

THE CONVERGENCES OF SCIENCE AND RELIGION: A RESPONSE*

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Are there any convergences of science and religion? The answer for which I shall argue is that there are, indeed, and that this is so for at least two main reasons: because by their very logic scientific inquiry and religious inquiry converge in principle; and because, given the results now forthcoming from both inquiries, there is also a new convergence between them in fact.

Science, most basically, is a mode of inquiry--a way of asking a certain kind of question that arises out of our existence as human beings given our distinctive vital interests in living, in living well, and in living better (Whitehead: 8). But, so, too, I should say, is religion, most basically, a mode of inquiry--a way of asking a related but also different kind of question that likewise arises from our existence as such and its vital interests. To be sure, by "religion" we commonly mean the answers that have been given to this question, just as we sometimes use the word "science" to refer, not to the process of critical questioning that is distinctive of science, but to some or all of the results of such questioning as of a given time. But in religion even as in science any answer can be called into question and, in fact, is called into question by all contrary or contradictory answers; and so one is forced back on the process of religious questioning as always more fundamental than any of the products of such questioning. In religion just as much as in science, answers are not and cannot be as fundamental as questions.

But just what kind of question is the question of religion? I speak of it as "the existential question," or "the question of faith," because it is the question about the ultimate meaning of our existence as such, given the ultimate reality with which we have to do; and this means, since our existence always rests upon a basic faith that our life is somehow ultimately meaningful, that it is also a question about this underlying faith--the underlying trust and loyalty that belong to our very existence as human persons. Implicitly, this existential question is asked and answered in one way or another by all that we as human beings think or say or do, and hence by all of the fields of culture, secular as well as religious. But what is properly meant by religion as a field of culture distinguishable from all of the other secular fields is the one such field in which this existential question is also asked and answered explicitly--in concepts and symbols having this function as distinct from all the other functions of our thought and speech in the other cultural fields--morality, science, art, politics, law, what have you.

On this understanding of religion, the term obviously has a far broader meaning than it is commonly given, assuming the answers to the religious question constitutive of the dominant religious tradition of a particular society and culture. Thus, for example, assuming the answers to the religious question constitutive of the radically monotheistic

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religions of Judaism and Christianity, which dominate our own religious tradition in the West, neither the revolutionary humanism of Marxism nor the more evolutionary humanism of Western liberalism would be judged to be religious, because neither is theistic but is, rather, an explicitly atheistic or, at best, nontheistic world view. But if "religion" is understood, as I have proposed here, as the explicit asking and answering of the existential question, then one can make a strong case that Marxism in one form or another is the religion of a significant portion of contemporary humanity, while one or another form of modern liberalism is the working religion of yet another significant portion of this same human community.

But how exactly are we to understand this existential question, or this question of faith, that is explicitly asked and answered by religion? To conclude from the work of those who have studied religion most closely--not only theologians but also and especially historians and philosophers of religion and such human scientists as anthropologists, sociologists, and psychologists--the question underlying religion always has two closely correlated aspects: on the one hand, it is a question about the meaning of ultimate reality for us; on the other hand, it is a question about the authentic understanding of our own existence as human persons, in the sense of the self-understanding that is appropriate to, or authorized by, this same ultimate reality. Since the question of faith clearly has both of these aspects, one might be tempted to analyze it as really two questions rather than one. But this temptation should be resisted. For in asking about the meaning of ultimate reality for us, we are at one and the same time asking about the self-understanding that is appropriate to this ultimate reality, just as, conversely, in asking about our authentic self-understanding as human beings, we are at one and the same time asking about the ultimate reality that authorizes this self-understanding. In short, in asking the religious question, we are not asking two questions, but rather one question with two essential aspects, each of which necessarily implies the other.

I speak of these two aspects of the existential question as, respectively, "metaphysical" and "moral"; for, while this question is distinct both from the properly metaphysical question, on the one hand, and from the properly moral question, on the other, it is nevertheless closely related to each of them. It is distinct from the properly metaphysical question, because, as I have said, it asks about the meaning of ultimate reality for us, whereas the metaphysical question properly asks about the structure of ultimate reality in itself. Even so, the religious question is also closely related to the metaphysical question, because any answer to it implies a certain answer to the proper question of metaphysics about the structure of ultimate reality in itself, which could not have the meaning for us that the answer asserts it to have unless it were one kind of structure instead of another. And so, too, with the moral aspect of the existential question. Although it asks about our authentic self-understanding instead of about how we are to act and what we are to do in relation to our fellow beings, it necessarily implies a certain answer to this properly moral question. For unless this rather than some other way were how we are morally obliged to act, and these rather than certain other

things were what we are morally obliged to do, the self-understanding that implies such a mode of acting and such particular acts could not be our authentic self-understanding as human beings.

But now because the religious question has these two essential aspects and overlaps in this way with both the properly metaphysical and the properly moral question, it is also related--and inevitably related--to the proper question of science. To take the metaphysical aspect of the question first, the essential point is that metaphysics has to do with the structure of ultimate reality in itself, and in the strict sense of the word, "metaphysics," it has to do with that which is existentially necessary or common to any world whatever, whether actual or merely possible. Just as logicians define a necessary proposition as a proposition whose truth is necessarily implied by any other proposition whatever, so the necessary conditions of existence with which metaphysics has to do may be defined as that which necessarily exists in any even merely possible world. But if metaphysics in the strict sense may thus be said to be critical inquiry concerning the necessary, as what is common to all possible worlds, science as such may be said to be critical reflection concerning the actual, as this world that happens to exist, even as mathematics might be said to be critical reflection concerning the possible, as the worlds, or aspects of worlds, that logically could exist.

The area of overlap between metaphysics and science, then, is what, being common to all worlds, actual or possible, must perforce also be the case with this actual world. But religion also connects with science via metaphysics, insofar as, in its metaphysical aspect, it asks and answers the question about the meaning of ultimate reality for us, thereby implying both the question and some answer to the question, of the structure of ultimate reality in itself, which is to say, the very question that is properly asked and answered by metaphysics--and, in its way, also by science.

A specific example may serve to make clear the sort of thing I have in mind. According to the understanding of God characteristically presupposed by the radically monotheistic religions of Judaism and Christianity, the strictly ultimate and, therefore, necessary reality called "God" is at once universal and individual. God is individual in the sense that God not only acts on, or makes a difference to, other things, but is also acted on by them or responds differentially to them. In other words, God is a center of interaction, of action on, and reaction to, other things. But this same God who is understood to be in this sense individual is also understood to be strictly universal, in that the field of God's interaction with others is boundless. Just as God acts on all things, or makes a difference to them, so all things, in turn, act on God, or make a difference to God--whereas in our own case, even as in that of every individual other than God, we act merely on some things, even as only some things in turn act on us. Our field of interaction, by radical contrast with God's, is bounded.

But one of the implications of this idea of God as the universal individual, or the individual universal, is that God is not merely a being --in the sense of one being among others--but rather the being, and, therefore, in the traditional theological formulation, "being itself" (esse

ipsum), or the very principle of reality as such. This means that anything else that is or even could be at all could not be absolutely different from God. For to be absolutely different from God would be to be absolutely different from being itself, and to be absolutely different from being itself would be to be quite simply nothing--everything that is anything at all being more than mere nothing and insofar forth like the being itself of God.

In sum: given the understanding of God presupposed by such radically monotheistic religions as Judaism and Christianity, the conclusion follows ineluctably that not only man and woman, but anything whatever, must be in some sense created in the likeness of God. Whatever the special sense, then, in which man and woman may be said to be created in God's image, it cannot exclude that this may also be said in some sense of every creature.

If this reasoning is sound, the metaphysics implied by the radical monotheism of the Jewish and Christian religions must be in one important sense monistic. Although these religions are pluralistic in the sense that they clearly imply that there is more than one ultimate subject of predication, there being a fundamental distinction between the one God who is the primal source and final end of the world and the many other individuals and events that together comprise the world, they are at the same time monistic in implication, in that there cannot be more than one ultimate or irreducible kind of such ultimate subjects of predication. For if any such subject were of an absolutely different kind from any other, it would also be absolutely different from God and, therefore, absolutely different from being itself, and so, self-contradictorily, nothing at all.

This means, on the one hand, that the Jewish and Christian religions have never had any good reason to try to express their witness to the one and only God through the kind of dualistic metaphysics that allows for an absolute difference in kind between history and nature, mind and matter. As often as they may have allied themselves with such dualism, they have done so only by implicitly contradicting the belief in God that they thereby sought to express. On the other hand, this conclusion means that Judaism and Christianity, at least, have every reason to welcome the kind of comprehensive scientific generalization, "the evolutionary vision," as Kenneth Boulding has called it, for which, rightly or wrongly, Professor Prigogine's theory of dissipative structures and other related developments in nonequilibrium or irreversible thermodynamics have been taken to provide the basis and the paradigm (Jantsch [ed.]: xv f.).

This is all the more so because, on the comprehensive scientific understanding provided by this evolutionary vision all natural things at all levels of emergent self-organization are conceived to be, in their different ways, "open systems," related to and dependent upon an environment of other things--whether equals on the same level of emergence or also inferiors and/or superiors on other lower or higher emergent levels. Thus things at all levels of nature image or embody in their respectively different ways the universal interaction of God, conceived as universally

related to and dependent upon all things even as they are all universally related to and dependent upon God and one another.

At this point, then, there is indeed a convergence of science and religion, insofar, at any rate, as the revolutionary science of the twentieth century, for which time and history have been discovered at all levels of nature from the very small to the very large, may indeed be said to converge toward the same antidualist metaphysics necessarily implied by a Jewish and Christian faith in the one and only God that has at last become clear and consistent about its own metaphysical implications.

As for the relation of religion to science involved in the other aspect of the religious question, which I have distinguished as its moral aspect, the essential point is this. Although the religious question in its moral aspect has to do with our existence as such, and thus with our authentic self-understanding in relation to ultimate reality, any answer to it necessarily has implications also for our praxis or action as human beings--and that with respect both to how we are to act and to what we are to do. To understand oneself in a certain way in relation to ultimate reality, both as a necessary whole and in its contingent parts, is inevitably to act in a way determined by this self-understanding and to do what, in the circumstances, is indicated by this way of acting. But, of course, what one is to do is also always determined by these circumstances; and this is where pursuit of the religious question so as to follow up its moral implications unavoidably involves one in the question and answers of science. For it is precisely and only science through which we are able to arrive at an ordered knowledge of all the complex circumstances of our moral action. Only by means of science do I come to a disciplined understanding of myself and my fellow beings who are the objects of my moral responsibility, if, as on the self-understanding common to both Judaism and Christianity, I am to realize my whole and undivided love of God precisely by loving my neighbor as myself. Only by understanding myself and my world as the sciences, natural and human, enable me to understand them can I become aware of the limits and the consequences, the risks and the opportunities, of any of my particular acts as well as of any of my particular ways of acting.

Once again, a specific example may be the best way to make clear this second point toward which religion and science converge--in this case through the mediation of morality rather than, as in the first case, through the mediation of metaphysics. On the presuppositions bequeathed to us by the dominant science and metaphysics of the nineteenth century, we were left, as we have seen, with a dualism between the world as history and the world as nature. On the one hand were human beings, who are the sole finite subjects, while on the other hand was the vast system of mere objects that constitutes the whole of nonhuman nature. This dualism was encouraged by both scientists and humanists--by scientists insofar as they pictured the rest of the universe apart from human beings as merely objective and mechanical through and through and by humanists insofar as they stressed the radical uniqueness of the human mind and spirit as compared with all that is nonhuman (Birch and Cobb: 138 f.). But beginning with

the Darwinian theory of evolution already in the nineteenth century, this dualism has become increasingly problematic, until through the scientific revolution that is even now going on it is more and more being overcome by a new nondualistic paradigm. If this new paradigm may be said to have qualified traditional humanism by thoroughly naturalizing human existence, it may just as well be said to have qualified traditional naturalism by thoroughly historicizing nature.

But this means, then, if one comes to share this new "evolutionary vision," this picture of nature as constituted by emergent levels of ever-more complex self-organization along the lines already indicated--this means that the love of one's neighbor as oneself that is necessarily implied by the radically monotheistic faith of Judaism and Christianity now takes on a very different meaning. For one thing, not only one's fellow human beings but also other natural beings, especially the higher animals, become the neighbors for whom one bears moral responsibility, whom one is to love as oneself. For another thing, one becomes aware that one's moral responsibility to love one's neighbors can become fully effective only by also becoming political, not so much in the narrow sense of "politics" having to do solely with processes of government as in the broader sense having to do with maintaining and transforming structures--all the social and cultural structures that play so fateful a role in the ongoing process of evolution, not only in our own sociocultural evolution as human beings, but, increasingly, with the development of a modern science-based technology that impacts the whole of our planetary ecosphere, in the process of evolution generally.

Here, then, is the other main point where science and religion today converge--toward a new understanding of the complex circumstances of human action, and thus toward a new definition of what it means to exist and to act in love--that returning love for God and, therefore, for all other things in God, that is the only fitting response to the prevenient love of God for all of us, to which both Judaism and Christianity bear witness.

Such is the reasoning by which I defend an affirmative answer to our question. Religion and science are alike, I have argued, in that, at bottom, each is a mode of inquiry, a way of asking and answering a question that is humanly significant, given our vital interests as human beings in not only living but living abundantly. At the same time, religious inquiry is also different from scientific insofar as the question it pursues and attempts to answer is the existential question about the ultimate meaning of our existence as such, given the ultimate reality with which we must somehow come to terms in our understanding of ourselves. Notwithstanding this essential difference, however, religion and science overlap at two main points. Because the existential question to which religion seeks an answer has two aspects, metaphysical and moral, religion necessarily has both properly metaphysical and properly moral implications. In each case, it is also related to science which, from its side, too, has both metaphysical and moral implications. Clearly, whatever is true of this actual world, which science has the task of understanding, cannot be false in every possible world and must, therefore, be allowed for by any true

metaphysics, whose task it is to conceptualize the strictly necessary conditions of the possibility of any world whatever. Just as clearly, it is impossible to specify exactly what ought to be done in particular circumstances without having an understanding of the circumstances such as the natural and human sciences alone are finally in a position to provide.

If we reckon, then, with what Professor Prigogine has called the "scientific revolution" in the midst of which we are now living, and which he has spoken of as "the greatest scientific revolution since the Renaissance" (indeed, since the formulation of Western science by Newton), and to which, I should suppose, he himself has most significantly contributed --if we reckon with this profound transformation in the science of our time, we can indeed speak of a convergence of science with religion--certainly with religious inquiry, but also, as I have tried to suggest, with the radical monotheistic religions of Judaism and Christianity (Prigogine, 1981b: 8 f.). This is so, at any rate, insofar as these religions for their part have shown a willingness to break with much of the metaphysics and morality in their respective traditions and have begun to think afresh about the necessary implications, moral as well as metaphysical, of the radically monotheistic faith in God to which they have both been given and called to bear witness.

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