

SHAPING THE FIELD OF THEOLOGY AND SCIENCE: A CRITIQUE OF NANCEY MURPHY

by Philip Clayton

Abstract. Nancey Murphy is a key second-generation figure in the field of religion and science. Through a variety of responsibilities, some of which are reviewed here, she has worked as a discipline builder over the last fifteen years. After trying to convey the general spirit of Murphy's work, the author focuses on five areas where readers might resist her conclusions, including her "postmodern" theory of scientific (and religious) knowledge and truth, her treatment of theology and science as "separate but equal," and her defense of physicalism.

Keywords: Ian Barbour; divine action; Alasdair MacIntyre; Nancey Murphy; philosophy of mind; physicalism; postmodernism; scientific method; theological method; theories of scientific rationality.

Consider the contrasts between Ian Barbour and Nancey Murphy. Barbour is often credited as the founder of the field of theology and science—the one who identified the key questions of this field and who convinced many scholars of the possibility of constructive debate at the boundaries of religion and science. If Barbour is a discipline founder, Murphy has functioned over the last decade and a half as discipline *builder*. What characterizes Murphy as a "second-generation" scholar in the field, in contrast to "first-generation" scholars such as Barbour, Ralph Burhoe, Philip Hefner, John Polkinghorne, and Arthur Peacocke?

- Murphy holds the Ph.D. in two disciplines, the philosophy of science and theology. Her academic persona thus represents a dialogue between the two fields; she is first a scholar in theology/science and then a specialist in the one or the other outside field.

Philip Clayton is Professor and Chair of Philosophy, California State University, Sonoma, Rohnert Park, CA 94928. His e-mail address is claytonp@sonoma.edu.

[*Zygon*, vol. 34, no. 4 (December 1999).]

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- Murphy published *Theology in the Age of Scientific Reasoning*, a major defense of a Lakatosian theory of scientific rationality, in 1990. People working in theology and science had been looking for a methodology and found it in Lakatos's notion of progressive and degenerating research programs. (I would like to think that *Explanation from Physics to Philosophy* [Clayton 1989], which also construed theological rationality in terms of Lakatos's research programs, also had some influence on the adoption of this approach in theology/science.) The Lakatos/Clayton/Murphy theory did not just work for theological rationality, however; many realized that specific theories for relating theology and the sciences could also be judged as research programs, for they too either help to explain results in theology and the sciences or fail to do so. Research-program thinking has played a major role over the last decade as theology/science has come of age as a discipline. If nothing else, it has helped to dispel the notion that "just anything goes" when theologians write about science, focusing scholars on the search for real progress and concrete results.
- In an early essay with James McClendon (1989), Murphy suggested that modernity was based on three fundamental assumptions or "Cartesian coordinates" and argued that the entire coordinate system was mistaken and should be replaced. This meant nothing less than leaving modernity behind and developing a "postmodern" approach to theology/science. As she had (and has) no sympathy for postmodernism with a French flavor, Murphy labeled her view "Anglo-American postmodernism" and began applying it to theological debates such as the opposition between liberalism and fundamentalism (1996; 1997a). Her strong stand against modernity has enmeshed her in the flurry of discussions surrounding postmodern approaches to theology, science, and biblical studies. Specifically, Murphy advocates an approach to theology/science that dispenses with questions of truth, realism, and (paradigm-transcendent) knowledge in favor of a tradition-centered theory of rationality (see her essay in Kirk and Vanhoozer 1999). It is too early to say what will be the full effects of this approach. Perhaps it has already influenced the theology and science group in the American Academy of Religion, which is currently stressing how science looks from the perspective of the various religious traditions of the world.
- Murphy has held leadership roles in virtually every area of theology/science. She has chaired the board of the Center for Theology and the Natural Sciences (CTNS) in Berkeley, has served on an advisory board to the Templeton Foundation, has worked with the Program on Dialogue between Science and Religion of the American Association for the Advancement of Science (AAAS), has helped to organize

the Vatican/CTNS project on divine action from the very first conference, has served as coeditor for three out of the four volumes that the project has produced, and serves as an advisor for the Templeton/CTNS program for initiating religion and science courses worldwide. She also has convened a conference on science and human nature and has edited its proceedings. There is unlikely to be a contemporary reader of this review who has not heard Murphy speak at his or her own university or seminary; she has logged more frequent-flyer miles on the lecture circuit in ten years than most academics log in a lifetime.

CHARACTERIZING THE SPIRIT OF THE AUTHOR

It is not usually easy to discern the basic character of a thinker's work—that basic orientation or set of concerns that motivates all that one writes. Still, some sense of the spirit of Murphy's contribution to the field of theology and science comes through in the two essays reprinted in this issue of *Zygon* (Murphy 1999a; 1999b). Let me try to "name the whirlwind."

Nancey Murphy is not a tortured theologian. She takes questions of theology and science very seriously, of course; but her writing does not ring with the "dark side" of modern theology. In her book *Reconciling Theology and Science* she writes, "The question whether the gospel is true does not much arise here. It seems so obviously true to me that the human race would be saved (from itself?) if we would just follow the teaching of Jesus that there does not seem to be much reason to doubt the rest of it" (1997b, 1). If you want to see how seriously she takes Nietzsche's challenge to theology, the death of God and the possible impossibility of belief, follow through the references to "Nothing" in the index to *Anglo-American Postmodernity* (1997a): all of the "references" are to blank pages!

Some theologians, and perhaps some scientists, will like this spunky confidence; they will complain that theologians spend altogether too much time moping about how implausible faith has become. Others will wonder whether it does full justice to the acute difficulties that theology faces today. Faith in the providential trinitarian God of the Christian tradition is not unproblematic in the age of science. Murphy's is a spirit more characteristic of the Society for Christian Philosophers than the American Academy of Religion, more at home in evangelical theology circles than in liberal theological circles. Murphy's *position* is carefully balanced between liberalism and fundamentalism, but the *mood* of her writing, the manner in which she presents theological topics, is thoroughly evangelical in spirit.

Interestingly, something of the same spirit characterizes her sorties across the borders between theology and the sciences. Revealing in this regard is the diagram that appears in *On the Moral Nature of the Universe* (Murphy and Ellis 1996, especially chap. 4) and is repeated with modifications in

various other publications (e.g., Murphy 1997b, 16f.). In this diagram, theology stands proudly atop a “hierarchy,” the pinnacle of an edifice of knowledge stretching from the physical sciences at the bottom, through the social sciences in one column and the broader natural sciences in another, to theology as the culminating science. It is true that Murphy can cite multiple authorities for this view, including the Oxford biochemist Arthur Peacocke—not to mention the great tradition of theology as the “queen of the sciences.” But there is also something distinctively unpost-modern about hierarchy drawing and about this hierarchy in particular. It will take a rather large dosage of metaphysics to make the hierarchy stick—but more on that in a moment.

LOOKING MORE CLOSELY

It will be clear from the foregoing that I am deeply sympathetic with the research-programs methodology that Nancey Murphy has championed. Her emphasis on epistemological issues also has helped to make the field of theology and science more rigorous. Still, pure panegyric makes for a boring profile. Let us consider five themes where some critical reservations are in order.

The Truth Question. The truth question you will have with you always (and the realism and reference questions as well). The tensions Murphy describes (1997a, 40) between atomism and idealism, skepticism and foundationalism, and representationalism and expressivism are not overcome by declaring them parts of a modern “coordinate system” that we now simply leave behind. Part of what it means to believe something is to believe that it is true—really true, not just “true in a language” or “for a speaker.” At their core, truth claims are claims about the world, that things are this way and not that. “But,” I can hear the critic complain, “how could you *know* which statements correspond to the way the world really is?” Indeed, demonstrating objectively that this or that particular sentence gets things right may exceed our capabilities. Yet this only shows that what the word *true* means is not identical to the evidence we currently have for thinking that this or that sentence is true. Truth and rationality are not isomorphic. Reasons to believe may always be limited and perspectival, but this fact doesn’t render otiose the claim that true language represents what is ultimately the case. To say otherwise runs even greater risks; as Sheffler notes, “the claim that we made the stars is false if anything is” (1980, 206).

Separate But Equal? In her second essay in this volume (1999a, pp. 573–600) Murphy stresses her emphasis on a “two-way interaction between theology and science.” She correctly sees that her notion of two-way interaction requires “that theology is epistemologically comparable to

science.” But comparisons come in many flavors. Sometimes when Murphy promotes the two-way interaction, as she does in the preceding essays, one has the impression that she means that science and theology are epistemologically identical, or at least that science has no leg up over theology when it comes to knowledge. This seems to be her position when she claims that “all intellectual work—even natural science—is done from a convictional location” (p. 575). Her appropriation of the work of Alasdair MacIntyre suggests a similar inference. MacIntyre is famous for his tradition-centered theory of knowledge, according to which standards for judging are internal to a particular tradition or set of practices. If one follows MacIntyre in denying any place for tradition-transcendent criteria, science *cannot* set the standards for other intellectual endeavors such as theology. With regard to criteria, then, theology and science for Murphy stand as separate but equal.

If I am right, Murphy’s position comes out surprisingly close to the famous defense of “theological science” by T. F. Torrance (1969). Torrance believed that no one can challenge religious beliefs for failing to live up to the standards of science as long as religious persons use the methods and criteria appropriate to their own particular object, for instance, the self-revealing God of the Christian tradition. Torrance admitted the closeness of his view to Karl Barth’s theology (would Murphy also?). Recall that the famous opening pages of Barth’s *Church Dogmatics* I/1 (Barth 1936–1975) refuse to subordinate theology to any standards other than its own. Both Torrance and Murphy draw parallels with science in order to reinstate theology to a place of intellectual prominence in a science-dominated world.

I do not agree that there is a full parity between theology and the natural sciences—even the sort of initial parity that would set in motion MacIntyre’s type of comparisons between traditions.¹ In particular, we should be careful to avoid responding to science with a gigantic *tu quoque* (“you also”), the argument that “we can’t be blamed for the arbitrariness of our assumptions because yours are just as arbitrary as ours.” Instead, I would like to call Professor Murphy back to the recognition in her *Theology in the Age of Scientific Reasoning* (1990) that scientific research programs sometimes evidence “empirical progress”: they make predictions or explain new sets of data in clear and verifiable ways. Isn’t this one reason why theology ought to listen to the natural sciences in the way that Murphy so often advocates: because they provide a model of rigorous (though not infallible) knowledge?

Apologetics and Postmodernism. One finds a strange combination of apologetics and boundary-drawing in Murphy’s work. We have just seen how she uses MacIntyre to distinguish the rationalities of science and theology, keeping them separate but equal. Theologians don’t need to worry about falsifications from science, since falsification can occur only in terms

of one's own internal standards. At the same time, much of Murphy's work certainly has an apologetic intent. Thus she writes that "the fine-tuning of the cosmos can add important evidence to some theories of ultimate reality" (Murphy and Ellis 1996, 63). Here the evidence apparently confirms personal theism in a paradigm-transcending manner: "The fact that none of the other hypotheses offered to account for the fine-tuning is part of an ongoing research program, with prior confirmation, means that none can be confirmed by the fine-tuning in this more dramatic way. That is, the fine-tuning cannot provide *independent* confirmation for those other theories" (p. 63; emphasis in original).

Now, I know that Murphy will argue that there is no inconsistency here, since MacIntyre (allegedly) allows one tradition to be confirmed by its own lights, in a way that other traditions can see and agree with, while others fail to produce equivalent confirmation by their own lights. But the tone of these passages is certainly closer to classical apologetics than to MacIntyre. I find myself less optimistic than Murphy's confident assertions; Buddhists, for example, offer sophisticated arguments that they claim provide good evidence for their position, and even the Christian arguments that Murphy raises are open to more serious reservations than she admits. And yet I am also more optimistic than her epistemology allows, since sometimes we really *can* make direct contact with those in other religious traditions, and many times we share common criteria for assessing explanatory success.² Isn't the net effect of Murphy's writings, including the two essays printed in this volume, to show that science and theology are *not* "separate but equal," but rather that the two intertwine and interconnect in so extensive and subtle a fashion that sharp lines simply cannot be drawn between them?

Physicalism and Theology. In recent years Murphy has invested more and more time in the neurosciences and the philosophy of mind. One of the biggest questions in this field, especially for theologians, is whether the human person can be understood in purely physical terms or whether one's ontology must include something more—for dualists, a soul; for emergentists, genuinely emergent properties. Murphy has become an outspoken spokesperson for the view that theologians should be physicalists. She is opposed to reductionism, though; she does not wish to reduce explanations of human persons to their genes but insists instead on (for example) the importance of social contexts. At the same time, she is not sympathetic to more metaphysical accounts of the human person or to speculations about the ontology of mental characteristics.³

As in our earlier advocacy of the research-program method, Professor Murphy and I have been paired recently by (independently) using supervenience to oppose reductionist theories of the person. While I usually emphasize the commonalities—and they are the more significant—it might

be wise in closing to formulate the crucial differences between her nonreductive physicalism and my emergentist monism.⁴ Murphy notes that her listeners are often surprised at her willingness to espouse physicalism. She responds that “Christians need [only?] two basic metaphysical categories: God and creation” (1999b, 570 n. 11). I actually think that Christians are heirs to a much richer metaphysics of God and world, which includes Platonic and Aristotelian, Neoplatonic and emanationist influences (Clayton in press). She then continues, “The claim that God’s creation is purely physical does not entail there being no (nonphysical) Creator” (p. 570 n. 11). I agree that there is no entailment relationship here. But one would expect that a world created by a being who is pure spirit would manifest some of the characteristics of spirit, hence that there would be metaphysical commonalities between God and God’s creation. Even Murphy’s two-category metaphysic has room for the image of God (*imago Dei*) in creation. Why would a theologian not wish to develop an understanding of human nature in which the *imago Dei* qualities were a real and actual (i.e., ontological) part of the human person? Traditionally, theologians have seen the human person as uniquely reflecting the nature of God. But surely such a theory of human nature breaks the bonds of physicalism!

I can imagine a reader responding to this account of our differences by saying, “But does it really matter? If both thinkers grant a hierarchy of complexity—if Clayton is willing to speak of ‘the single natural world’ underlying these layers and Murphy of the ‘emergence’ of higher levels out of the lower—then where’s the difference? Both are nonreductivists, and both accept a single order of created reality. Is this a merely verbal dispute over the term *physicalism*?” I think not. There is a genuine difference between viewing the finite order as the site of the emergence of Spirit, and thus as having genuinely spiritual properties, and viewing it as a fundamentally physical order. One ought to wonder, as our atheist discussion partners do, how a physical universe could possess genuinely spiritual properties. For would one not expect, if the universe is physical through and through, that these spiritual-seeming properties will eventually have an adequate physical explanation? By contrast, if the universe has genuinely mental or spiritual properties, then it is not a purely physical universe; the ontology of physicalism is inadequate to its nature.⁵ How otherwise could a purely physical being possess these sorts of properties and yet be described as ontologically physical—at least if the term *physical* is being used in anything like its traditional sense of “the sort of objects studied by the discipline of physics”?

Does Metaphysics Matter to Theology/Science? Murphy thinks it does. *On the Moral Nature of the Universe* (Murphy and Ellis 1996) is an extended essay in metaphysical cosmology; it consciously stretches the term *cosmology* well beyond the standard meaning of physical cosmology. In a

crucial passage Murphy and Ellis write: “Hence, we note the fundamental major metaphysical issues that purely scientific cosmology by itself cannot tackle—the problems of existence (what is the ultimate origin of physical reality?) and the origin and determination of the specific nature of physical laws—for these all lie outside the domain of scientific investigation” (1996, 61). The reason these are “outside” is that “the hierarchy of natural sciences is incomplete; it needs further layers for its completion, layers of a metaphysical nature.” They conclude that “any viewpoint that leaves out these aspects will, by that fact, doom itself to be narrow and insubstantial in the broader scheme of things (even if it attains a great deal of understanding in terms of purely scientific explanation)” (1996, 61).

One cannot have it both ways. Once one embarks on the metaphysical journey, one must develop a position that is rigorous and complete; spelling out the metaphysical components of one’s theory becomes unavoidable.⁶ In the physicalism debate, for example, there are several distinct positions: there may exist only a physical universe (in the standard sense of physicalism or naturalism); there may exist a created order filled both with physical objects and with souls (in the sense of classical dualism); or there may exist a single created order, which is more than physical, although not dualistic (emergentist monism). *Tertium non datur*—There is no third option. To espouse this last position is, I think, to find, or at least to seek, connections within the world for the affirmations one makes about God. Especially for those whose interests lie at the intersection of religion and science, it is crucial to look for the subtle signs of spirit. I fear that physicalism will hamper the search.

CONCLUSION

Nancey Murphy’s published work is extensive and impressive. It includes clearly formulated positions on epistemology, divine action, ethics and discernment, the balance between liberalism and fundamentalism, the theology of the radical reformation, and the philosophy of mind (to name a few). My criticisms should not obscure my respect for her work, appreciation of her influence on the discipline of theology and science, and agreement with her compelling focus on questions of knowledge, explanation, and rationality. We also are in debt to her emphasis on ethical concerns, which she draws from the tradition of the Radical Reformation and which has helped to keep the theology/science discussion from falling into unnecessary distractions and irrelevance, returning it again and again to a focus on Christian obedience and matters of right living. As Murphy beautifully puts it somewhere, Christianity is about “continuing the work of Jesus, peacefully, simply, together.”

I have sought to honor and applaud the work of an author who has brought the clear, sharp light of her analytic mind to bear on previously

murky issues. Of course, the advantage of a clear thinker is that she makes it possible for us to want more where previously we were satisfied; she allows us to see objects by bright daylight where before all was shrouded in the gloom of twilight. If the discussion in the field now wants more than postmodernism or physicalism can offer, we have Nancey Murphy herself to thank.

NOTES

1. For fuller details on this disagreement see the debate on theological method between Murphy, Nicholas Wolterstorff, and Knapp and Clayton in Richardson and Wildman (1996).
2. Murphy and Ellis (1996, 229) themselves grant that in their view “the connection from theology and ethics to cosmology and the other natural sciences is rather weak.” I also think that judgments of the “tightness” (or degree of coherence) between parts of a broader system are very difficult to assess, especially across traditions.
3. Interestingly, this reticence to doing metaphysics may be a “modern” phenomenon. “Modern” thinkers such as positivists try to avoid metaphysical reflection, which is seen as “foundationalist” because it allegedly functions as the foundation on which scientific knowledge must be built. But why not develop a *postfoundationalist*—and in this sense, at least, postmodern—metaphysics, which would eschew all foundationalist presumptions?
4. The two positions are described in separate chapters of Russell, Murphy, Arbib, and Meyer (1999).
5. Perhaps Murphy is using *physical* in a radically different way than standard usage. Indeed, one can see why it would seem attractive to appropriate from the theist’s harshest critics their central term, and then to turn it in such a manner that it becomes compatible with the view one holds, namely, that the finite universe is the creation of God and that it contains beings such as humans, who possess spiritual properties, who are destined for eternal life with God, and who are in their very nature in the image of God (see Clayton 1998a). Murphy attempts a similar move in another major portion of her work when she uses the term *postmodern* not to refer to the demise of all meta-narratives, as in the influential work of Lyotard (1984) or Derrida’s deconstruction, but rather as the label for an epistemology of research programs, traditions, webs, confirmation, and pragmatism.
6. For a sketch of the standards and the dangers of this type of reflection, see Clayton (1998b).
7. There are in turn several types of monism. Dual-aspect monism, for example, asserts that the one world can be viewed sometimes in terms of mental properties and sometimes in terms of physical properties but is in itself neither, whereas emergentist monism sees the one world as evidencing physical, biological, mental, and even spiritual properties and thus as having a nature that includes them all.

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