Response

RELATING SCIENCE AND THEOLOGY WITH COMPLEMENTARITY: A CAUTION

by Kevin J. Sharpe

Abstract. I examine Helmut Reich's recent (*Zygon,* December 1990) discussion of the complementarity model for relating science and theology and find it confusing. On the one hand, his complementarity purports to make science and theology relevant for each other. It even requires we solve their conflicts. On the other hand, it discourages the overlap of scientific and theological knowledge and thus the direct resolution of their conflicts.

Keywords: complementarity; Helmut Reich; theology and science.

For over half a century complementarity has been a way to relate science and theology; it is still popular.[1] The latest reflection on this use comes from Helmut Reich in the December 1990 issue of this journal. Yet there are persistent problems with complementarity right through to Reich.

Writers sometimes use complementarity carelessly. They seldom ask the question, Does this model for the relation of science and theology picture both as necessary *and also as relevant for each other?* Unfortunately, many such models ignore the latter half of the question; these models help theologians avoid the conflicts between theology and science. When this occurs, science continues its way without theology; theology too continues its way, only sometimes nodding to science. Fact and value move even farther apart. Since I have sought to justify this belief in detail in previous publications

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(Sharpe 1984; 1990), I will not reiterate my reasons here. Making science and theology relevant for each other is the touchstone for any proposed relation between them.[2]

Reich's Use of Complementarity

Reich wants to manage statements that appear contradictory, especially those involving religion. He favors a rational way of explaining why there really is no contradiction (In press, 1). Complementarity is such a rational approach. It is a form of thought, an epistemology, that tries to create a relation among several explanations of the same reference.

How does complementary thinking work? Reich says it makes sense of noncompatible theories by coordinating them (In press, 2). (He prefers to call apparent contradictions noncompatible. In this way he does not prejudge them to be compatible or incompatible.) Complementarity helps noncompatible theories illuminate and set limits on each other when they describe or explain the same reference. Thus, we think in a complementary way by

clarifying and defining, at least tentatively, the "functionally coherent unit" (i.e., the reference that is to be described or explained);

listing all descriptions, or explanations A, B, . . . , from differing categories, even if they are considered incompatible, incommensurable, etc., by the ambient culture, possibly adding new ones, and dealing with any conflicts arising;

establishing the circumstances under which A, B, . . . , describe or explain particular aspects of the reference, and, if a genuine understanding does not come forth, reconsidering A (B, . . .) as an approximation or only as an analogy;

discovering and describing any (even unexpected) links between the different descriptions or explanations, and disclosing (even unsuspected) common attributes and coinherences;

assessing the extent to which the relative (proportional) explanatory contribution of each mode depends on the current "strength" of the other mode(s)—as distinct from a contribution described by a fixed relationship;

developing a complete synopsis or theory that explains all features of the reference in different circumstances and situations;

explaining any shifts in the meaning of the concepts needed to explain the reference, its modes, and the new synopsis or theory (Reich 1990, 372-73).

There are for Reich two types of complementarity (Reich 1990, 381-84). The relation between science and theology is of what he calls the circular type.[3] It requires "a lengthy circular process of reflection: Why does one need this process? Why can one not understand each complementary aspect independently of the other(s)? Which corrections of the initial *a priori* presuppositions follow from

the insights gained in this circular process?" In circular complementarity, "the two explanations illuminate, rather than limit, each other" (Reich 1990, 383).

Reich's work goes even further. With Fritz Oser, he has developed and tested a developmental model for complementary thinking (e.g., Reich 1989; 1990, 374–81; in press). They chart maturational changes in responses to problems that may call for thinking in terms of complementarity. This way of thinking develops through stages and emerges fully fairly late in an individual's life, if at all (Reich, in press, 12–13). It is the highest level of reasoning. And it is necessary, Reich says, for reaching higher stages of religious development (Reich 1990, 375–78).

Problems with Reich's Complementarity

In Reich's scheme, are science and theology relevant for each other? Can they interact? Might they debate and resolve points of disagreement? If Reich's device is confusing on this score, it might be a flawed way for relating science and theology.

For simplicity's sake, I will say there are two phases in Reich's scheme where he addresses conflicts between science and theology. The first starts with the second stage of Reich's outline of what complementary thinking requires ("listing all descriptions . . . dealing with any conflicts") (Reich 1990, 373). It continues to the fourth stage, where he seeks links between the descriptions. The second phase is found in Reich's sixth stage, where he develops "a complete synopsis or theory that explains all features of the reference" (Reich 1990, 372–73). These two phases could lead to different ways for handling science-theology conflicts.

First, theology and science should settle their conflicts. Phase one of Reich's scheme is explicit about this. He even requires linking the various descriptions.

Second, one could take Reich's scheme to say science and theology need not interact.[4] Phase two of his scheme asks us to build a complete theory or synopsis. It is here I feel a danger of glossing over differences (which perhaps were overlooked or intentionally ignored earlier in the complementarity program). For instance, Reich asks: "Is it not easier to study these [noncompatible] features separately in differing circumstances?" (1990, 372). Studying each feature separately and then bringing all features together—perhaps to conflict—is one matter. Studying them separately and keeping them separate is another. Though Reich may not intend it, building a complete theory may permit the latter.

At least three aspects of Reich's presentation lead me to this suspicion:

1. The language Reich uses does not take full account of what might happen as one irons out the conflicts in phase one.

Consider, for instance, wrestling with the creation-evolution question. Working through Reich's complementarity program soon raises the conflict between Genesis creation and evolution. The program suggests solving this conflict. Usually one does so by saying religion is about meaning and science about fact. But this makes theology irrelevant to the scientific theory.[5] The alternative is to change the scientific or the religious account, or both, to make them consonant.

The latter type of change is major and Reich does not consider the weight of this possibility.

2. Quantum physics's theory of complementarity, closely related to Reich's, also says one can hide conflicts with complementarity. It holds disputants apart, practically isolating them. Physics's complementarity can be couched as an uncertainty relation: While a quantum-level particle may have two properties, such as position and momentum, we cannot know both with precision. In practice only one of the properties is there. If such reasoning were used in the science-theology dialogue, it would imply that using a scientific explanation for a situation virtually rules out a theological one. The same holds in reverse.

3. The third reason for my thinking one can interpret Reich as saying theology and science need not interact is more subtle.

Complementarity does not emphasize the need to relate science and theology directly, so that one affects the content of the other. Rather, their relation lies in their being part of a larger complementary scheme, where their respective theories may be in harmony. Like an overpass on a highway, complementarity may stop collisions by having the parties pass over and under each other. The danger is that they may thus remain separate, on different levels.

Thus Reich can write the following, trying to clarify the idea that science and theology might interact. "We need to distinguish between the idea that science and theology are not unrelated and (on the other hand) the idea that the nature of their inter-relation is causal" (Reich 1989, 67). He says his complementarity research suggests the former. On the other hand, the latter resembles relevance. Complementarity may therefore want science and theology to have little to do with each other.

The adolescents he has interviewed and found to have the highest level of development do link scientific and theological explanations.

They coordinate competing explanations. For each of them, however, the worlds of science and theology are separate (Reich 1990, 378–81). One adolescent, Reto, has them in different dimensions. Bernhard and Renate hold a deism where God acted at the beginning and things now evolve by themselves according to their natural laws. Science has to do with finding "one's way around this world" and religion with living "a truly human life." This is René's view. And Victor sees science and theology as different worldviews—they are different ways humans think, and they have different functions. All of these views suggest that science and theology can go their independent ways.

The avoidance also surfaces when Reich defines complementarity. He wants to use it to make sense of *apparent* contradictions. This suggests he has already judged the contradictions not to be real before he starts. *Apparent* means there is in truth *no* contradiction. He prefers to call such contradictory theories *noncompatible,* but this term is also misleading. Before Reich applies the complementarity principle, he knows there is a chance that the theories will contradict each other or be incompatible. That is why he applies it. Thus, he requires one to decide at the outset that the contradiction is unimportant or does not really exist.

To make his basic model suitable for the science-theology relation, Reich modifies it by postulating circular complementarity. This scheme resembles a spiral. Continually moving from science to theology and back again, it may never allow the two sides to relate directly. There is illumination, but neither side limits the other.

Thus, one can read Reich as thinking that science and theology are separate and should not interact. Yet he also says that the two should resolve their differences and link their explanations. Thus his model is confusing on this important matter.

The following points probe Reich's research into the development of complementary thinking in individuals. They continue the discussion of complementarity's confusion over relevancy.[6]

Some people do reach the level of complementary thinking. But this does not mean complementarity is better for approaching an apparent contradiction than is some other way. (What does better mean here anyway?) Similarly, while Reich lists conditions necessary for using complementarity, he should also provide criteria for when to adopt it. He has not discussed in detail why we should use complementarity to relate science and theology. Further, what are the criteria for not relating explanations in a complementary way although they satisfy Reich's requirements? We could use his scheme on all sorts of conflicting statements, perhaps inappropriately.

What is Reich's motivation for promoting complementarity? He appears to feel it represents the highest form of religious development because it unifies one's beliefs, metaphysical systems, and activities (Reich 1990, 375–78). This raises further issues:

1. Choosing one approach as the highest form of religious development is value-laden. Reich might discuss these values.
2. Why does Reich believe complementarity reaches the aim of unity better than other approaches?
3. Is adopting complementarity in fact an act of maturity? Or does it stem from the frustration of a person wanting unity yet facing contradictions? Perhaps a person who settles conflicts by splitting science from theology simply wants peace and quiet rather than threatening debate. Reich promotes complementarity "for resolving the many perceived contradictions and paradoxes that characterize religious life" (Reich, in press, 13).
4. People might also use complementarity to relate science and theology because it reflects what culture says is the relation between them. Thus there is a variety of historical and social reasons for using complementarity. The reason for using it may not be that it is the most mature.
5. The mark of mental maturity may not be using complementarity. Rather, it could be distinguishing between what should rightfully be a complementary relation and what should not.

I have raised several doubts about Reich's complementarity program, focusing especially on its confusion over relevance. Reich could remove these difficulties from his program. On the other hand, physics's use of complementarity has precedence and does avoid conflict and relevance. It may therefore be better to avoid the term when relating theology and science and not to build that dialogue around any model that is like physics's complementarity.

CONCLUSION

Judging by his papers, Reich's concern is with religious education and the religious beliefs of young people. He wants them to develop an intelligent approach to the conflicts between science and religion. Using complementarity they can, he believes, avoid contradictions and conflict. Then they may not fall to skepticism and reject religion out of hand (Reich, in press, 1; 1990, 375).

The problem with the use of complementarity, both as an insight borrowed from physics and as the program Reich outlines, is confusion over relevancy. At issue is whether complementarity provides an avenue for admitting the conflicts between science and religion and

building on their common features—in short, allowing them to be mutually relevant. Secular young people may not even consider religion, let alone become skeptical and reject it, unless they perceive religion and science to be mutually relevant, even with the conflict and contradictions thus entailed. Any model for the science-religion relation should show no confusion over this. It is better to drop complementarity and use a model in which the two disciplines not only illuminate but limit one another.[7]

NOTES

1. For example, Polkinghorne 1989, 71. Donald MacKay is the most well-known proponent of complementarity; see Sharpe, in press.
2. Austin (1976, 6-8) describes different types of relevance. I am using his direct and quasi-direct categories for relating science and theology to one another.
3. Reich (1990, 379) also feels there are difficulties in this.
4. I am talking, not only about specific instances relating a scientific and a theological statement, but also about the more general science-theology relation. Reich's model applies in a specific situation, weighing the explanatory worth of the statements about it. The overall science-theology relation is the aggregate of the relations for each situation. Complementarity is a general program that applies in each specific instance.
5. I amplify this point in Sharpe 1987.
6. Those competent to do so may criticize the developmental research of Oser and Reich. (For example, Are there an adequate number of subjects? Is there a bias in their selection?)
7. Sharpe 1984 introduces the ladder model to satisfy this requirement.

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