

IAN BARBOUR: THEOLOGIAN'S FRIEND, SCIENTIST'S INTERPRETER

by *Sallie McFague*

Abstract. Ian Barbour's work, especially *Religion in an Age of Science*, is a comprehensive, balanced, and theologian-friendly guide to relations between science and religion. As a physicist and a theologian, Barbour is one of a handful of people who know both areas in depth and hence provide a bridge for others who are not dually educated. This is a very substantial accomplishment. His own position, however, is presented tentatively and, in the opinion of this author, is less radical than that demanded by his overt commitments vis-à-vis the contemporary scientific worldview. At two points, especially, his position appears modernist when it should be postmodern, in light of his own stated theological and scientific convictions: (1) his critique of the feminist and two-thirds-world position on the social construction of science, (2) his preference for a unified worldview at the cost of slighting issues of diversity and particularity. Nonetheless, he has made an immense contribution by providing the best and deepest survey of the sciences of astronomy, physics, and biology and their implications for Christian theology; it makes him one of the premier thinkers in the twentieth-century discussions of science and religion.

Keywords: critical realism; critique of modernist paradigm; embodiment; feminist critiques of Western science; identity and difference; metaphors and models; theology of nature; unified worldview; wholeness versus diversity.

In a review of Ian Barbour's *Religion in an Age of Science* (1990) Owen Thomas wrote, "This is a remarkably comprehensive survey of the state of the sciences of physics, astronomy and biology, and of their implications for Christianity. . . . There is . . . little doubt that this will remain a standard reference volume in this important subject for years to come" (Thomas 1990, 308). Indeed. I agree completely; I

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consult it frequently, certain that on any topic in the sciences I will find a concise, balanced, clearly presented, and carefully argued discussion. The book is theologian-friendly, a valuable interpreter for those of us educated in the humanities and in need of dually educated bridge people, such as physicist-theologian Barbour. He is one of a mere handful of such folks, without whom the rest of us working in the area of theology and science could not function.

Let me speak personally for a minute. When my own work turned in this direction with my book *Metaphorical Theology* (1982), I sent a draft of a chapter on metaphors and models in science and theology to Ian Barbour—with, I might add, fear and trembling. When I received his reply that basically it was OK, that I had gotten the science material more or less right, I breathed a sigh of relief. I knew that if Ian said it was OK, then it was. This little anecdote points to several characteristics of Barbour's work that will be apparent to all who are familiar with it: his range and depth in contemporary science, his evenhanded, middle-of-the-road position on most issues, his tendency to lay out various options on a topic rather than push for his own, and his unfailing, nonadversarial support for the work of other people in the field. As a mentor and a guide to us humanities-educated theologians, Barbour can be trusted for solid interpretations of scientific material presented in a manner that helps facilitate our work. Many of us are profoundly in his debt—this is the first and the strongest word I want to say about Ian Barbour. He has made the work of many others possible.

I would like now to nuance this appreciative comment. Does it mean that he *only* makes others' work possible? What about his own position? Owen Thomas remarks in his review that Barbour's "own views emerge only occasionally and quite tentatively" (1990, 308). I would say both yes and no to this statement. It is true that part of Barbour's genius—and an aspect of his work that I am celebrating—is his careful, balanced, comprehensive description and analysis of various scientific positions, which assist theologians in making well-informed judgments. This characteristic is, for instance, clearly evident in the brilliant first chapter of *Religion in an Age of Science* (1990), where he gives a typology of ways science and religion might be related. In each case, Barbour both commends and criticizes the type, covering a vast amount of material as well as thorny methodological issues with economy and insight. It is a chapter that I refer to again and again and that my students find very helpful. But his own position surfaces as well, not only between the lines of his appreciative and cautionary comments on other positions, but also

in the final type, which he calls "Integration." He mentions that he is "in basic agreement with the 'Theology of Nature' position, coupled with a cautious use of process theology" (Barbour 1990, 30).

In fact, I want to suggest that Barbour's "credo," his own basic position on relating science and theology, is summed up in two key paragraphs from this section of the book:

A theology of nature does not start from science, as some versions of natural theology do. Instead, it starts from a religious tradition based on religious experience and historical revelation. But it holds that some traditional doctrines need to be reformulated in the light of current science. Here science and religion are considered to be relatively independent sources of ideas, but with some areas of overlap in their concerns. In particular, the doctrines of creation, providence, and human nature are affected by the findings of science. If religious beliefs are to be in harmony with scientific knowledge, some adjustments or modifications are called for. The theologian will want to draw mainly from broad features of science that are widely accepted, rather than risk adapting to limited or speculative theories that are more likely to be abandoned in the future.

Our understanding of the general characteristics of nature will affect our models of God's relation to nature. Nature is today understood to be a dynamic evolutionary process with a long history of emergent novelty, characterized throughout by chance and law. The natural order is ecological, interdependent, and multileveled. These characteristics will modify our representation of the relation of both God and humanity to nonhuman nature. This will, in turn, affect our attitudes toward nature and will have practical implications for environmental ethics. The problem of evil will also be viewed differently in an evolutionary rather than a static world. (Barbour 1990, 26-27)

In two brief paragraphs, we have received marching orders for a new theology and a new ethic. If this is indeed Barbour's credo, then its seemingly reasonable, eminently sane suggestions to theology mask a more radical agenda than he himself appears to follow. This is the focus of my second set of remarks: given Barbour's own position on the relation of theology and science, has he himself gone far enough?

What am I saying? Let us consider the quoted paragraphs. The tone is moderate and the suggestions, on their face, moderate as well. In the first paragraph Barbour recommends that science and theology remain "relatively independent" but observes that, since there is some degree of overlap, certain Christian doctrines—notably those of creation, providence, and human nature—will be affected by scientific findings. Hence, for a theology that wants to be in harmony with contemporary science, "some adjustments or modifications are called for." All that sounds relatively harmless. But Barbour then notes that in making such adjustments the theologian must use the "broad features of science," the picture of reality coming to us from the sciences—which he then describes as "dynamic" "evolutionary,"

“ecological,” “interdependent,” and characterized by novelty. In other words, it is a picture radically at odds with both medieval and Newtonian views of the world—the worldviews that inform the major Christian doctrines as well as basic conceptions of the God-world relationship. Barbour later summarizes medieval, Newtonian, and twentieth-century views in sharply contrasting terms: fixed order versus change as rearrangement versus evolution; teleology versus determinism versus law and chance; substantiveness versus atomism versus relationality and interdependence. In other words, if we take seriously Barbour’s recommendation regarding *what* needs to be revised in Christian theology—nothing less than “the doctrines of creation, providence, and human nature,” “our models of God’s relation to nature,” and “our attitudes toward nature”—we realize how serious his agenda is. If we further accept that these revisions should be made in the context of what he calls the twentieth-century view of reality, we see that he is calling us to some fairly serious reconstructive work. If we follow his advice, the changes will not be merely cosmetic; the God-world relationship and the doctrines that accompany it will have to change out of their medieval and Newtonian dress.

In fact, if one follows Barbour’s instructions (as I have modestly tried to do in some of my work), one can end up being called a heretic—which I hasten to add is not Barbour’s fault, but stems from one’s own efforts at reconstructing doctrines. Nonetheless, beware such innocent-sounding statements as “Our understanding of the general characteristics of nature will affect our models of God’s relation to nature” (Barbour 1990, 26). Indeed, it will! Seeing the “natural order [as] ecological, interdependent, and multileveled” prompted me, for instance, to float the model of the world as God’s body—not a model Barbour likes very much, although his views encourage such moves.

Barbour says that we must take the view of nature coming to us from cosmology and evolutionary biology with utmost seriousness. He does not, however, in my opinion, follow out the implications of this advice in his own work. His positions, as they emerge in *Religion in an Age of Science*, remain moderate and balanced, but also, and here is the important point, *within the modernist paradigm*. I believe he is saying that we should take the new view of reality seriously, but only within the limits of an epistemological paradigm that is being severely criticized from several quarters. Granted the difficulties of dealing with the chameleon terms *modern* and *postmodern*, and even more with the question of whether some aspects of modernity might be our salvation at a time when postmodernity can and does slip into dangerous negativity and divisiveness—nonetheless, Barbour’s

project needs to answer some questions being posed from outside the modernist paradigm.

I would like to look very briefly at two such questions. The first is his defense of objectivity in both science and theology, especially in conversation with feminist critiques of Western science. Barbour feels very uneasy with the “strong program” or the social construction of science. He appears to want, and to believe that we can have, a “gender-free science” in which neither male nor female biases predominate. While I would question whether anything, including science, can be gender-free, I agree with Barbour when he writes, “Absolutizing the feminine seems as dubious as absolutizing the masculine” (Barbour 1990, 81). But noting that the extreme is inadmissible is not sufficient. His discussion of feminist and two-thirds-world critiques of science lacks his usual appreciative, open manner. His attitude is one of protecting the modernist understanding of objectivity rather than asking what these voices from beyond the paradigm are *really* trying to say—and whether they have merit. Perhaps these critiques are simply nibbling at the margins, but what if they are suggesting a fundamentally different way both of perceiving the world and of being in it? What if this different way of perceiving and living in the world is part of the twentieth-century view of reality, which Barbour rightly insists we must inhabit theologically? What if one of its basic assumptions about what counts as true—for instance, a pragmatic criterion that what is good for the planet and its lifeforms should be accepted as “truth”—is as important as a critical realist view, if not *more* so? In one feminist discussion of objectivity, the suggestion is made that science will be “more objective” when scientists are drawn from a wider pool—in other words, that the necessarily biased views of *all* scientists can be balanced by the inclusion of many perspectives (such as those of women and two-thirds-world people). Likewise, the goals of science might change if those who do it change—from serving the industrial-military complex, for instance, to finding better ways to feed starving people, protect the environment, and equalize medical studies between women and men. The questions are *who* does science and *for* whose benefit? This feminist criticism accepts both the political and the empirical character of science; its criticism aims at a greater, not a lesser, objectivity for science by broadening the base of who participates in setting scientific agendas, so that science might be emancipatory, liberating, and beneficial for more people—and for the planet that supports us all (see Haraway 1988).

This sort of feminist criticism is, in my opinion, not only necessary to revealing the myopic and oppressive nature of contemporary

science (its pretensions to angelic knowledge, its refusal to acknowledge its concrete enculturation), but also helpful to a fuller appreciation of the very picture of reality Barbour calls us to pay attention to—a picture that reminds us of our embodiment, our mutual dependence, our shared destiny on planet Earth. Most basically, what I am asking Barbour is why he does not see the *value* of the feminist and two-thirds-world critiques, the ways in which the “strong program,” the realization of the ways in which we *do* construct reality, calls into question many of the present goals of contemporary science and suggests other projects that are healthier for our planet and its many different kinds of people and creatures?

My second observation comes from another criticism that postmodernity is making of modernity. It pertains to my work as well, for it has to do with any position that seeks a unified worldview. I would like to phrase this critique with the help of some terms from a recent essay in which Martin Marty (1994) suggests that the first half of the twentieth century was characterized by centripetal forces, the desire to unite. Marty quotes Lewis Mumford’s summation: “Civilization is the never-ending process of creating one world and one humanity” (Marty 1994, 7). We see this tendency in the United Nations, the World Council of Churches, totalitarian government, racial integration, ecumenism, and the phrase, popular in the 1950s, “the family of man.” It is what Barbour is pointing to when he writes, “If we seek a coherent interpretation of all experience, we cannot avoid the search for a unified world view” (Barbour 1990, 16). And it is what I am doing when I speak in my writing of a “common creation story.” In fact, all or most of us in the theology/science conversation are in some sense assuming that the scientific picture of the world is a coherent, universal one that has the potential to unify the world’s disparate people. It can help Christians overcome the schizophrenia inherent in having to believe in a three-story universe and a supernatural God in religious matters while living in an everyday world with very different assumptions. It can help all the world’s people realize that in spite of differences we are inextricably inter-related and interdependent and the fate of our earth is a common one.

But, claims Marty, the force driving the second half of our century is instead a centrifugal one. What we increasingly see on both the national and international scene is divergence, particularization, and diversity—identity politics, tribal and ethnic warfare, and multiculturalism of an exclusive sort. At the very time when we most need to accept the notion of the global village and spaceship earth, we are seeing it slip farther away. Yet there is no going back to the

earlier, modernist view of unity that rode roughshod over dissenting voices, that masked the one hegemonic voice (in this instance, the white, male, Euro-American one) as the universal position, that understood unity as homogeneity (as in the telling American phrase, “the melting pot”). Marty’s closing suggestion is a call to work *with and through* differences: “What theology for tomorrow calls forth is what I call variously a multiplex, multifocal, multivocal, and multimodal approach. Such an approach attempts to do justice at once to the particularities that do exist and the universals that both world survival, and in the present case, Christian belief demand” (Marty 1994, 15).

This work cannot, I believe, be undertaken within the modernist paradigm alone. It will demand not just “dealing with diversity” but immersion in it, a “standing down” of the privileged and hegemonic voices (including those of white, North American feminists). It will demand letting go of premature closure, of a desire to “know” some things with certainty, to find solutions at any cost, while at the same time refusing the excesses of postmodernism—its tendency to sink into aestheticism or nihilism. This critique of Barbour’s work—that in terms of the unity issue it tilts in the direction of privileging wholeness over diversity—is one that my graduate students, when reading both Barbour’s work and mine, make of both of us. While graduate students perhaps do not have the last word, they are often the canary in the mineshaft foretelling danger ahead. I believe this is one of the most serious issues facing theology and our culture: how to understand *real* (uncomfortable, deep, painful, “unmanageable”) differences in a way that will help our world—and our theologies as well—not only to survive but in some sense to prosper. I have no answers, but I have found two insights useful. First, ecological unity, which underscores the radical particularity of each and every species and individual while insisting at the same time on the interdependence of all life forms, is a very different kind of unity than meshing the many into the one. It is a mosaic, not a melting pot. Second, some feminist epistemologies that privilege the particular and the embodied, critiquing classical Western epistemology for its reliance on vision (seeing universals with “the eye of the mind” rather than concrete particulars with “the eye of the body”), may help us to pay attention to differences (see, for instance, Code 1991).

In closing, I would like to return to where I began—to an appreciation of Ian Barbour’s magnificent accomplishment. I firmly believe in the quilt metaphor for understanding theological contributions: each of us sews his or her piece and if it is a fine bit of material, well worked and serviceable, the rest of us should be grateful. I am much

less interested in noting what Barbour has not done than in celebrating what he has done. His piece of the quilt is large, elegant, and eminently serviceable. He is a theologian who understands collegiality in the deepest sense: he recognizes that the theological task is not accomplished by any one individual, but is a joint enterprise requiring many different contributions. His gifts to us are manifold and I salute him as teacher, brother, and fellow worker whom I have felt privileged to know personally and whose writings have helped to make my own possible.

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