naturalistic ones and thereby reinvigorate life in both pulpit and pew. He nods toward the theological establishment in the preface, mainly to demonstrate its fragmentation (as evidence he cites the three theological typologies of John Macquarrie, Hans Frei, and Arthur Peacocke that, together, account for thirty-two categories of theological thought), but it is the lives of individual believers and the church that seem to be his principal concerns.

In chapters 1–4 Cavanaugh provides a brief synopsis of evolutionary theory, the origins of thought and language, the emergence of culture, and concept formation. This will be familiar terrain for many *Zygon* readers, but Cavanaugh effectively organizes and summarizes a sizable literature related to each of these areas.

For Cavanaugh the process of concept formation as introduced in chapter 4 turns out to be the principal bridge between biological substrate and theological formulation and between traditional theologies and biotheology. He traces the biogenetic roots of concepts from preconceptual thinking to language-embedded concepts to the synthesis of completely new concepts by the human imagination. He considers the theological imagination as merely one expression, perhaps a prototypical expression, given its roots in prehistory, of the human imagination. Thus, theology, at the level of human psychology, is the creation and synthesis of concepts for explaining "the mysteries around us" (p. 60). The tendency to construct such conceptual explanations is natural and universal. Their elaboration

into myths is also natural and universal. But what can be created can be modified, and this is the task of biotheology—to convert supernaturalistic theological formulation into naturalistic formulation through the mechanism of concept modification.

In chapter 6, entitled “Scripture and the Modification of Concepts,” Cavanaugh explains how this concept modification might be accomplished. He begins with the assertion that scripture can be divided into four natural categories. The first is “a) Innate behaviors codified by scripture into cultural universals, which arise out of our biological commonality” (p. 82). An example of such a biologically based cultural universal is the injunction in the Hebrew Scriptures (and other scriptures) “Thou shalt not kill.” Citing Lopreato’s *Human Nature and Biocultural Evolution* (1984), Cavanaugh notes “such universals evidence biologically based truth arising from out of ‘deep structures’ rather than just culturally relative truth sliding off our ‘surface structures’” (p. 82). The other categories are “b) Scriptural concepts that are biologically based but variable within the population, c) Culturally relative scripture, and d) Errors in scripture” (p. 82). Critical to concept modification, which is inherently resistant to change because of the persistence of the underlying neural substrates of propositions in all four categories, is the recognition of idolatry, or the confusion of symbol with underlying reality. Cavanaugh evokes this concept in a contemporary context to discriminate between beliefs that are maintained merely because they are contained in scripture and those that are maintained because they are contained in scripture *and* our biological nature. The former may need to be modified if idolatry is to be avoided, but the latter need to be protected because they correspond to our essential nature *and* have been codified in our sacred traditions.

Chapter 8 is a consideration of the concept of God, historically and across the spectrum of modern theologies. Cavanaugh opts for the concept of God as word, not in the sense of *logos*, but word as symbol and summary of certain experiences. *God* is a word that summarizes “our deep psychological experiences, including not only love and truth but also patience, joy, peace and justice” (p. 132).

In chapters 9–12 Cavanaugh begins to redefine in biotheological terms such traditional theological concepts as free will, sin, and salvation. On the issue of free will he preserves human judgment as an adaptive response to variations in human environments. Sin is construed as behavior chosen without regard “for the serious risks it holds or behavior which seeks self without due regard for our nature as a group species, or behavior which willfully disregards culture’s distilled wisdom” (p. 171). Salvation is construed as a sense of security and well-being based on realistic appraisals of the limits to this security and the inevitability of death.

The remainder of *Biotheology* is devoted to the ethical and moral implications of a biotheology for *group life*, a term Cavanaugh uses to describe all collectives from the planet’s earliest, smallest foraging groups to mass societies. Noting that individuals have evolved to attend first to their own self-interest and that of their kin, Cavanaugh nonetheless notes the long-term convergence of personal and group interests and the ways we may undermine this convergence with short-term decisions in which we consider only our own self-interest. As an example, he cites individual reproductive choices made without consideration for larger, population pressures. A theology and an ethic based on a clear understanding of

our biological nature would readily expose the relationship between individual and group interests and would naturally support an ethic of population management.

Throughout *Biotheology*, Cavanaugh insists on building on existing structures, not supplanting them, but I am less sanguine than he seems to be that supernaturalistic personal theologies can be modulated into naturalistic ones. The global rise of fundamentalisms, deeply embedded in supernaturalistic worldviews, seems to be evidence that such changes are problematic at both the individual and cultural levels. Alternatively, such thinkers as Pascal Boyer have affirmed the naturalness of supernatural ideas. It is clear that the demise of supernaturalism may have been greatly exaggerated because we have not yet fully understood it, presumptively passing it off as a phase in our cultural evolution.

Since *Biotheology's* publication in 1996, interest in the brain bases of religion has grown rapidly, finally surfacing in the popular media, but much of this interest has been relatively narrowly focused on subjective religious experience. Biotheology deals with a broader and more inclusive range of topics — theological concepts, individual religious experience, the moral and ethical dimensions of religious life, and the corporate dimension of religious life, to mention only a few. In its intended breadth *Biotheology* occasionally seems to skim the surface on some topics, given the prominent and complex roles they occupy in theological tradition. The topic of sin is an example. Confining sin to risky behavior, selfishness, or disregard for the distilled wisdom of the culture seems to beg the question of *why* one would act in these sinful ways in the first place. What could bioevolutionary concepts tell us about a human nature that makes the behavioral mistakes that Cavanaugh calls sin possible or even likely? What have traditional concepts of sin, including original sin, tried to tell us about human nature? What about the relationship between sin and salvation, however they are defined? It seems to me that the subject of sin invites more than a consideration of human error. It invites a consideration of human nature, and there is no better idiom for such a discussion than modern biology. Nonetheless, Cavanaugh skillfully leads us through a broad range of topics to show why a biotheology is necessary, what its broad outline would look like, and what its practical implications would be in a world desperately seeking a moral terra firma upon which to stand. For these reasons it remains a very valuable book.

REFERENCE

Lopreato, Joseph. 1984. *Human Nature and Biocultural Evolution*. Boston: Allen and Unwin.

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