GILLESPIE, NEAL. *Charles Darwin and the Problem of Creation*. Chicago: University of Chicago Press, 1979. 201 pp. $15.95 hard-bound. $6.50 paperback.

Reviewed by Richard Sherlock, assistant professor of human values and ethics, University of Tennessee, Center for the Health Sciences, Memphis.

Charles Darwin and the Problem of Creation is alternatively very good and very disappointing. As a historian, Neal Gillespie is at his best in a detailed and stimulating review of the fundamental problem for nineteenth-century biology, namely, to what extent are theological premises necessary or even desirable in a truly scientific biological science? Working with a theoretical structure amalgamated from Kuhn's notion of paradigm and Michel Foucault's somewhat similar construct "episteme," Gillespie argues that the nineteenth-century marked a great turning point from an older paradigm in biological science which found theological premises necessary for a naturalistic account of the world to a new paradigm which he calls "positivism." Advocates of this new outlook sought to banish theology from science both because they did not believe such premises were necessary and because they thought that any true science must be based on human knowledge, not on premises derived from revelation. To assert that something in the natural world cannot be explained by man and must therefore be accounted for by the hand of God was, the positivists asserted, a betrayal of the true scientific spirit. Physics and astronomy had long since given up the need for God as an explanation for observed phenomena; so why not biology, they claimed.

As a historian, Gillespie has done his homework. Anyone familiar with nineteenth-century biology will recognize the material he pulls together; moreover, Gillespie shapes and categorizes it well. He makes distinctions among various positions, distinctions that are very helpful in making sense of the whole story, such as his careful discussion of the different forms of belief in special creationism. For the general reader or student, the most helpful sections will be his clear demonstration of how pervasively theological premises were involved in biological work—even by scientists who were not in any sense committed to extreme biblical literalism such as espoused by Louis Agassiz.

Darwin himself stood at the great divide. Before him, naturalists and theologians could confidently point to the harmonious relation of structure and function in the natural world as a supreme evidence

of divinity. After Darwin, that confidence disappeared. If Darwin's theory of natural selection were true, it accounted for all of the facts brought forth by the natural theologians. From a scientific point of view, he further was able to account for much that was unaccounted for in the older religiously based paradigm.

The problem was that Darwin's theory did not require any theistic premises to make it work. It could get along very nicely without God. Certainly many of those who practiced this new science were themselves personally religious. The new biology did not require atheism. It simply required the setting aside of religious beliefs when one entered the laboratory. In taking this position, the positivist biology ran into strong criticism from other biologists who thought that one could not explain all phenomena on positivist principles and also from theologians who thought it was blasphemy to try to do so.

Gillespie concentrates his discussion on the struggle within the scientific community itself, a struggle ultimately won, many feel, by positivism. However, the fact that many revered scientific minds ultimately adopted positivist principles leads Gillespie astray, for he writes as though positivism is really a better science, his rhetoric being that of someone convinced that positivism is superior to its older alternatives. Nothing in the book, however, gives any justification for his making such a sweeping claim. If anything, his own attachment to the relativistic theory of paradigms advanced by Kuhn should have led him to a more cautious writing style. In both Kuhn and Foucault there is no basis for claiming that any given outlook or paradigm is any better than another. Nevertheless, Gillespie goes much further in his unfounded rhetoric which sometimes seems like that of a true believer rather than a dispassionate historian.

For religious communities, the story that Gillespie tells poses a great challenge. Even if his rhetoric gets in the way, he does point up the difficulty of engaging in truly scientific inquiry on the basis of nonscientific religious premises. He shows how true scientific advances offer naturalistic explanations of the world, not explanations of theological mysteries. In such a world one might still believe in God, but the evidence does not demand it. One can explain the world without Him. If Gillespie is right, then the very practice of science requires premises that remove God one step from the immediate control of nature. This, of course, is something that many religious believers have always been reluctant to accept, and they fought Darwin because of it.

Anyone seriously engaged in scientific work will see the truth of much of what Darwin and his followers asserted on this point. The

challenge therefore is twofold. First, one must think through again the very premises of scientific inquiry, both in general as well as in their specific relationships to biological inquiry. For example, if something like evolution has occurred, why is it nevertheless unscientific to believe that the course of evolution has been designed by a Providential hand? Gillespie writes as if such a view were demonstrably wrong, but nothing he says justifies such an assumption. More fundamentally, positivism itself is not all it was claimed to be and many philosophers have rejected it, a fact of which Gillespie seems unaware. Many philosophers, such as Stanley Jaki, have argued there may yet be a place for faith even in the most rigorous physical science. One needs to think through what such a place might be.

The second challenge is particularly appropriate for Mormons. As Mormons, we need to reexamine many of the naive ways in which we have presented our beliefs to others. Many of the so-called "scientific arguments" for religious belief simply will not stand up in the post-Darwinian world. Continuing to use them may please those who are already converted but will do little for those who are not. We might do better to learn from the example of certain scientists whom Gillespie unfortunately neglects—those who remained deeply religious even in the face of Darwin. Those scientists did not give up on science; many of them became devoted followers of Darwinian biology. However, they knew something that some of us might learn better—that true religious faith concentrates on man and his relationship to God, not on the facts of biology or geology. True religious faith is a matter of testimony, not lab work. People remain faithful because of the relationship they have established with God. A faith built on such a rock will not wash away. But, as Gillespie shows all too well, a faith built on the facts of geology and biology may be swept away with any latest discovery. Admittedly, true faith is harder to attain than belief in a bogus science passing itself off as faith. But it is that quest for true faith that is precisely the challenge for all of us.

KIMBALL, STANLEY B. *Heber C. Kimball: Mormon Patriarch and Pioneer*. Urbana: University of Illinois Press, 1981. 343 pp. $17.95.

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Writing a biography of President Heber C. Kimball, Brigham's First Counselor and pioneer Utah's number two man, requires a