Zygon *and the Future of Religion-and-Science*

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DISCERNING THE VOICE OF *ZYGON*: IDENTITY AND ISSUES

by Philip Hefner

Abstract. The challenge to the journal *Zygon* as suggested here is to respond to three different reference groups: public intellectuals, academia, and religious communities. An extended discussion follows of what I term the situation of irony in which religion-and-science finds itself. I argue that this situation of irony actually constitutes the domain in which our greatest contributions can be offered.

Keywords: academic discipline; incommensurate; irony; Immanuel Kant; Solomon Katz; Gotthold Lessing; Karl Peters; public intellectual; religious community; yoking

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A funny thing happened on *Zygon*'s way from its origins in 1966 to the present day, forty-four years later. The funny thing is that what began as a slim fledgling journal embodying a vision for dealing with a perceived crisis of society has become a flagship journal of an academic discipline—with worldwide Internet availability through three thousand libraries. This unexpected transformation is my theme for reflecting on *Zygon's* future.

Philip Hefner is professor of systematic theology emeritus, Lutheran School of Theology at Chicago, 1100 E. 55th Street, Chicago, IL 60615; e-mail pnhefner@sbcglobal.net.

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In 1966, there was no religion-and-science field, no enterprise designated as "religion-and-science." There were a handful of leading thinkers, among them Ian Barbour and Ralph Wendell Burhoe, and a body of interested readers and listeners. The first issue of *Zygon* lists twenty-one distinguished scientists on the editorial advisory board; Barbour, a physicist trained under Enrico Fermi and teaching both physics and religion at Carleton College, is the only board member who was professionally involved in religious studies. The scientists included those who were involved in programs of the American Academy of Arts and Sciences that aimed to address the crisis of "morale and morals" that was apparent in a growing chasm between the traditions of knowledge, represented by the sciences, and those of values and meaning that are embodied in religion. These scientists took to a deeper level what C. P. Snow termed "the two cultures." Our first editorial, in March 1966, puts it clearly: "Religious beliefs governing our morale and morals in the West have not kept pace with the radical transformation of our world view and of our conditions of living. The beliefs currently propagated by the Judeo-Christian, as well as other religious traditions, remain largely those which fitted the world views and conditions of life of a prescientific culture."

This same editorial asks, "Why another journal?" There are social science journals that deal with religion and also those that focus on the history of science and religion. Add to these publications "devoted to showing why scientific advances have little relevance for religion and theology." "But we are committed to the task of *reformulating religion for an age of science*, not simply analyzing scientifically or historically what has gone on thus far . . . we represent a new field, or a novel approach to a former field" (emphasis added).

These scientists were galvanized by the urgency they perceived to resuscitate the lost unity between truth and goodness, expressed as the "yoking"—zygon—of science and religion.

Today, in contrast to 1966, there are hundreds, perhaps thousands, of academics who concern themselves with religion-and-science. This entails courses and syllabi to be designed as well as reappointment, promotion, and tenure to be achieved; there may indeed be a societal crisis, but the "publish or perish" rule exists in institutional contexts that are not galvanized by the same motivations as the initial group of scientists had who put their endorsements on each issue of *Zygon*. At the same time, *Zygon* is now embedded in a grand worldwide educational effort that has enriched thousands of minds—students, teachers, and researchers. It's a wonderful world in many respects, but it is lodged in an institutionalization of religion-and-science quite different from what the founders of our journal knew or intended.

I characterize these twists and turns as a movement between the roles of *public intellectual* and *journal of an academic discipline*. We are reminded

that *Zygon* is in movement; it is not a static thing. *Zygon* is on a journey, crossing terrain that includes these two roles and more besides. The journal is challenged either to choose between these roles or combine them all in a single trajectory.

Identity

Public Intellectual. Public intellectuals do not confine their thinking to an area of specialization; they rather bring knowledge and ideas to bear in the larger public sphere, frequently participating in public debates. Public intellectuals may speak about their specialized discipline, and they also may relate that discipline to the larger social, cultural, and political world, but their audience is the larger public square, not their peers in the specialized guild.

Although both science and religion are highly developed fields of study, requiring specialized knowledge, they are inherently public because they impinge intensely on the common life. Scientific knowledge makes a difference for how men and women in general understand themselves and the world they live in—this is a matter of worldview. Even more, when it functions in tandem with sophisticated technology, scientific knowledge shapes our bodies and the way we live. Nuclear physics, genetic medicine, and transplant surgery are examples of how intensely scientific knowledge intersects our lives and therefore becomes subject to equally intense public discussion and debate. Religion, likewise, concerns itself directly with both worldview and with the way individuals and groups conduct their lives.

When they occupy themselves with the conduct of life, both science and religion carry an "ought." In the public realm, because science inevitably becomes a means for the betterment of life and even for individual and social survival, it carries within itself an imperative. If stem-cell research can prevent disease and deformity, we argue that it ought to be supported. Likewise, if scientific knowledge can show how to reverse environmental deterioration, it ought to be applied in practice. For its part, religion brings "ought" and "ought not" even more forthrightly to bear, at points intersecting the imperatives of science, as in the issue of stem-cell research, and also in ways that have less to do with science, as in the issues of marriage and family, truth and goodness. Because both religion and science are regularly coopted for society's purposes, they become enmeshed in ambiguities and at times even serve such interests as economic profit, war, and racism. These issues of public concern elicit passionate debate and criticism.

The inherent contrast in the ways religion and science approach life in the world—quite apart from the substance of practical moral issues—is a matter of public significance. Are we, for example, to shape our policy and behavior on the basis of religious tradition and story or on reason and demonstration as practiced by science?

Academic Discipline. In its academic disciplinary life, religion-and-science presents quite a different face. As a specialized academic field, it must conform itself to curricular standards—courses, seminars, syllabi and bibliographies, and examinations—and to research standards—library acquisitions, scholarly papers, dissertations, and the criteria for academic prestige and advancement. As a discipline, religion-and-science constructs a canon of basic readings, a language or jargon for use in the peer group, a set of issues to be elucidated; the field also assumes its own history, which in turn requires interpretation.

The stuff of the specialized discipline may seem tedious and abstruse to the larger audience, whereas the burning issues of public concern may be distractions within the routines of academia. The public delights in lampooning the meticulous professor, just as academia is notorious for penalizing the public intellectual who has not won the stripes that are bestowed only on those who have jumped its approved hurdles.

The dissonance between public square and specialized academic discipline is serious and important. The public sphere requires clarity, simplicity, and relevance; policy and action are present immediacies; they cannot be delayed interminably until research projects are completed. On the other hand, the complexities of specialization and research make an irreplaceable contribution. Although the public may believe, for example, that religious thinkers across the board reject Charles Darwin, the historical fact documented in scholarly tomes that Darwin was from the beginning well received by many religionists needs to be recognized. A comparable point can be made about Galileo's relations with the church. To take another example, the cognitive sciences certainly defy easy popular explanation, but they are nevertheless enormously significant for understanding religion, mental health, and moral behavior. Such understanding is not nurtured by the demands of the public square; it is found in the ivory towers of academic specialization, where there are time and resources for research and reflection.

Religious Communities. There is a third audience to be considered in this connection: the religious communities. In that first editorial, *Zygon*'s founders underscored the journal's commitment "to the task of reformulating religion for an age of science." To be sure, the public square and the academic discipline also give attention to reformulated religion, but it is the life of religious communities that is most existentially affected by such reformulation. And these communities will insist on directing that reformulation. They may indeed reject out of hand any given innovation, just as in the public realm the revisionist history of how religion has related to Darwin or Galileo has been mostly ignored.

How is *Zygon* to conduct itself amid these worlds—public square, academic discipline, religious community? At no point in its forty-four years

has the journal wanted to ignore any of them. At the mundane level of editorial process, each of these worlds brings its own criteria of excellence and relevance. An article that satisfies the criteria of one of these worlds will not necessarily find favor in the other two. *Zygon* has had to be more even than interdisciplinary; it is multidisciplinary.

Issues

Finite Mind and the Situation of Irony. *Zygon* presents new and important research developments pertaining to religion-and-science—its *descriptive* function—and also reflects on developments in religion-and-science in broader perspective—its *normative* function. In this latter respect, the journal performs a "meta" function, so to speak: It engages in *thinking about thinking*—in this case thinking about religion-and-science thinking. I focus here on one issue that arises at the level of meta-thinking and that seems to me to be of particular importance: our finite ways of thinking and the situation of irony in which we find ourselves as a result.

I like the idea of irony, but the term does present difficulties, because it is used in a variety of ways. The point I want to make has been expressed in philosophical terms by numerous thinkers. Immanuel Kant writes in the opening passage of the Preface to the first edition (1781) of his *Critique of Pure Reason*: "Human reason has this peculiar fate that . . . it is burdened by questions which, as prescribed by the very nature of reason itself, it is not able to ignore, but which, as transcending all its powers, it is also not able to answer" (Kant [1781] 1958, 7).

Kant elaborated this insight in his three *Critiques* that probe the nature of reason, its possibilities and its limitations in providing both theoretical and practical knowledge. His conclusions affirmed the role of reason in its attempts to understand the world and our experience. At the same time he offered a classic analysis of reason's operations in those areas in which it faces its inability to answer the questions it raises. Religion-and-science is situated squarely in the terrain that Kant designates by this peculiar fate. George Steiner (2001, 103) offers his own version of Kant's insight, drawing upon a major strand of Western thinking since earliest times, when he argues that the meaning of the world is "non-computable to human reason, to its linguistic means, and scientific investigations." Gotthold Ephraim Lessing (1729–81) added another nuance to this same set of issues in his image of the "ugly ditch" that stands between contingent events of nature and history on the one hand and necessary or normative truths of reason on the other hand. He argued that there is no rational leap over this ditch; contingent events cannot become sufficient proofs of normative truths (Lessing [1777] 1957).

It is the very essence of religion to address the questions that defy resolution that Kant, Steiner, and Lessing speak of: the meaning and purpose

of the world, the normative meaning of historical and natural contingencies, and such necessary questions as "Why is there something rather than nothing?" "Why are we here?" "What is human life for?" Placement in this terrain governs the whole of our thinking and writing—and this is revealed nowhere more vividly than in the denial of that fate and the rebellion against it that permeate the corpus of literature in the religion-and-science field.

Irony comes into play precisely at this point where we are called upon to recognize the poignancy of our placement, where we are driven to raise the questions that our philosophical and scientific reason is unable to answer.

My use of the term *irony* is suggested by the literary scholar Harold Bloom. Irony defines the situation in which "altogether incommensurate realities juxtapose and clash." Bloom charts this irony in great literature, particularly in the Yahwist narrative contained in the Hebrew Scriptures and the Christian Old Testament (Rosenberg and Bloom 1990, 24). Yahweh's plan for Israel, for example, rests on ninety-year-old Sarah's becoming pregnant by a centenarian man, Abraham. Little wonder that the woman laughed at Yahweh's suggestion. Or, we read that Yahweh's plan hinges on Esau's trading his inheritance for a bowl of stew or on Isaac's inability to distinguish between one son's hairy arms and another's goatskin jacket sleeves.

The ironic juxtaposition of incommensurate realities is the stock in trade of creative work in religion-and-science, even when it is not acknowledged as such. In the light of some of the responses to my suggestions at the *Zygon* symposium in May 2009, clarification is needed to understand the term *incommensurate realities*. Science and religion are not, in principle, incommensurate (Peters 2010). Rather, the incommensurates are, following Lessing, contingent events of nature and history and necessary judgments of reason (including moral reasoning); or, following Kant, regulative ideas (also termed "synthetic"), such as God, freedom, and immorality, which transcend any particular instance of empirical cognition, and constitutive ideas (also termed "analytic"), which are formed exclusively from empirical cognition. The sciences employ both kinds of ideas. Reports that describe research are constituted from empirical knowledge, whereas the interpretation of those results and the formation of theories transcend any single research observation—a point that Karl Popper embodies in his theory of falsification: Regardless of how persuasive an interpretation may be, it is in principle always open to the possibility of falsification by future observations.

The academic study of religion attempts to follow the scientific model. Theology, however, along with metaphysics, spirituality, and the arts, is based on relatively less grounding in empirical cognition and gives more attention to normative judgments that transcend any particular cognition. The effort to relate religion and science may be construed as the attempt to

bring the empirical-descriptive ideas together with the interpretive-normative. Religion, metaphysics, spirituality, and the arts—these terms designate the domain in which we entertain that which cannot be computed by our reason or our science alone. This is not the domain of irrationality, but it is the place where we dare to go beyond our reason and our science and venture to live on the basis of *uncertain certainties* or what we might call *provisional absolutes*. We wager our lives on certainties about whose truth we must always remain uncertain. That is our peculiar fate.

Contrary to what some commentators suggest, the incommensurability of the contingent and necessary, the descriptive and the normative, is inherent in human thinking—it cannot be overcome. Neither can this incommensurability be avoided. Kant was correct when he referred to our "peculiar fate," in which we are not able to ignore the normative judgments that transcend the particularities of our experience even though we cannot fully ground them in empirical cognition. We are dealing not with a problem to be overcome but with a fate that we must continually confront and respond to. This is what makes our situation one of irony. Living with what I call uncertain certainties or provisional absolutes is not optional for us; it is the essence of what it means to be human.

This understanding of our situation as one of irony differs from the proposals of Solomon Katz and Karl Peters, who suggest that enlightenment and scientific advance can dispel the irony. Katz associates irony with gaps between science and religion that he correlates in turn with outmoded ideas of religion and science as nonintersecting parallel universes, invoking Stephen J. Gould's "non-overlapping magisteria," and calls for the activity of "yoking" to bridge the gaps between science and religion in our concern for ethics. He speaks of a "new empiricism" that will fill the gaps of irony with "knowledge that gives voice to both the lens of science and the wisdom of the religious communities" (Katz 2010, 441).

In my view, the incommensurables in question—empirical cognition and normative transcendent judgment—are far from being parallel universes or nonoverlapping magisteria. We are never free of our fate, the necessity to relate contingency and necessity, to compute the incomputable, to answer the unanswerable questions. Moral action, to which Katz and Peters rightly call our attention, is inherently a domain of provisional absolutes; we must act with certainty on the basis of judgments that always remain uncertain. We may not be in the situation of Sarah and Abraham, as cited by Bloom, in which we must relate the divine plan of history to the reproductive behavior of a single couple or to the interactions between two brothers, but we are continually speaking of what "ought" and "must" be done, of what is mandatory for our personal or communal integrity, on the basis of judgments that are always falsifiable. We are always in the position of associating necessary normative truths with contingent events of nature and history.

If there is a fault to be found in the thinking and behavior that I have suggested, it is not that we seek to relate incommensurables of empirical cognition and judgments that are religious, spiritual, metaphysical, or aesthetic. The fault occurs if we imagine that we have overcome the incommensurables that define our situation, if we tell ourselves that we have conquered our fate, if we engage in the deception that we have escaped irony.

The finest thinkers among us in the field of religion-and-science have made their mark precisely in their refusal to allow the irony of incommensurables to silence their voices, even though on occasion they, too, have tried to deny it. It is the achievement of these thinkers to have juxtaposed scientific descriptions of natural processes with the deepest realities, the same realities that are embodied in religious myth. I refer briefly to four such thinkers whose important contributions are well attested by the broad range of appreciation and critical discussion that their work has elicited. The brilliance of their proposals is matched by the obvious marks of irony that attend them.

1. Robert John Russell. In his work (2008, for example), the indeterminacy of quantum processes is juxtaposed to the action of God in the world, with the claim that the juxtaposition is perfectly natural and does not assert divine intervention.

2. Arthur Peacocke. The thermodynamics of nonlinear systems and the biochemical processes of emergence are juxtaposed to the incarnation of God in Jesus Christ, human spirituality, and the classic Christian liturgy, with the claim that this is fully naturalistic thinking, with no trace of the supernatural (Peacocke 2007).

3. John Polkinghorne. Our physical understanding of the cosmos, exemplified in chaos theory, as well as in theories of nonlinearity and complexity, is juxtaposed to a "looseness" or indefiniteness in reality itself that is an opening to God's action in miracles and resurrection, resulting in a richer, more adequate interpretation of nature (Polkinghorne 1998).

4. Ursula Goodenough. The processes of cell biology are juxtaposed to religious and moral depths, the "sacred depths of nature" (1998), under the rubric of emergence.

The audacity and the irony of these thinkers is clear from the outset when we consider what they are attempting. Russell, Peacocke, and Polkinghorne presuppose the classical Christian understanding of God who transcends time and space and yet is also confessed to be incarnate in the world through Jesus Christ and present in an ongoing manner through the divine spirit. This God is related to the most mundane contingent natural events—as described by physics and biochemistry. In principle, this is no different a juxtaposition than that undertaken by the Yahwist in the telling of the sexual encounter of Sarah and Abraham and of Jacob's hoodwinking his brother Esau. These thinkers all profess to escape the irony, however, in

their protests against interventionism (Russell) and supernaturalism (Peacocke) and in the insistence that the inclusion of God simply renders cosmology richer (Polkinghorne). Goodenough intentionally avoids bringing God into her discussion, but she nevertheless vividly reveals her attempt to leap over Lessing's ditch when she moves from the contingencies of cell biology to the necessary judgment that the whole of the natural world is rooted in sacredness and hence worthy of mindful regard. These thinkers and others like them are frequently subjected to criticism for their efforts to relate the incommensurables. They ought, rather, to be commended for their straightforward engagement with the peculiar fate that we all share.

Both Katz and Peters embrace *Zygon's* historic emphasis on yoking, harnessing religion and science. The situation of irony is embedded in the very word *zygon*, yoking. The assumption appears to be that if we are to live our lives adequately we must take the actual world into account, and the sciences offer the most reliable knowledge of the world. The initial editorial of 1966 follows from this assumption. The point is not that we lack scientific knowledge but that we lack the resources of morale and morals that religion historically provides. The crisis that called *Zygon* into existence is rooted in the "lack of fit" between religious "beliefs currently propagated by the Judeo-Christian, as well as other religious traditions" and the "world views and conditions of life" in a scientific culture. Irony finds a home exactly here, where there is talk of a "fit" between science and religion, in that such talk constitutes a programmatic call for juxtaposing "morale and morals" on the one hand with scientifically demonstrated knowledge on the other hand—precisely the incommensurables I have described. The actual contributions that Katz and Peters have made to our field clearly demonstrate this irony. Both have worked at length and persuasively in the area of spirituality, and in doing so they have in fact insisted that there is a dimension of spirituality and sacredness inherent in the contingent biocultural and neurobiological events on which they base their work.[1] Biological processes do not carry markers of spirituality and sacredness unless they are interpreted in certain ways, and there is a great deal in the biological record that resists such an interpretation. A clear juxtaposition of incommensurables is at work here, and both the brilliance and appeal of these interpretations is grounded in that juxtaposition.

In Conclusion

Of the issues I have discussed, irony is the most difficult to deal with. That is why I have given it the most attention. The public intellectual, the academic discipline, the religious community—these are well recognized and for the most part respected. Irony is less graspable, less subject to rational analysis, and more threatening. This is understandable when we consider just what is involved when we juxtapose incommensurate realities: We dare

to go beyond scientific knowledge and invest uncertain beliefs with existential certainty. Such a venture is threatening. It challenges our personal and cultural resources to the very limit. Indeed, Søren Kierkegaard likened our position to swimming in 80,000 fathoms of water. It is inevitable that those sectors of our society that tend to deny the irony of human thinking will find our work in this journal difficult—and this may include the sectors of science and academia that are so important to *Zygon*. The challenge is to face this issue squarely; if we try to deny the irony of our work, we will in the process relinquish what is most valuable about our enterprise.

When we confront the incomputability of scientific knowledge and the nature it portrays with our incessant demands for meaning, we have only two alternatives: to deny that there is meaning and insist that we really do not require meaning—a strategy that cannot stand up to the most minimal scrutiny—and to forcibly juxtapose incomputable meaning to our rational scientific knowledge, all the while well aware of the cognitive dissonance that will ensue. In short, irony is our only alternative. As I said earlier, this act of juxtaposing is fundamental to the human situation. Negotiating the incommensurables is what it means to be human.

In my view, religion-and-science is poised over something more significant and more urgent than 80,000 fathoms of water—and that something is described in the themes on which I have focused. It is a difficult position, to be sure, but the difficulties are more than outweighed by its promise. It is this very positioning that makes religion-and-science a venture to be treasured, a venture of enormous significance for public discourse, academic pursuit, religious life, and human life generally. If *Zygon* is to represent this venture, it will seek to encompass all these domains—and at the same time, it will want to attend to its ironic sense.

Notes

A version of this article was presented as the keynote address at the symposium "Where Are We Going? *Zygon* and the Future of Religion-and-Science," 8–9 May 2009, in Chicago.

1. Katz established the Metanexus Institute project "Science and Spiritual Transformation." This project resulted in extensive research by a team of scientists. See *http://www.spiritualtransformationresearch.org/index.html*. Peters has published several items in the area of spirituality (Peters 2002; 2008; 2010).

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