

Editorials

CULTURE IS WHERE IT HAPPENS

In the June 2005 issue of *Zygon*, several authors (William Schweiker, Barbara Strassberg, Lluís Oviedo, and Norbert Samuelson) reminded us that understanding culture is essential if we are to deal adequately with either religion or science or the relations between the two. This is in itself an insight that scientific knowledge imposes on us. Without going into the details, the relevant sciences demonstrate that nothing human takes place apart from culture. We are intrinsically cultural creatures in that our brains have made culture possible and our survival depends on it. The world around us was not created by culture, but all of our understandings and interactions with that world are mediated through our culture. Even though biological heredity plays a role in enabling culture, the specific character of culture as it appears in any individual or society is acquired by imitation, training, and learning in interaction with other human beings. Our biology bestows the capability for language, for example, but it is culture that determines which particular languages we speak.

In the modern era, we have often focused on culture as if the natural world were irrelevant, subsuming nature under culture and human history. Today this modernist rupture of nature and culture is recognized as untenable. For some time now, the challenge has been to understand on the contrary how culture is subsumed within nature and its evolution. Culture does not stand over against nature; it is a phenomenon within nature. We now have a far better sense of how evolution has made culture an intrinsic element of our humanness and continues to shape it. Over our forty years, *Zygon* authors have made this point many times and in different ways.

Religion, science, philosophy, and morality, to mention only a few relevant elements of life, all are cultural realities. They unfold as elements of culture and are inseparable from it. Consequently, it is an error of the first magnitude to reflect on any of these elements as if they could be abstracted from their culture. It is true that we must preserve the integrity of religion as well as of science; we cannot countenance a reductionism that interprets religion, science, and morality as nothing but pawns in the play of nature

and other forces, such as economics, politics, and ethnicity. On the other hand, we cannot extricate any single element from its embeddedness in nature and the rest of culture. Whatever meaning and significance religion, science, and morality have are embodied and conveyed as elements of culture. We can draw a number of important implications from this recognition of cultural entanglement.

First, the cultural matrix in which religion and science are embedded is a dynamic matrix. Religion and theology in particular are often discussed as if they were both monolithic and unchanging. As a result, judgments are made that simply do not take into account the dynamic at work in the last two centuries of religious development and conceptual thinking. Similarly, scientific views often are presented as if there were no diversity of perspective and emphasis among scientists.

Second, culture itself is constituted by a constellation of elements that continually evolve and impact each other. Barbara Strassberg has provided detailed elaboration of this concept of culture. She focuses on five constituent elements: magic, religion, science, technology, and ethics. The point is that while these elements assume different forms and positions relative to one another, none of them ever completely disappears, and they never cease to impact each other and the cultural matrix as a whole. The ideology of the nineteenth century, epitomized by Auguste Comte, is still prominent in much discussion. Comte predicted that scientific thinking would displace both magic and religion; his views surface in a widespread opinion that secularism will drive out magic and religion. Sometimes this position is labeled as *modernist* or as the *secularization hypothesis*. This ideology cannot deal with the present fact that science, magic, and religion are all flourishing in the twenty-first century. The ideology also flies in the face of much social scientific research. Each of these elements has repositioned itself, to be sure, within the cultural matrix, and their reciprocal impacts have taken different directions. Any view that was invested in an unchanging essential nature of religion, science, or magic—not to mention of ethics and technology—has proven itself to be inadequate and unhelpful.

Strassberg's proposal suggests a new model for relating science and religion. Nearly all of the prominent models presently propounded assume views of science and religion that are far too abstract, static, and unresponsive to the actual history of the relations between them. They also fail to take into account that religion and science never encounter each other in the abstract but rather in the context of the cultural and ethical challenges that face society at any given moment. Consider the discussion of conflict between religion and science. Conflict is real, to be sure, but it is the conflict between siblings who share both history and social location. Unless we take this cultural kinship into account, we cannot understand how, for example, fundamentalist societies (generally considered to be "enemies"

of science) encourage, support, and employ thousands of their citizens who choose vocations in science.

Science and religion both have had reason to distrust cultural studies. It has seemed, sometimes rightly so, that cultural studies aim only at “debunking.” At least since 1800, religion frequently has been debunked by cultural analyses. Ludwig Feuerbach, Karl Marx, and Sigmund Freud are among the great formative debunkers who dissolved religion into the soup of sociological, psychological, political, and economic processes. More recently, scientists have begun to feel the same kinds of debunking forces.

It is a grave error to reject the cultural studies because of these debunking possibilities, however. For one thing, the debunking is not all wrong. Both religion and science have on occasion become the pawns of society, sometimes with terrible consequences. More important, I would argue, the significance and meaning of religion and science are inseparable from their cultural embodiments. There is no abstract meaning of either science or religion apart from its concrete incarnated existence. The meaning of religion cannot be divorced from the actuality that it has on occasion sacralized certain social forms and intentions that resulted in racism or war. Equally, science has no meaning that can be sundered from the fact that it provides the knowledge of nature that society desires in order to accomplish its aims of the moment, even when those aims are degrading. There is more than this to both religion and science, but that “something more” cannot be elaborated in an abstract purity that denies the cultural embodiments that constitute them.

In another mode, those discussions that set science and religion opposite each other, as irreconcilable realities, fail to take account of the embodied reality that hundreds of thousands of scientists today are devout adherents of the world’s religions. Contrariwise, the argument that there is no *fundamental* incompatibility between religion and science comes up hard against the concrete reality that large numbers of our most brilliant scientists and other members of the intelligentsia take that incompatibility as a basic assumption.

The proposed model for relating religion and science (and other elements of culture) may be termed a *dynamic cultural interactionist model*. This model makes the dialogue between religion and science more complex and more ambiguous; it also requires that history and the social sciences be brought into the discussion in a prominent way. As a result, we may have to settle for fewer grand hypotheses about religion and science, and we will have to live with ambiguity. The payoff, however, is that we will have a truer picture of the interaction between what Alfred North Whitehead called the two most powerful forces of human history. This payoff should be enriching for both science and religion.

This journal will not endorse any particular model for understanding the yoking of religion and science, but its pages will present in the future

more of the culturally informed studies and interpretations of this terrain that *Zygon* has inhabited for forty years. Several of the articles in this issue express at least indirectly how cultural embeddedness shapes their discussions. In a guest editorial, Don Browning, who has recently assumed the co-chairmanship (with Solomon Katz) of the *Zygon* Joint Publication Board, states his own hopes for the journal as it assesses its goals in this anniversary year. In his summons that *Zygon* bring religious tradition and science to bear upon “the emerging worldwide challenges confronting societies on the boundary between biotechnology and tradition, modernity and contemporary expressions of religion,” he echoes this concern that our work be sensitive to the cultural context and accountable to it.

The Fortieth Anniversary Symposium continues. Ursula King (theology) calls for an approach to the religion-science dialogue that moves “away from an adversarial, exclusionary spirit to a more collaborative and communicative framework.” She suggests that we “build an altogether new Athens and Jerusalem.” A contextual approach is urged by Willem Drees (physics, theology) that acknowledges that “religion and science” takes on different meanings in different situations. Cognitive scientist E. Thomas Lawson demonstrates how deeply cognitive science can impact our perspectives on religion and science, particularly in the analysis of folk theory. Fatima Agha Al-Hayani (Islamic law and philosophy) provides a helpful interpretation of past history and future possibilities for the interaction of Islam with science. Alan Padgett (philosophy of religion) urges us to enlarge the religion-science dialogue with more attention to technology and ethics; his article shows why such an enlargement is necessary. Theologian Wolfhart Pannenberg offers a summary view of why he sees “no reason for assuming a fundamental conflict between science and religion.”

In the second section, on science and spirituality, religious studies scholars David Hay and Pawel Socha present their thesis that spirituality is a natural phenomenon, while Ellen Goldberg (comparative religion) analyzes in detail how cognitive science can carry on conversation with hathayoga. A symposium follows on Karl Peters’s book *Dancing with the Sacred*. In conversation with philosopher Charley Hardwick and religious studies scholars Ann Pederson and Gregory Peterson, Peters continues to follow what he calls a “narrative, confessional mode of writing.” This symposium demonstrates that such an approach provides rich resources for both practical and theoretical issues.

The work of Pierre Teilhard de Chardin, Paul Tillich, and John Haught takes center stage in the fourth section. Harold Morowitz (biophysics), James Salmon, S.J. (chemistry, theology), and Nicole Schmitz-Moormann (Teilhard studies) take up one of Teilhard’s most provocative and controversial ideas, “the two energies,” and explore its scientific and theological implications. Paul Carr (physics) sees a “theology for evolution” in the work of Haught, Tillich, and Teilhard; Michael DeLashmutt compares the

methods of Teilhard and Tillich; James Huchingson throws light on Tillich's and Teilhard's thinking about the distinction between organic and inorganic.

The issue closes with three articles. Matthew Orr (biology) picks up threads of a previous *Zygon* discussion of whether or not "nature is enough." He brings the poetry of Robert Frost to bear on that question and concludes that the answer "is in the eye of the beholder." Biologist Rudolf Brun deals in depth with E. O. Wilson's emphasis on the conflict between transcendentalism and empiricism; Brun argues that the two are not mutually exclusive. Edgar Towne (theology) proves himself a helpful guide through the terrain of pantheism, particularly as that concept is discussed in a recent book of essays on the subject.

I invite the reader not only to delve deeply into the fare presented here but also to write a commentary on the views presented in this editorial—such are always welcome!

—Philip Hefner

ZYGNON AT 40: ITS PAST AND POSSIBLE FUTURE

Journals are like humans. If they reach the age of 40, their chances for a long life are excellent. I predict that this will be the case with the journal *Zygon*. Predictions for longevity at 40 are favorable partly because anyone who has made it that far has learned much about the dos and don'ts of life and how to handle them. This also is true of journals, or at least of their editors and sponsors. In addition to the congratulations and praise that *Zygon* at this time rightly deserves, it is an occasion for assessing the past and envisioning the future. Allow me, along with others, to try my hand at these two tasks.

By way of homework to prepare for writing this editorial, I gave myself the job of examining the annual indexes for the years 1966 (the first year of publication), 1976, 1986, 1996, and 2004, the last year for a full index. What was I looking for? I simply tabulated very loosely the number of articles on various topics in the field of science and religion. Here is what I found. In addition to an even sprinkling of investigations into the philosophy of science, the philosophy of religion, and theological method, there were some interesting shifts in other subjects. A dialogue with physics and its implications for cosmology was quite visible in the beginning but gradually faded in prominence. Biology, sociobiology, and evolutionary psychology became dominant concerns in the 1970s and 1980s. The relevance of these areas of science to philosophical and theological ethics were central interests of *Zygon* during this period.

This continued in the 1990s but was supplemented by new fascinations with the brain and the emerging discipline of cognitive neuroscience. Even here, I believe, issues pertaining to ethics, in contrast to cosmology and metaphysics, characterized most of the articles during that decade and into the twenty-first century. In addition, as Ian Barbour pointed out in his 2003 essay "Future Directions for the Zygon Center," *Zygon* paid attention to both Christianity and other religions. Representations of Christian theology often took the form of Christian philosophy, if not some broad form of philosophy of religion. Such articles provided a larger framework in which theologians, ethicists, philosophers, and scientists could feel comfortable and engage in fruitful exchanges.

The editorial direction of *Zygon* during these years was sound. Ralph Burhoe, Karl Peters, and Philip Hefner provided firm yet inclusive leader-

ship and made *Zygon* the preeminent journal relating science and religion in the United States and possibly the leading journal in the entire world.

Thoughts on the Future. We have much to be proud of and much to celebrate. But now we confront new challenges and decisions. The religions of the world are in many ways in crisis. Both Protestantism and Catholicism are in free fall in Western Europe. Mainline, or oldline, expressions of Protestantism are declining and polarized in the United States. Evangelicals, Pentecostals, and Latter-Day Saints—groups thought to pay little scholarly attention to the conversation between science and religion—are growing and exercising increasing cultural and political influence. The technical applications of science are introducing increasingly complex problems in the areas of economic justice, the dislocations of globalization, and the staggering ambiguities of the fields of biotechnology and assisted reproductive technology. The possibilities of nuclear and biological terrorism loom on the horizon, fueled by religious animosity and ignorance. As fanaticism grows and mainline denominations become less powerful, religion more and more appears irrational and discredited to powerful educated and scientific elites.

In light of this emerging world situation, we must ask ourselves which of *Zygon's* past emphases it should retain, which it should expand, and what new emphases it should give fresh and focused attention.

I think *Zygon* should go in two directions at once. First, it should continue to pursue fundamental theoretical issues on the relation of science and religion—that is, investigations in the philosophy of science, the philosophy of religious tradition, and the role of science in theological and ethical methodology. Second, it should apply the fruits of these inquiries to the emerging worldwide challenges confronting societies on the boundary between biotechnology and tradition, modernity and contemporary expressions of religion. Customary *Zygon* themes should be visible in both of these directions, but they should take fresh forms, and, indeed, new issues will emerge.

Being a practical theologian, I recommend gaining focus on theoretical issues by searching for the sharpest way to define the great plethora of disturbing new practical issues facing society. I would not want *Zygon* to go so far as to become a journal in applied religious ethics that solely specializes in combining religious traditions and modern science to address contemporary moral problems. But *Zygon* has taken some appropriate steps in the direction of the practical. An example of this can be found in the important work on AIDS/HIV stimulated by James Moore. If such practical work also attends to basic issues in science, philosophy, ethics, and the critical hermeneutics of religious traditions, it can help put fundamental theoretical discussions into a fruitful frame of reference. The dialectic between practice and theory can be useful, I contend, even in the dialogue between science and religion.

Critical Hermeneutics in Science and Religion. To pursue both theoretical and practical issues simultaneously requires a quest for an adequate philosophy of both science and religion. We need an understanding of human action that helps us understand it in both its scientific and practical manifestations—in work of theory (*theoria*) and practical wisdom (*phronesis*). We also need models of action that help us understand the relation between theory and practice.

I recommend the resources of critical hermeneutics, sometimes called hermeneutic realism—best expressed, I think, in the work of the French philosopher Paul Ricoeur. Ricoeur follows the work of Heidegger and Gadamer in seeing human action as first of all a matter of practical interpretation. We are finite and reflective creatures who, in an effort to address the emerging future, must also interpret how the past impinges on our experience of the present. Human beings are practical interpreters, struggling to understand (*verstehen*) the past and present in an effort to deal with the natural and moral challenges of the future.

According to Ricoeur, in order to interpret experience, humans must both participate in experience yet simultaneously gain various kinds and degrees of “distance” from it. Even to begin to consciously interpret our experience requires gaining some degree of distance from the great fund of inherited symbolic frameworks that we more or less habitually bring to our present experience. Simple thoughtfulness—simple intentional reflectiveness—is a form of “distanciation,” to use a favorite word of Ricoeur (1981, 91–92). Ricoeur uses the idea of distance in place of the concept of objectivity. Sciences never achieve pure objectivity. Furthermore, the cognitive distance of a scientist is only meaningful if it functions in tension with the tradition that shaped him or her.

There are various kinds and degrees of distanciation. Science is one of the most radical forms of distancing. In science, the scientist tries to loosen habitual interpretive assumptions shaped by the past, turns them into hypotheses, and attempts to test them through controlled experiments, correlations, and statistical probabilities. But because human beings are historical creatures who are embedded in nature but never completely determined by it, scientific distanciation never gives humans all they need to know to satisfy the demands of practical interpretation, understanding, and action.

For my money, Ricoeur’s view of hermeneutics is more satisfying than either Heidegger’s or Gadamer’s simply because he built into it a place for the distanciating submoment of science. To interpret experience first requires interpreting our massive historical, symbolic, and narrative inheritance due to the huge impingement of the past on the present. Here Ricoeur agrees with his mentors Heidegger and Gadamer. But to interpret the present, one must also gain varying degrees of distance from the past to examine present social, psychological, biological, and physical impacts as

well. Practical interpretation, according to Ricoeur, is a matter of understanding-explanation-understanding. This requires, among other forms of distanciation, the distancing procedures of science. Here Ricoeur goes beyond Heidegger and Gadamer.

If we take Ricoeur seriously, science is, and can only be, a subordinate moment in the wider and larger practical interpretative process. Furthermore, according to this view, science, no matter how much distance it achieves, will in fact lose its bearings—lose its orientation to experience—if it attempts to completely divorce itself from interpreting the historical past. More deeply, science needs to remember and itself be informed by the religiocultural classics of the past—the classics that have fed, informed, and given orientation to the civilizations that have in fact made science possible. These classics have not only carried the moral framework of our civilizations, they have carried the categories and interpretations of nature, time, space, and causality that science depends on, no matter how much it refines them.

Science gains continuous and necessary moral and cognitive orientation from tradition. At the same time, tradition and its religiocultural core need the constant refinements of science. My work over the last decade on the topics of family, children, marriage, and sexuality in the Religion, Culture, and Family Project has taught me that religious traditions are riddled with judgments about the rhythms of nature. Folk science, folk medicine, agricultural observations, observations about the sexual, mating, and birth habits of other species, various forms of comparative biology, and some premodern forms of science run throughout the texts of Christianity, Judaism, Islam, and all the other literate axial religions.

Part of the task of *Zygon*—a very large proportion of it—should be expending more effort to uncover the naturalistic and protoscientific judgments implicit in the great religious traditions of the past. Because of its massive impact in almost every part of the world—the United States, Western Europe, Africa, and South America—special attention to Christianity is entirely justifiable. But attention to other religions is also mandatory. What can the religion-science conversation do for the religions? It can refine them, especially at that point where their assumptions about nature inform their moral and religious judgments. Notice that I used the word *refine*. Science will never be able to replace or even radically alter the massive complexity of these religions. But science can help bring about significant adjustments to their moral and cultural practices. In order to pursue this goal, *Zygon* must do more to research, critically interpret, and retrieve the uses of naturalistic observations in the great world religions and bring these ancient observations into conversation with the insights of modern science.

At the same time, more attention to the hermeneutic task of retrieval could have great benefit for modern science. It would help overcome temp-

tations toward amnesia that afflict the philosophical-foundationalist assumptions of so many of the sciences. This is the idea that science, by forgetting and repudiating the religiocultural classics of the past, can sooner or later give rise to some new and better world vision and ethic. These foundationalist assumptions, as the work of Richard Bernstein and others has so convincingly argued, lead most assuredly to a dead end (Bernstein 1983, 2, 8, 9, 22–23). Science will serve us best if it understands itself as refining certain judgments of the past rather than repudiating them wholesale and creating a new world from scratch. These are some of the possibilities, sensibilities, and appetites that critical hermeneutics might bring to the *Zygon* table. Science, yes, but not science alone. The religious traditions, yes. But not these traditions without the refinements of contemporary science.

—Don Browning
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- Ricoeur, Paul. 1981. *Hermeneutics and the Human Sciences*. Cambridge: Cambridge Univ. Press.
- Bernstein, Richard. 1983. *Beyond Objectivism and Relativism: Science, Hermeneutics, and Praxis*. Philadelphia: Univ. of Pennsylvania Press.

Coming in December

The fourth and final round of the Fortieth Anniversary Symposium, “Science, Religion, and Secularity in a Technological Society,” appears in our next issue. Contributors are Bronislaw Szerszynski (environment and culture), Rustum Roy (materials science), Antje Jackelén (theology), V. V. Raman (physics), and Ted Peters (theology). Gregory Peterson (philosophy, religious studies) provides an interpretation of the entire symposium—22 essays altogether.

Call for Papers 1

Zygon welcomes papers on the theme “What are the criteria for judging that a worldview is ‘scientific?’” What are the essential components of a “scientific worldview”? What would disqualify a position from being considered “scientific”?

Length is negotiable. Deadline is 15 October 2005. Authors planning to submit such a paper should inform the editor as soon as possible. Send notifications to both of these addresses:

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Call for Papers 2

Zygon welcomes papers on the theme “What place, if any, do the ideas of *meaning*, *purpose*, and *telos* play in scientific research and theory formation?” On the one hand, we often read that “teleology,” “design,” and “purpose” are alien to science; we also read that “chance” and “randomness” are fundamental to science, especially for the biological sciences. On the other hand, the idea of “function” also seems basic to some scientific thinking, especially biology. “Function” seems closely related to purpose, as philosophers of biology have frequently observed. A recent report, for example, noted that paleontologists are much exercised over the question “What were dinosaur feathers for?” Is it the case that science operates with notions of “purpose” and “telos” with lower-case *p* and *m*, whereas religion raises those letters to upper-case status? What is the nonscientific thinker to understand about the stance of science on these questions? Do the various sciences take different positions on this question?

Length is negotiable. Deadline is 1 February 2006. Authors planning to submit such a paper should inform the editor as soon as possible. Send notifications to both of these addresses:

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