

REVISING PROCESS METAPHYSICS IN RESPONSE TO IAN BARBOUR'S CRITIQUE

by Joseph A. Bracken, S.J.

Abstract. In *Religion in an Age of Science*, Ian Barbour concludes that the contemporary evolutionary worldview with its emphasis on the interplay of law and chance, relationality and autonomy, can be properly accounted for only by something like the process-relational metaphysics of Alfred North Whitehead. At the same time, he expresses serious reservations about certain features of Whitehead's scheme, notably, his perceived inability to account for the ongoing identity of the human self and for the fact of multilevel organization within organisms and in the world of inanimate compounds. In this article, I suggest that both of these difficulties can be resolved if one adopts a revisionist understanding of the Whiteheadian category of society according to which democratically organized societies possess an ontological unity and exercise a corporate agency proper to their own level of existence and activity. Furthermore, if one applies this revisionist understanding of societies to the Whiteheadian doctrine of God, a Trinitarian understanding of God becomes possible within the overall parameters of process-relational metaphysics. In this way, traditional belief in the doctrine of the Trinity can be reconciled with a scientifically credible worldview.

Keywords: agency; process-relational metaphysics; society of actual occasions; structured field of activity; Trinity.

In one of the concluding chapters of his monumental work *Religion in an Age of Science*, Ian Barbour compares and contrasts with one another the medieval, Newtonian, and twentieth-century worldviews (Barbour 1990, 218–21). He concludes that the contemporary evolutionary worldview with its emphasis on the interplay of law and chance, relationality and autonomy, “top-down” as well as “bottom-up” causality can be properly accounted for only by something like Alfred North Whitehead's process-relational metaphysics. At the same time, Barbour expresses reservations

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about certain features of that same metaphysical scheme. He gives high praise, for example, to Whitehead for his notion of reality as organic process and for the creation of the novel metaphysical category of "actual occasion" or "actual entity" so as to introduce the possibility of spontaneity at the most elementary levels of existence. Yet, in Barbour's judgment, Whitehead does not adequately account for the ongoing identity of the human self with the category of actual occasions as discrete moments of experience. Likewise, Whitehead does not seem to provide for the fact of multilevel organization and interaction within organisms and in the world of inanimate compounds (Barbour 1990, 227).

My argument in this brief presentation is that both of these difficulties can be resolved if one adopts the revisionist understanding of the Whiteheadian doctrine of society, which I have been setting forth over the years in a series of books and articles (Bracken 1985, 1991, 1994, 1995, 1997). Furthermore, I also argue that Whitehead's doctrine of God could be given a far more orthodox Christian interpretation if one were to apply this revisionist understanding of the Whiteheadian notion of society to the doctrine of the Trinity, the interrelationship of the three divine persons both to one another and to their creatures. In this way, Whitehead's thought could be made more acceptable to those Protestant and Roman Catholic theologians who do not feel at liberty to abandon cherished Christian beliefs, such as belief in the Trinity, for the sake of a more scientifically credible worldview.

Barbour himself, it should be noted, believes that God within the evolutionary worldview should be considered as "the leader of a cosmic community" (Barbour 1990, 260). Yet he does not further conclude that creation as a cosmic community is incorporated within the primordial community of the divine persons. Instead, following the leadership of Charles Hartshorne and other Whiteheadians, he continues to think of God in basically unipersonal terms, with the result that a certain distance remains between more traditionally oriented Christian theologians and proponents of process-relational metaphysics. My proposal seeks to eliminate that gap by setting forth a communitarian understanding of the doctrine of the Trinity from within a process-relational perspective.

To begin, then, I return to the first of Barbour's two criticisms of Whitehead's metaphysical scheme. Barbour believes that Whitehead was perhaps too zealous in his rejection of substantialist modes of thought in favor of the notion of actual occasions, momentary subjects of experience rapidly succeeding one another and linked only by the repetition of a pattern or, in Whitehead's own terms, a "common element of form" (Whitehead 1978, 34). As he comments, "I would question whether human experience has such a fragmentary and episodic character. Perhaps reality at higher levels is more like a continually flowing process, from which

temporal moments are abstractions” (Barbour 1990, 227). The problem, of course, is that either the notion of an actual occasion is a genuinely metaphysical category, in which case it must be applicable at all levels of existence without exception, or it is not, in which case Whitehead’s metaphysical scheme is in danger of collapse.

A much simpler way to preserve continuity amid the discontinuity of successive actual occasions within human consciousness is to give greater importance to the Whiteheadian notion of a society as that which is created and sustained in existence by a succession of actual occasions with a common element of form. As I noted in a recent article (Bracken 1994, 14), instead of focusing with Whitehead on actual occasions as “the final real things of which the world is made up” (Whitehead 1978, 18), it would make much more sense to think of an actual occasion as the latest member of a society. For, as Whitehead himself noted in *Adventures of Ideas*, “[t]he real actual things that endure are all societies. They are not actual occasions” (Whitehead 1967, 204). Hence, while actual occasions are indeed the building blocks of reality, societies, not actual occasions, are the counterparts to the Aristotelian category of substance, that which endures over time and thus guarantees the continuity of the human self in ordinary experience.

Yet, upon further reflection, more is at stake here than just a simple shift of focus from the notion of actual occasions to that of societies within Whitehead’s metaphysical scheme. Implicit in my proposal is the further assumption that Whiteheadian societies are objective ontological realities with at least some measure of agency or power of self-disposition. For many orthodox Whiteheadians, this is a totally unacceptable reversion to substantialist modes of thought. For, as Whitehead consistently maintained, in the end only actual occasions exist and only actual occasions exercise agency (Whitehead 1978, 31). As I see it, however, there exists a mediating third position between traditional Aristotelian substantialism and what can only be called Whiteheadian “atomism.”

Societies can be said to exist as objective realities if they are understood to be a new kind of entity, namely, structured fields for the dynamic interrelation of actual occasions. As such, they do not possess the fully determinate actuality of an actual occasion but rather the indeterminate actuality of an environment or context for entities that are fully determinate, namely, actual occasions. More important, however, societies understood as structured fields of activity for their constituent actual occasions embody the necessary ontological potentiality for further actualization in terms of new actual occasions. They carry forward, in other words, from one generation of actual occasions to another the structure or formal intelligibility characteristic of the society as such. In that sense, Whiteheadian societies, when understood as structured fields of activity, are

much akin to Aristotelian substances in that they represent both actuality and potentiality: actuality in the order of existence, potentiality in the order of operation.

An illustration of what I have in mind here is available from the natural sciences. Physicists have long been convinced of the reality of fields to explain the ongoing interaction of particles at the subatomic level or the influence of celestial bodies on one another's movements in outer space. Furthermore, they have constructed precise mathematical formulas to explain the laws operative within those fields. But, philosophically speaking, they really don't know what fields are, since fields are not directly available to the senses for empirical verification. One has to infer the existence of the field from the way in which the entities or events taking place within the field exhibit a consistent pattern of interaction. In similar fashion, Whiteheadian societies, in my judgment, are structured fields of activity for successive generations of actual occasions. As such, they have an objective even if somewhat intangible reality, since they represent the principle of continuity from one set of occasions to another. Actual occasions come and go, but the societies or structured fields of activity of which they are the latest members persist over time in the same way that Aristotelian substances serve as the principle of continuity for all the accidental changes taking place within them.

When applied to the Whiteheadian notion of the human self as a personally ordered society of conscious actual occasions, this means that the self is an ongoing structured field of activity for successive actual occasions as momentary subjects of experience. The self is like an Aristotelian substance in that it endures over time amid accidental modifications. But it is unlike an Aristotelian substance in that it is not a "thing" in the ordinary sense but an intentional field that serves as the context or environment out of which the current actual occasion or present moment of experience arises and to which it contributes its formal structure as it perishes. Thus the individual human being feels an identity with his or her past in that his or her decision of the present moment is clearly shaped by past events—past moments of experience as represented by the prevailing structure of the field of consciousness. At the same time, the individual feels free to alter, at least in a modest way, that same inherited structure in virtue of his or her experience here and now. What Barbour asked for in terms of the human self seems, therefore, to be assured: continuity of awareness amid the discontinuity of successive moments of consciousness.

In the article cited earlier, I also made clear how this understanding of Whiteheadian societies as structured fields of activity for their constituent actual occasions enormously simplifies Whitehead's doctrine of prehension (Bracken 1994, 16–17). By prehension, Whitehead means the way in which the currently concentering actual occasion "grasps" its predecessors

in terms of content and formal structure as objective data for its own self-constituting decision (Whitehead 1978, 23–24). Instead of grasping a huge number of previous actual occasions, the concreting occasion simply grasps the structure of the field as a whole within which it is coming to be. It conforms itself, in other words, to its “world” without undergoing the laborious process of “transmuting” the physical feelings derived from predecessor actual occasions into one complex conceptual feeling for its own process of self-constitution (Whitehead 1978, 250–51). But this is a technical question for professional Whiteheadians to think about. What is more important for our purposes in this essay is the further question of whether fields as such exercise ontological agency or a power of self-disposition. For, otherwise, the analogy with Aristotelian substances evidently collapses.

On the one hand, it is clear that the personally ordered society of actual occasions making up human consciousness exercises agency in and through its latest member, its latest moment of experience. To be sure, it may take many such mini-decisions constitutive of a whole series of actual occasions for me as a human being to come to a fully reflective decision, one in which I am quite aware of what I am doing and why I am doing it. But, at least in principle, the society of personally ordered actual occasions that constitutes me as a conscious human being makes decisions and acts upon them even though the actual process of conscious decision making is more complicated than it might seem at first glance. More difficult is the issue of whether societies of actual occasions without a dominant conscious member at every moment can likewise be said to possess ontological agency or a power of self-disposition.

My argument is that every society as a structured field of activity exercises agency, albeit in and through the coordinated individual agencies of its constituent actual occasions. That is, the society or field exercises what might be called a collective agency derivative from the coordination of the individual agencies of all its constituent occasions. Thus, in a human being or other organism with a central nervous system, the agency of the “soul” or “mind” is coordinated with the agencies of all the other subsocieties of actual occasions, both living and nonliving, within the body. Likewise, within an inanimate compound, such as a rock or a human artifact, the various subsocieties of actual occasions are coordinated so as to maintain over time basic physical characteristics, such as shape, size, molecular configuration, and so on. Admittedly, no self-awareness is thereby involved, but the entity in question is not a pure aggregate that, in principle, could break apart at any given moment (Bracken 1991, 39–56).

Charles Hartshorne (1936), to be sure, argued persuasively in a celebrated article long ago that complex or “structured” societies of actual occasions only exercise agency in virtue of the agency of a dominant

actual occasion at any given moment, hence, that the only societies with effective agency or power of self-disposition are those that are “monarchically” organized. “Democratically” organized societies in which there is no “soul” or central organizing actual occasion are, as noted earlier, simply aggregates with no power of agency or self-control (Hartshorne 1936, 193–210). Thus within Hartshorne’s scheme, all effective unity and organization is from the top downward. The dominant actual occasion is responsible for the ontological unity and agency of the entire entity. Where such a monarchical form of organization is totally lacking or non-operative (as, for example, in cellular interaction within organisms), then whatever organization and unified activity exist within or among the macroscopic entities in question are, at least in principle, inexplicable, since we are presumably dealing here with nothing more than an aggregate of actual occasions.

On the other hand, if these distinct levels of organization both within organisms and within inanimate compounds are understood to be democratically organized Whiteheadian societies with a collective agency proper to their own level of existence and activity, then they can interact with one another quite apart from the influence and control of a dominant actual occasion (or regnant subsociety of such dominant occasions, that is, a soul). Furthermore, if the societies in question are understood to be structured fields of activity for their constituent actual occasions, then there seems no reason to deny that these fields can be hierarchically ordered vis-à-vis one another, with the more comprehensive fields of activity setting forth conditions for the existence and operation of the more specialized fields.

Whitehead himself seems to be thinking along the same lines in the following citation from his masterwork *Process and Reality*:

Every society must be considered with its background of a wider environment of actual entities, which also contribute their objectifications to which the members of the society must conform. Thus the given contributions of the environment must at least be permissive of the self-sustenance of the society. . . . But this means that the environment, together with the society in question, must form a larger society in respect to more general characters than those defining the society from which we started. Thus we arrive at the principle that every society requires a social background, of which it is itself a part. (Whitehead 1978, 90)

It requires no great stretch of the imagination, moreover, to see this scheme in an evolutionary context. That is, the more comprehensive fields of activity with their more general characteristics had to exist prior to the emergence of more specialized fields of activity with their more particular characteristics. Only when the more comprehensive fields of activity themselves achieved a certain stability of existence and self-organization could the jump be made to a still more specialized field of existence and activity with its own set of constituent actual

occasions. Hartshorne's scheme, on the other hand, is not so readily set within an evolutionary context. That is, insofar as Hartshorne views unity and organization "from the top down," as noted earlier, with the dominant actual occasion controlling the operation of the subordinate actual occasions within a complex or "structured" society at every moment, there really is no logical way to allow for "the radical diversity among levels of activity in the world and the emergence of genuine novelty at all stages of evolutionary history," as Barbour insists in *Religion in an Age of Science* (Barbour 1990, 227).

The problem, of course, is even more acute when one seeks to expand the Whiteheadian notion of society to include strictly social forms of organization such as physical environments or, on the human level, communities. Clearly, at this level of organization within nature, monarchically organized Whiteheadian societies are not appropriate. There is no dominant member within a physical environment or a human community that would correspond to the soul or central organ of control within an organism. These higher forms of organization and activity must be constituted along the lines of a democratically organized Whiteheadian society. At the same time, most people would be very reluctant to say that these complex forms of societal organization and activity are simply aggregates whose members lack, in principle at least, any permanence and stability in their ongoing interaction.

At this point we are in a position to rethink Whitehead's and Hartshorne's unipersonal understanding of God. Whitehead (1978, 87–88) argues that God is a transcendent actual entity whose process of concrescence never ends. Hartshorne (1964, 174–211) was unhappy with this understanding of God for various reasons and stipulated instead that God is a society of personally ordered conscious actual occasions with a relationship to the world like that of the soul to the body. At least one reason why they both assume God to be unipersonal is because within their metaphysical schemes the only possible ontological unity is the unity of an actual entity or actual occasion. Both accept the validity of what Whitehead (1978) called the ontological principle, that is, that "all real togetherness is togetherness in the formal constitution of an actuality" (p. 32), namely, an actual entity or an actual occasion. Societies, accordingly, do not possess ontological unity except in terms of their constituent actual occasions. For Whitehead, therefore, God possesses ontological unity because God is a transcendent actual entity, albeit one always in process of concrescence. For Hartshorne, God is a personally ordered society of actual occasions that achieves ontological unity in the unity of its latest member, its latest actual occasion. The Trinity understood as a bona fide community of three distinct divine persons is, in terms of Whitehead's and Hartshorne's scheme, tritheism,

an aggregate of three separate centers of subjectivity, each with its own ontological unity.

If, however, we accept the reinterpretation of Whitehead's category of society that I have sketched here, then a communitarian model for the doctrine of the Trinity is quite legitimate within the framework of process-relational metaphysics. That is, if democratically organized Whiteheadian societies possess an ontological unity appropriate to their own level of existence and activity, and if in addition such democratically organized Whiteheadian societies possess a collective agency derivative from the interrelated individual agencies of their constituent actual occasions, then one can logically affirm that the three divine persons by their dynamic interrelation from moment to moment constitute the objective reality of one God, not three gods. They are, in Whiteheadian terms, a complex "structured" society composed of three interrelated personally ordered subsocieties of conscious actual occasions corresponding to "Father," "Son," and Holy Spirit.¹

Earlier I mentioned that Whiteheadian societies are best understood as structured fields of activity for their constituent actual occasions. Applied to the communitarian model for the doctrine of the Trinity, this means that the ontological unity of God, that is, the divine nature that makes the three divine persons be together one God, is an all-encompassing field of operation for their internal relationality with one another and for their external activity with respect to creation. Each of them, as a transcendent personally ordered society of actual occasions, has an infinite field of activity. But these three infinite fields of activity are necessarily in the end only one infinite field shared equally by all three persons. The one all-encompassing field of activity proper to the divine nature has, in other words, three interrelated foci or centers of activity corresponding to the three divine persons in their dynamic interrelation.

Before one dismisses this scheme as the product of an overheated imagination, it would be good to recall that Wolfhart Pannenberg, one of the most respected systematic theologians at the present time, has a strikingly similar model for the doctrine of the Trinity. That is, in his *Systematic Theology*, volume 1, Pannenberg (1991, 382–84) proposes that the underlying nature of God is a "force-field" for the dynamic interrelation of the three divine persons. Then, in volume 2, he further suggests that the field of activity proper to creation, namely, space-time, is contained within the all-encompassing field of activity proper to the triune God (1994, 79–102). This is all the more remarkable in that Pannenberg is not influenced here primarily by the philosophy of Alfred North Whitehead but rather by reflections on the notion of *pneuma* as opposed to that of *nous* for the understanding of God among the Apostolic Fathers.

Because Origen and other early Christian theologians distrusted the Stoic notion of *pneuma* as something material rather than spiritual and thus as inappropriate for the description of God as pure spirit, they resorted to the concept of *nous*, or mind. But, in so doing, they reinforced the image of God as a single transcendent subject of activity as in Judaism rather than the image of three interrelated divine subjects of activity as in Christian trinitarian theology. Only with the new understanding of immaterial force fields derived from contemporary physics can one use the biblical notion of *pneuma* to describe the underlying nature of God as spirit and to indicate that the Holy Spirit is one of the three interrelated centers of activity within that divine force field (Pannenberg 1991, 382–84).

To sum up, then, I have sketched a revisionist understanding of the Whiteheadian category of society. The initial need for such a reinterpretation of the Whiteheadian category of society arises out of two systemic weaknesses in process-relational metaphysics, as pointed out by a friendly critic, Ian Barbour. The first is the difficulty of providing for a needed sense of continuity for the human self in the midst of the discontinuity of successive actual occasions as distinct moments of experience. The second is the relative inability of process-relational metaphysics to account for the fact of multilevel interaction both within organisms and among inanimate things. In the course of this essay, I myself have alluded to still another systemic weakness in Whitehead's metaphysical scheme: the inability of Whitehead's category of society paradoxically to explain the existence and operation of larger societal realities such as physical environments and human communities. For, evidently, these higher forms of social organization are not pure aggregates with little or no internal cohesiveness among their members. At the same time, it is difficult to think of them as monarchically organized Whiteheadian societies.

There are, then, good reasons to undertake this revisionist understanding of a key category within Whitehead's metaphysical scheme, quite apart from any reference to the Christian doctrine of the Trinity. If, on the other hand, it turns out that this same revisionist approach to the Whiteheadian doctrine of society can be suitably employed to legitimate a trinitarian understanding of God within the context of process-relational metaphysics, still more reason exists to support this speculative revision of Whitehead's thought. Truth, after all, is ultimately one. In principle, the truth claims of religion and science should reinforce, not contradict, one another (Barbour 1990, 16–30). Admittedly, it may take considerable time to work out a suitable philosophical conceptuality whereby these separate truth claims from religion and science can be reconciled with one another. But this was clearly what Thomas Aquinas had in mind with his attempt to wed the philosophy of Aristotle with the data of Christian

revelation in the Middle Ages. Likewise, in subsequent centuries, Christian theologians have worked at the same task with still other philosophical schemes. As I see it, we in our time can do no less.

NOTE

1. The names "Father" and "Son" are given in quotation marks to indicate their purely metaphorical, nonsexist intent.

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