

TOWARD THE CONFLUENCE OF THE SCIENTIFIC  
AND CHRISTIAN FAITHS*by Harold K. Schilling*

Some revolutionary changes have taken place during recent years in the communities of science and of Christian faith. These developments are in my opinion producing a new situation in the relationships between science and religion. Too long have they seemed to be enemies. In view of the new situation they should now consciously assume a different stance toward each other, and they should then be regarded as allies, making common cause in attacking the difficult and perplexing problems of our day. A lecture, or book, or course on what is commonly called "science and religion" should no longer be thought of instinctively as dealing primarily with either controversy or reconciliation between the two fields. We should settle once and for all in our minds that these potent forces of our culture are not incongruous but rather represent kindred spirits and ideals. We should therefore assume that any discussion of this subject will consider constructively and creatively how and what science and religion can contribute *together* to the enriching of life and thought, and therefore to the more complete humanization of mankind.

With regard to such a possibility we must note two contradictory circumstances in our time. On the one hand, life has become much more future oriented than formerly. We now realize that man has

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entered upon the self-determinative stage of his evolution. This has been spoken of recently in several different ways. Thus, while for a long time man has been referred to as *homo faber*, he is now increasingly being called also *homo faber suiipsius*. Schillebeeckx has used this term recently. Bonhoeffer spoke of the "world come of age"; Karl Rahner, of a radically "new human existence" in which man "can really be the active, creative draftsman and planner of himself, his environment and also of his distant future."<sup>1</sup> Harvey Cox and Michael Novak, as well as Rahner, have characterized the future of man as utterly "open" in the sense that man is free to fashion or create it himself as he wishes it to be under God. So, on the one hand, it is recognized that great power has come to man, together with an awareness of almost unlimited possibilities for further development.

On the other hand, man is wondering whether he is after all equal to the challenge of such wide-open possibilities. And not a few men are wondering whether life is worth living at all. They are losing faith in the sense of courage, hope, and adventurous expectancy. The restoration or even enhancement of such faith is therefore one of the most urgent needs of our time. It is my conviction that this can never be achieved, however, unless religion and science make common cause—with each other and with the arts—in helping man to achieve a truly adequate faith-supporting understanding of life and the world in all its aspects. None of these great forces in our culture can itself be *the* channel through which such inclusive understanding can come to man. Together, however, they can become such a channel. How can science and religion in particular contribute to it? Each of them has unique insights that are utterly indispensable to full understanding and faith.

Does it, however, make sense to expect anything like that in our time? As I see it our answer must be, *Yes*, it does. In elaborating this view I shall proceed as follows. In speaking of "religion" I shall refer specifically to Christianity, the example I know best. In doing this it is not my intention to be exclusivistic or to denigrate other religions. First, then, we shall consider what Christianity is, and in what sense it is a "faith enterprise"; and, second, how science may be regarded as a "faith enterprise" that can support genuine faith. Then we shall examine the claim that, in terms of their visions of the world, and of their basic attitudes and concerns, the Christian and the science faiths are moving toward a "confluence," that is, toward a faith that will be truly scientific *and* truly Christian, though it may not eventually bear the name of either. What its name will be may not be especially important anyway.

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Briefly, this is what I conceive Christianity, or the Christian faith, to be—in the truly biblical sense. It is not primarily a ritualistic system, or a code of prescribed religious behavior, or a body of required beliefs, but rather a confident faith and therefore a way of life, characterized by hope, faithfulness, and love, lived in and not apart from the world and the struggle for goodness, justice, and peace.

Unfortunately faith is much misunderstood. It is not what it is so commonly said to be, credulity, or a submissive acceptance of beliefs in spite of reason to the contrary. It is rather an acceptance and affirmation of life, a confidence that life has purpose and meaning and that the way things are makes sense. This faith has been expressed in words in many ways, both in the Bible and in the literature of Christianity. Let me illustrate this with three examples: As Shinn puts it, "To believe in God is to testify that life is not "a bad joke" or a "dirty trick". . . . It is to say that we live in a world of purpose, a world where words like reverence, fidelity, and love are not nonsense."<sup>2</sup> Similarly Schillebeeckx says: "the acceptance of real human existence, concretely taken with all its responsibilities, is in truth an act of God-centered faith."<sup>3</sup> Nowhere, however, has this faith been expressed more potently and cogently for our time—and all time—than by St. Paul, in his letter to the young Roman church, in which he asserts (as translated by Phillips) that "to those who love God everything fits into a pattern for good" (Rom. 8:28). This certainly is complete acceptance of life and existence.

Many people regard such faith as utter nonsense. Much of contemporary art, literature, and philosophy depicts life and the world as ugly, terrifying, meaningless, and even absurd, a wasteland. And so, it is said, do the newspapers and television programs and the common man.

The fundamental religious question is widely held to be: Does there exist a reality to which men can confidently anchor their lives, upon which they can count for power and meaning, and to which they can be devoted in complete commitment and devotion—and which is utterly worthy of their full allegiance? To this question very many people would reply: No, there is no such reality; life just isn't that way. Christianity, however, sees all of being or reality, including all the evils, of which it is very conscious, as worthy of acceptance and trustworthy; and it points, again using Pauline language, to its "Source, Guide and Goal" (Rom. 11:36, *The New English Bible*), as the creative reality which does give ultimate meaning and purpose to life.

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The Christian community thus witnesses out of its experience that men *can* achieve true humanity in commitment to that reality, which it calls God.

This stripped to its bare essentials is, as I see it, what is meant by Christianity as a faith. The thinking-and-feeling that underlies such a vision of the purposefulness and meaning of things, and leads to full acceptance of it, is a configurational type of sensing that discerns the meaning of life and the world through the patterns of interrelationships and occurrences of events in nature and history. Now let us look at science as a faith-way of life, as a vision of the world, and as a configurational sensing of meaning in, or through, patterns.

### SCIENTIFIC FAITH

While it is often supposed that science is interested primarily in so-called facts, actually its main concern is to find patterns—of data, events, and concepts, in terms of which phenomena can be understood, and which therefore confer scientific meaning. In science, as in religion, knowing and understanding come not from isolated facts, or even an accumulation of facts, but from the patterns of their occurrence.

It is out of the patterns of events and relationship among things that have been discerned in nature by science that there has developed a faith that enables men to face nature with confidence, knowing that it does not cheat, is not fickle, but can be depended upon. Let us see what some of these patterns are.

1. The first has to do with those interconnections among things and events that have revealed nature to be understandable to a great extent: the so-called cause-and-effect, or functional, patterns that we call laws of nature, or laws of science. We tend to forget what the world looked like before modern science came along. Walter Ong, professor of English at St. Louis University, has recently reminded us<sup>4</sup> that most people of the Middle Ages, indeed until well into the eighteenth century, felt themselves to be helpless pawns in a world most of which they did not understand. They lived in "what we would consider paralyzing insecurity," subject to "the horrible fears resulting from . . . the regular loss of most of their children before adulthood, by . . . death" from utterly unknown causes. And he adds humorously: "Do you ever wonder why people in Renaissance paintings don't smile? It's because most of them don't have all their teeth in their mouths." It was a grim world.

My point is that before modern science appeared on the scene man

found it extremely difficult to see any patterns for most of the happenings of nature and history. Nature was one great, tantalizing puzzle. It simply was not understandable under those circumstances. Now it is, and to an amazing extent because of the patterns of cause and effect, formulated as the so-called laws of nature, which science has unveiled. We now see that in many remarkable ways nature *does* make sense and *can* be understood and relied upon.

2. Next, the patterns science discerns reveal that much of nature and life is not only understandable but actually predictable, and even controllable or manageable. Nature can be changed, to improve the lot of man and other beings. The overall pattern is for good, in the sense that knowledge of it enables man to enrich life. It is quite conceivable that the pattern might have been such that the world could *not* be improved by man. The fact that it can be is one of its marvelous, faith-engendering features.

3. The third pattern to be noted is that, quite aside from the transformations man can introduce into it for good, nature itself changes in a remarkable way that in the long run is seen to be for good. Of this particular pattern man has become aware only recently. For a long time the world was thought to have remained essentially unchanged since "its beginning." Indeed, until about 150 years ago, there was no compelling evidence that it had changed significantly in its physical and biological features—though there had been speculations to that effect earlier. Then evolutionary science came along and gave us a radically different perspective of the history of the earth and the cosmos.

According to this grand conception, all of the world, animate and inanimate, has been changing continually over a long period of time. The age of the earth is now thought to be from two to five billion years. At the beginning of this period there was in this region of the universe nothing but a huge swarm of dissociated elementary particles, protons, neutrons, electrons, and photons. Later some of these agglomerated to form atoms, which had not been there before. Then there appeared by aggregation the larger and more complex entities called molecules, and then even self-replicating molecules, that is, the most elementary forms of life. Thereafter there appeared, in succession after long intervals of time, biological cells, then large organisms like plants and animals, that were characterized by increasing independence, sensitivity to external stimuli, by adaptability and so on. Finally, there emerged man with mind and spirit, with the ability to reason and create, and to produce civilizations and community.

What a vision! Does it tell us anything about the general pattern of

happenings in the universe? Yes, it does. For one thing, the world has a very long history of creative change, of a steady sequence of emergences of novelty none of which had existed previously. For another, there seems to be something systematic in the long-range flow of its major events. While science must avoid using any concept of cosmic purpose and final goal, as beyond its own power of observation, it nevertheless recognizes a definite trend in the sequence of nature's evolutionary emergences: from the very small entity to the large, from the very simple structures to complex ones; from the inanimate to the animate, to mind, to social existence and community; from individual elementary entities to great systems with internal feedback and goal-seeking controls. This development has been unmistakably in the direction of ever richer existence, with more and more possibilities and meaning, that is, toward a more abundant "life." This overall "upward," advancing, and enriching thrust has persisted long enough and consistently enough to justify the tentative, if not final, conclusion that it represents a basic aspect or pattern of the universe. To be sure, there have been many transient, short-range departures from the curve of upward advance, departures that have often been downward, impoverishing, and even destructive. But these losses have not canceled out the unmistakable long-range gains. This is then a pattern of creative change, and one that suggests also that the world is still in the making, is as yet unfinished, and in the future will be very different by virtue of other novel emergences still to come.

4. Apparently, however, it is a pattern not only of change but also of constancy, as indicated by the temporal constancy of the laws of nature. So far as we can see, while natural phenomena may change, say from season to season, or from one geological age to another, the causal laws underlying them do not. Thus we have a matrix of constancy within which process and change occur; and it is because of this that changes are in part predictable and manageable, and that man can significantly affect the future of his environment for good or for evil.

5. Returning to the evolutionary vision—it was formerly thought that evolution of the biological species was achieved mainly in blood and gore, by saber tooth and claw, that is, by survival of the fittest in *destructive* competition. More recently, however, biology has been accumulating evidence that the "morality" of nature and ecological relationships may be characterized much more—though not altogether—by constructive, symbiotic cooperation and mutual aid. This, too, seems to me to be a faith-generating component of the scientific vision of the world.

6. Man has come to be seen as an integral part of nature, not separate from it, and embedded in its network of cause and effect. His behavior, as truly as that of the animals or molecules or rockets, is in large part predictable and manageable. Amazingly successful controls of human behavior, through surgical, electrical, chemical, psychological, and psychiatric manipulation of human individuals *and groups* are already available. Moreover, it may soon be possible also to affect or determine in advance many human characteristics, and therefore behavior patterns, through prenatal genetic control. It therefore seems justifiable to assume that man will be able increasingly to control not only the misfortunes brought on by nature but also many evils perpetrated by men. This also I would regard as faith supporting, for again it means that the scientifically discernible pattern of happenings is one not of static perpetuation of the status quo but of the possibility of planned change—and change for good, even though there is no certainty that change will be in that direction. Here again, man is seen not to be helpless or doomed to frustration. Possibilities are now known to exist for his future self-determination.

Let me hasten to say that I realize that with these genuine possibilities for great good there have come also many possibilities—and even probabilities—for diabolical evil. We can disregard these only at our peril. This does not, however, alter the fact that there has come to mankind a magnificent vision of a world that does have formerly unknown potentialities, and that in many respects this vision does support faith, confidence, and hope.

These pattern aspects of nature are then widely held to signify that nature is hospitable to human inquiry and control, rather than forbidding and inimical; that it is dependable and comprehensible in large measure, not haphazard or incomprehensible; and that it is both transformable and itself dynamically creative, rather than intractable and statically sterile. To recognize and say this is to express a powerful faith, a faith that removes much of the fear and dread that dominated men for so long. If anything is to be feared, says this scientific faith, it is our ignorance of nature, our willful, high-handed interventions in it, and the evil uses to which we may put our knowledge of it. As far as nature itself is concerned, the more we learn about it the less we need to fear it, and the more we can trust it and enter with joyous expectancy into its life and further development. In his relations with nature man has therefore much solid ground to stand on, and part of this solidity or dependability consists in the certainty nature provides that he *can* transform it to his uses for good and thus in large part de-

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termine his own future. Because of "the way things are," he can participate in the creative processes of nature that are shaping him and his destiny, and can orient them toward the good—if he but will. This, then, is what I mean by the faith that comes out of science and is often called the scientific faith.

### THE ROLE OF IMAGINATION AND HOLISTIC CONCEIVING

There is another way in which contemporary science is contributing to such faith, namely, through its newer understandings of how the human mind operates in the discovery of patterns. This is, of course, an extensive subject by itself, and we can consider only a little of it—briefly. It has been supposed commonly that the only intellectual tools required and desirable in science are experimentation and logic. Now we know, however, that intuition is also important in science. Indeed, what distinguishes the great scientist most from the mediocre one is his superior prowess not in formal method but in his ability intuitively to devise intellectual shortcuts and bypasses, to pierce through masses of data and verbiage to pinpoint *the* issue, *the* basic consideration, or anticipate *the* solution of a problem, without much prior reasoning—which formal reasoning he may do later.

It seems also that part of man's intuition is his capacity for what has come to be called configurational perception and thought. He can perceive and conceive things holistically in terms of general patterns without first having to analyze them in detail. This is an intuiting of things directly as wholes rather than as aggregates of partial features noticed separately.

The bypassing of more formal analytic thought also occurs in a hunch, a guess, a sudden inspiration, a "feeling in one's bones," a creatively imaginative moment, a revelatory experience when unexpected light breaks through. All of these have been recognized and discussed in the recent literature of the methodology of science. They are increasingly regarded as important elements in scientific experience and thought, though any conclusions reached by them must eventually be checked rigorously by experimentation and/or logic.

There is still another aspect of this that is significant for our subject. As Marshall McLuhan has pointed out so cogently, the electronic age has greatly accelerated our mental processes by contracting the time span involved in action and reaction in perception and recognition, bypassing much detailed analysis, with the result that configurational pattern types of thinking are becoming increasingly important in our lives. This, then, is an age of the amplification and intensification of



intuition and of mythical and visceral thinking. But it is precisely this kind of holistic overall experiencing and understanding, rather than analyzing, that underlies the recognition of patterns, out of which, for the most part, emerge faith, confidence, and hope.

Thus it has come about that science has helped to sharpen those sensitivities, capacities, and ways of thought without which there can be no genuine faith, while at the same time giving us a remarkable vision of the world in terms of the patterns it displays, which in turn also provide a foundation for faith.

#### SOME PARALLEL AND COMPLEMENTARY NOTIONS

Next we should note that the scientific and Hebraic-Christian faith visions resemble each other to a remarkable extent. According to the latter, God is conceived to be "living" and "creating" now, not merely long ago. Right now God is thought to be working out his purposes in the world. His work is not finished. The world is still in the making. Surely this religious vision is not out of harmony with the scientific one which says that the processes of genesis, emergence, and developmental growth in nature have been operative for aeons of time and that the universe is now seen to be essentially dynamic rather than static, changing rather than fixed, and as yet unfinished. And the science vision is not out of harmony with the religious one.

It should, of course, be emphasized that this does not mean that they are identical. They are fundamentally different, and each is needed for the contribution it can make to the common understanding and faith. Consider the following important differences that are typical of still others.

The religious vision contributes the insight that God is the God of *love*, and that therefore the most potent, creative force at the center of the universe, and of reality and life, is love. This understanding cannot, as I see it, come out of science as it is now conceived. On the other hand, science contributes the insight, which religion cannot of itself provide, that the natural world is orderly and dependable, in the sense of being predictable and systematically transformable. Religion tells us that the good life is not achievable in all its richness and potency unless it is lived with a sense of responsibility to, and dependence upon, all of Being and its ground, God. The scientific insight notes that the good life is not achievable unless it is lived responsibly with respect to the cause-and-effect realities of nature. Many other mutually complementing sets of insights and understandings can be contributed by science and religion. It is in this sense that I suggest that the under-

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standings of both science and religion are necessary for the achievement of a total understanding of life that can eventuate in adequate faith and hope, and that science and religion should make common cause.

### CONFLUENCE BEYOND LINGUISTIC BARRIERS

Finally, let us note that for many thoughtful persons today their scientific and Christian faiths are converging toward what seems to them to be an actual confluence and merging into one grand, all-encompassing faith. Nowhere is this thought more meaningfully evident than in the writings of that remarkable scientist and Christian, Teilhard de Chardin, who, in my opinion, was one of the truly great minds and spirits of our time. He was a master of holistic, unifying, pattern-discerning thinking that can lead to profound insight and faith. His work was not perfect or beyond criticism, but it was magnificently epoch making, and it does indicate the way we can, and probably should, go: namely, in the direction of a comprehensive faith that is neither exclusively scientific, nor exclusively Christian, but both scientific and Christian.

Happily, Teilhard's thought is not alone in its thrust toward more integrating and synthesizing insights. Other men, too, are working in that direction, and their number is increasing. In this connection I want to suggest that Christian faith has been confined and hobbled too much by the demands of print, as McLuhan has been saying for some time, that is, by an analytical, differentiating, precisely defining, "hot" kind of thought that can easily be put into print. Not enough has it been formed by a pattern-discerning or configurational, intuitive, "cool" kind of insight that defies encapsulation in print.

If we freed our minds from this dominance by the modes of thinking of print, we might realize more easily than we seem able to now that the term written as "Christ" stands for an eternal and universal reality whose name need not be spelled or printed that way, and that can be experienced and known without use of the literal symbol CHRIST, and even without the explicit knowledge of Jesus—though without that knowledge there cannot be complete understanding of it. St. John of the Fourth Gospel and of the Epistles was apparently quite aware of this when he spoke of the Christ as the *logos*, as well as the light and life of the world. St. Paul certainly was aware of it, as is evident from his speech in Athens about the unknown God. Coming to our own time, skipping over the insights of many church fathers, the point I am trying to make is exemplified cogently by Raymond Panikkar of India, in his remarkable book *The Hidden Christ of Hinduism*.<sup>5</sup> The fact

that Hinduism does not include the term "Christ" in its vocabulary does not mean necessarily that it is unaware of the reality of Christ. Panikkar argues persuasively that Christ is not unknown to Hinduism. Teilhard's concept of the eternal alpha and omega of all existence has similar implications.

It is my earnest conviction that the faith of much of the science community is essentially a faith in that reality—even though that community may be unaware of, or may even reject, the term "Christ." Whenever men exhibit ultimate concern, search for truth passionately, come to see and affirm reality as creative and redemptive, restorative and healing, there they have encountered the reality that Christians call Christ, and to whom others may give a different name or no name at all. Whenever love, and sensitivity, and tenderness, and vicarious suffering are at work in the world, there God is making his presence felt through Christ. Wherever men seek to penetrate within, behind, and beyond the immediacies of life directly perceived by the physical senses, and then find that through these visible proximate realities there come intimations of ultimate reality that seems to transcend them, there and then they have encountered Christ—or, better, have been confronted by Christ.

I trust that these remarks are not out of accord with the following remarks of Schillebeeckx:

... the concrete world, by definition, is an implicit Christianity . . . an objective, non-sacral but saintly and sanctified expression of mankind's communion with the living God; whereas the Church *qua* institution of salvation, with her explicit creed, her worship and sacraments, is the direct and sacred expression of that identical communion. . . . To speak of the relationship between the Church and the world does not mean therefore that a dialogue is to be launched between the strictly Christian dimension of our human life and its distinctly non-Christian dimension, nor is it a question of . . . a dialogue between the religious and profane, between the supernatural and natural. . . . it is rather a dialogue between two complementary, authentically Christian expressions of one and the same God-related life. . . . In other words, the *implicitly* Christian and the *explicitly* Christian dimension of the same God-related life. . . . What is meant by *implicit* Christianity . . . is the human, earthy and profane reality assumed in its secularity into the God-related life which it proceeds to express objectively, even when that God-related life remains *anonymous* and *implicit*.<sup>6</sup>

In this profound sense, I suggest, much of the science community is an expression or embodiment of *implicit* or *anonymous* Christianity (to use Schillebeeckx's terms), or of *latent* Christianity (to use Tillich's) even if not of *explicit* (Schillebeeckx) or *manifest* (Tillich) Christianity. The confluence I am talking about, of the scientific and

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the Christian faiths, is, then, I believe, a confluence of an implicit and an explicit Christian faith—to form a faith that is truly Christian and truly scientific in the broadest and most meaningful sense.

### NOTES

1. As quoted in George A. Lindbeck, "The Thought of Karl Rahner, S.J.," *Christianity and Crisis* 25 (1965):212.

2. Roger Shinn, *Life, Death, and Destiny* (Philadelphia: Westminster Press, 1957), p. 27.

3. Edward Schillebeeckx, ed., *The Church and Mankind*, Dogma, vol. 1, Concilium: Theology in the Age of Renewal (Glen Rock, N.J.: Paulist Press, 1965), pp. 84–85.

4. See Walter Ong, "The Spiritual Meaning of Technology and Culture," in *Technology and Culture in Perspective*, ed. Ilene Montana (Cambridge, Mass.: Church Society for College Work, 1967).

5. Raymond Panikkar, *The Hidden Christ of Hinduism* (London: Darton, Longman & Todd, 1964).

6. Schillebeeckx, p. 82. Italics mine.