

RELIGION AND SCIENCE IN AMERICA: STRUGGLING FOR COHERENCE

by James B. Miller

Abstract. James Gilbert has provided fascinating and valuable historical sketches of the interactions of science and religion in American culture in this century, especially those taking place between 1945 and 1962. Yet, taken together, it is unclear what conclusion is to be drawn from these interactions. Ambiguity about the variety of forms of the science-and-religion relationship and about the referent of the term *religion* make the task of apprehending a coherent pattern among these sketches very difficult.

Keywords: American Association for the Advancement of Science; American culture; American Scientific Affiliation; William Jennings Bryan; Ralph Wendell Burhoe; Institute on Religion in an Age of Science; military chaplaincy; Moody Institute of Science; science and religion; science fiction; Society for the Scientific Study of Religion; Velikovsky.

University of Maryland historian James Gilbert's discussion of interactions between science and religion from the end of World War II through the Seattle World's Fair of 1962 is at once a fascinating and frustrating account of American cultural history. The simile that best captures this tension to some degree, I think, is the following: Reading this book is like coming across a necklace of rare and diverse jewels strung together on a string of dubious quality. Each individual stone is remarkable; strung together, however, the effect is that the whole is less than the sum of its parts. I will try to explain this reaction, but first let me highlight each gem of a chapter.

Although the opening chapter seeks to set the context for the whole volume, I will deal with it last. The second chapter begins the story actually before World War II with an assessment of William Jennings Bryan's motivations for participation in the (in)famous Scopes trial of

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1925. Gilbert portrays Bryan as champion of a union between popular religion and commonsense science. Evolutionary theory was a challenge by an increasingly professionally defined science against a commonsense or amateur science that served as the partner of a popular natural theology. The most interesting revelation in the chapter is that in December of 1924 Bryan had become a member of the American Association for the Advancement of Science (AAAS). He designated the astronomy section as his area of specialty. Gilbert argues persuasively that this act was not in anticipation of Bryan's later engagement with the prosecution in the Scopes trial but was instead evidence of his populist or democratic understanding of science, a science open to all, not to just a narrow company of professionals. At stake for Bryan then in Dayton, Tennessee, was a cultural union in which science supported traditional religious convictions. Bryan's humiliation in the trial could be seen as a triumph of professional over amateur science, but it could also be seen as a wedge driven so as to break the popular natural theological union.

The next chapter moves quickly to the post-World War II period and considers the ambiguous and brief ascendancy of the atomic scientists in American culture. Gilbert points out that the discovery of atomic energy and concern about its control in the aftermath of Hiroshima and Nagasaki thrust scientists, especially nuclear physicists, into an unprecedented cultural status. They were the keepers of atomic mysteries not easily grasped by the general public. Already an international community, they possessed a sense that the scientific enterprise of dispassionate rational inquiry could be the model for the ordering of postwar society by transcending parochial interests, whether political or religious. But at the same time their very cognitive distance from ordinary people and their internationalism were sources of suspicion in the emerging Cold War social environment. Though the physicists were often allied with religious communities in efforts to control "the bomb," moral culpability for its existence was also laid at science's door by these same communities. Claims that science was an adequate guide to a good future were met by theological critiques from such opinion leaders as Reinhold Niebuhr.

The next gem on the string is a discussion of the development of the Conference on Science, Philosophy and Religion in Their Relation to the Democratic Way of Life, which began meeting annually in 1940 and continued for more than a decade. Founded largely by the efforts of Rabbi Louis Finkelstein, president of the Jewish Theological Seminary in New York City, this "Judeo-Christian" conference was formed initially to reject the scientific and secular pragmatism of John Dewey. Ironically, this effort turned out to be more difficult and contentious than expected as a result of the insistence of some participants (for example, Mortimer Adler and

Jacques Maritain) that science be subordinated to religion, whereas the moral value of scientific method was defended by others (including Sidney Hook and Philipp Frank). Unable to resolve deep divisions about the relationships between religion and science as societal foundations, the latter years of the conference were focused on more “practical problems of democracy such as race relations and the usefulness of the social sciences” (p. 91).

Chapters five and six are actually parts one and two of a single story, the first being the professionalization of the military chaplaincy. This development accompanied the creation of a program entitled Character Guidance as a part of recruit and ongoing military training. The second is the appropriation, especially in the Air Force, of the products of the Moody Institute of Science (MIS) as significant elements of this program. Gilbert provides significant detail on the development of the Character Guidance program in relation to the political activities related to the establishment of universal military training and on the particular Air Force Program in relation to the creation of the MIS as an extension of the Moody Bible Institute’s evangelistic outreach. This is a fascinating story of an intimate relationship between religion and the state, on the one hand, and the use of science as a means for the propagation or reinforcement of a popular form of natural theology on the other.

The formation of the American Scientific Affiliation (ASA) is the very interesting subject of the next chapter. Although ASA was established to be an open forum for discussion of contemporary science and evangelical Christianity, it is Gilbert’s judgment that the organization’s very openness combined with an accedence to scientific professionalism moved the organization toward mainstream scientific views. This, he concludes, marginalized it as a religious force in relation to science and compromised its ability to engender a Protestant convergence of science and theology.

The views of Immanuel Velikovsky concerning catastrophic interplanetary events within ancient historic time provide Gilbert the catalyst to contrast two views of science. These are embodied in the persons of philosopher Horace Kallen, of New York’s New School for Social Research, and Harvard astronomer Harlow Shapley. Shapley had been one of the founding participants in the Conference on Science, Philosophy and Religion, which began in reaction against the scientific pragmatism of John Dewey, and Kallen had been one of Dewey’s defenders. Here, however, Gilbert raises again the issue he introduced with his discussion of William Jennings Bryan: that of amateur versus professional science, of democratic versus hierarchical science, of eccentric versus orthodox science. Both Kallen and Shapley were religious, although not committed to organized religions. The conflict surrounding Velikovsky was particularly intense and led, according to Gilbert, to the firing of an editor at the

Macmillan publishing house and the director of New York's Hayden Planetarium. Yet in spite of the relationship of Velikovsky's interplanetary history to events recounted in the Hebrew scriptures, this appears to have been a controversy more over the nature of science than over the relationship between science and religion.

A chapter follows on a series of four films produced by Frank Capra for Bell Labs. What Gilbert effectively documents is the way that Capra's Roman Catholic sensibilities were engrafted into these ostensibly science films. He notes particularly the running tension between Capra and astronomer Donald Menzel, whose book about the sun was the basis for the first film. Gilbert sees Capra's work as a variation on the theme that had previously motivated the Moody Institute of Science films—namely, the use of science to reinforce a general natural theology.

Chapter 10 offers a curious combination of an analysis of the religious elements in the UFO craze of the 1950s, a discussion of Wernher von Braun's advocacy for manned space exploration, and religious elements in science fiction, especially in George Pal's classic film *The Conquest of Space*. Donald Menzel appears once more as a defender of science in relation to the claims of UFO enthusiasts. Many advocates of UFOs as extraterrestrial visitations expressed their convictions with both religious imagery and fervor. Opposition by Menzel gives the appearance of a conflict between science and religion. Gilbert points out that von Braun not only used popular culture (for example, Disney television films) as a tool for the advocacy of space travel but that he also invoked religious language to depict human entry into space as a divinely ordained destiny. The religious assessment of space travel is a central plot element in Pal's film. Both religious misgivings about space travel and the resolution of the crisis of the film on Christmas Eve exhibit for Gilbert a mixture of religion with space science. To close the chapter, he compares the reading from Genesis that accompanied the first circumnavigation of the moon and the words of Neil Armstrong as he set foot on the moon. He views these events as exhibiting a mixture of secular and religious sentiments characteristic of American scientific culture.

Comparing and contrasting the formation and functions of the Society for the Scientific Study of Religion (SSSR) and the Religious Research Association (RRA) are the focus of the next chapter. Gilbert views both of these as efforts to find an accommodation between religion and the social sciences (primarily sociology). The former has turned out to be a society of professional social scientists with religion as the object of their inquiry, while the latter is largely an association of religious professionals seeking to use the social sciences to advance religious interests. Once more the theme of professional versus amateur science is struck and, somewhat

ironically, Horace Kallen again appears, now as a major advocate of professional standards in the establishment of the SSSR.

Shapley puts in another appearance in the following chapter, which gives an account of the creation of the Institute on Religion in an Age of Science (IRAS). Of course, as readers of this journal are well aware, the guiding spirit for the formation of IRAS was the late Ralph Wendell Burhoe, and Gilbert documents Burhoe's religious odyssey (which led to the founding of the Institute and later to the publishing of *Zygon*). Gilbert views this movement as one that sought a reconciliation of science and religion or the creation of what he calls a "religion of science." Although he credits IRAS with a more steadfast commitment to such reconciliation than earlier initiatives, he suggests that the results have fallen short of that mark. I find it curious that Gilbert does not mention that IRAS was received as an affiliate of both the American Association for the Advancement of Science and the American Academy of Religion.

The last major chapter in the book offers a detailed account of the planning of Century 21—the 1962 Seattle World's Fair. Particular attention is given the development of the U.S. Science Pavilion and the Christian Witness Pavilion, which were located across from one another. The architecture of the former came to be known as "space Gothic." The architecture of the latter echoed the sweeping lines of the former but was topped by a cross. Gilbert calls attention to difficulties surrounding the use of film in both pavilions. For the science film the issues centered on the tensions between teaching science in a popularized form and providing a scientifically inspired entertainment. For the Christian Witness film the issue was one of religious impressionism versus more direct didactics. In contrast, the Moody Institute of Science also had a pavilion, in which it presented its Sermons from Science series and showed its films. The chapter ends by concluding what is perhaps the primary thesis that Gilbert has sought to establish throughout the book, namely, that in American culture there has been no satisfactory reconciliation between science and religion and that, perhaps, this is as it should be because a dialectic relationship between the two has been such a powerful influence in this culture.

A very brief concluding note on the equivocal meaning of the Apple Computer logo (the bitten apple) reinforces this conclusion. He writes:

In the end religion and science probably cannot be reconciled, if only because we do not really desire any such closure. Too much has been gained by maintaining their difference; too much would be lost in ending the struggle. I am persuaded that the constant interchange between these two supposed polarities constitutes a powerful element in mastering the challenges of cultural and social change. (p. 323)

Returning now to the simile with which I began this review, each of the chapters I have tried to summarize is a gem in itself. Yet their

relationship to one another is unclear. Some continuity between them is managed by the reappearance of particular individuals: Kallen, Shapley, Menzel. The themes of the professionalization of science and the counterintuitive character of much twentieth-century science also provide some slight continuity. And there is something of a chronological order to the chapters, although there is considerable temporal overlap between them. It is important to note that, in his introductory chapter, Gilbert offers his framework for the organization of the book, but this is more descriptive than explanatory of the order. In the end I find myself unsatisfied with the whole. There does not seem to be a conceptual "golden chain" to link the individual chapters firmly together. I can identify at least two reasons for this.

First, it is not clear how Gilbert actually understands the relationships between science and religion that he describes. Sometimes he uses the language of debate, sometimes of hostility, sometimes of separation, sometimes of reconciliation, and finally of dialectic. Granted that the various incidents he reports and the individuals he describes exhibit one or more of these characteristics, what seems to be missing is clarity about the nature of these relationships and how they are conceptually, or even historically, related to one another. For example, does "reconciliation" between science and religion mean integration or, in contrast, some form of interactive consonance? Is the opposition of science and religion a lived cultural mythology or a conceptual necessity? How is it that many scientists clearly sustain commitments to traditional religious communities? If he has a comprehensive view, Gilbert seems to hold that there is an inherent conflict or at least opposition between science and religion, but such a view is not at all self-evident either conceptually or historically in light of a critical review of the history of the relationship. (See, for example, *God and Nature: Historical Essays on the Encounter between Christianity and Science*, ed. David C. Lindberg and Ronald L. Numbers [Berkeley: Univ. of California Press, 1986].)

Second, the use of the term *religion* in the book is an ambiguous one. Most of the time it seems to refer to the religious orientation of individuals, although there are references to religious institutions and traditions. When Gilbert speaks of religion as a social entity, he tends to characterize the term with references to "evangelicals" or "fundamentalists." At certain times these seem to be used synonymously and at others "fundamentalist" seems to refer to all conservative Christian positions; so it is not clear to what particular set of religious communities or theological positions these terms refer. While persons who would claim these designations can be found in most "mainline" denominations as well as concentrated in particular denominations, the majority of the members of such churches would not identify themselves in those terms. In particular, there is only a

passing reference to neo-orthodoxy, which it could be argued was the defining theological position of the mainline churches during this period. Further, although the designations *evangelical* and *fundamentalist* are applicable among Protestant Christians, they are not helpfully used in Roman Catholic or Jewish contexts, and persons from Roman Catholic and Jewish religious heritages have been significant contributors to the American scientific enterprise.

There are a number of minor disconcerting elements in the book. Although extensively footnoted, many of the discursive elements in the footnotes seem *non sequitur* in their placement. In a number of instances, Gilbert's rhetoric is curious. Besides the ambiguous use of the expression "fundamentalist," he uses the modern term *Israeli* to refer to the ancient Hebrews.

It should not be concluded from this review that *Redeeming Culture* is not worthy of study or even purchase. I believe it is worthy of both. Its deficiencies as a whole are outweighed by the value of its anecdotal insights, gems of history, which need to be placed in any mosaic account of the relations of science and religion in American culture. I only wish that Gilbert had set them so as to form a whole picture at a conceptual distance.

REFERENCE

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