

A Conceptual Background for Ecozoic Aspiration

by Lewis S. Ford

Among the many general concerns of the ecological movement, two stand out as particularly noteworthy. Firstly, there is the widespread appreciation of the interconnectedness of things; how each is dependent on others, and they in turn are dependent on it. This movement intuits the greater our sense of interdependence with other peoples and with nature, the less we shall be inclined to suppose that our independence justifies the imposition of our interests and goals on other beings. Secondly, the ecological movement has a sense of the intrinsic value of things. Value as seen by the ecologist isn't merely a human projection of concerns on things, but is rather an expression of value which belongs to them for what they are.

These two concerns are themselves interconnected. If we were all truly independent selves, then the only values we could have access to would be our own. Then it would make sense for us to impose our values on others. Insofar as we were ethnocentric, we would be right in imposing our values on other ethnic groups. Without intrinsic value in nature, there would be no inherent reason for us to respect any value other than our own. We can only be influenced by values beyond our own if there are real values “out there” upon which we depend.

Alfred North Whitehead's process philosophy

Interdependence and intrinsic value are central features of the “process philosophy” of Alfred North Whitehead. In this paper I would like to propose Whitehead's thought as a conceptual framework for ecological concern, or as some would have it “ecozoic” aspiration. At first glance, the thought of Whitehead appears to be a very unlikely source of ecological guidance. For one thing, his major work, *Process and Reality*, was first published in 1929. While the work has lasting significance, and continues to excite interest among scholars, its advent obviously took place long before the recent awakening of ecological consciousness. Also, one would expect a work of greatest relevance to emerge from those fields most relevant to ecology such as biology and environmental studies. Whitehead was a British



mathematician and theoretical physicist nearing retirement when he was called to teach philosophy at Harvard in 1924.

During the initial decades of the 20th century, Whitehead experienced the revolution in physics first-hand and became convinced that its conceptual foundations needed to be transformed. For the customary space, time, and matter, he substituted events and characteristics. The difficulty with matter, for Whitehead, lay in the assumption that each material entity was perfectly and fully itself without reference to any other material entity. In other words, relations of one entity to other entities were purely external, that is, they made no difference to what an entity was in itself.

Programmatically, Whitehead made the opposite assumption: every event (entity) is internally related to other events. These relations are internal, for each makes a difference to that event and are constituents of that event. Moreover, he assumed that an event had no independent features whatever; it was nothing but its relations.

Process vs. Substance.

Whitehead's process philosophy is usually contrasted with substance philosophy. Substance was classically defined by Descartes as that which needs nothing other than itself to exist. In other words, a substance cannot be affected by any relations it might have. An event as Whitehead conceived it has no substantial element, nothing which is other than its relations.

Since they are relatively independent of their surroundings, substances can endure, and hence undergo change. Change is explained as the exchange of some properties (generally called accidents) while the substantial core remains the same. That means at best that only some relations could be internal. The accidental relations must be external, not affecting the substantial core, for if they did, the substance would not endure and remain the same.

Now a wholly relational entity cannot be an enduring substance. An event neither endures nor changes. These are rather properties of successive events. Endurance is the sameness several successive events might possess, while change is the difference between events. In order to be fully relational, then, process had to be substituted for substance. The world was conceived as constituted by events.

How events come into being.

In Whitehead's first major philosophical book, *Science and the Modern World* (1925), he analyzed the nature of events and criticized the substantial view of materiality as the "fallacy of misplaced concreteness." He didn't develop the concept of process in that book, although he envisioned the possibility of extending his understanding of events to cover the evolutionary emergence of elementary particles, atoms, and molecules, as well as living organisms. In *Process and Reality* he extended his speculative inquiry into how these events with their interrelations could come into being.

He analyzed a causal relation in terms of prehension, a derivative of the word of apprehension, which could be applied to all events, not just conscious ones. If A causes B, then the present event B prehends the past completed event A. Ordinarily we think of that which we immediately perceive as part of the present. According to relativity physics, however, and so in Whitehead's thought, events that occur contemporaneously cannot causally influence one another. Thus the objects we perceive, or prehend in the present, Whitehead argued, have the same structure as past beings, and should be classified as the immediate past rather than the objective present.

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Events occurring in the present are not determinate unities (or beings). They are rather acts of becoming whereby the many relations or prehensions of other beings are unified together into a definite experience. Concrecence is the name for this process of growing together (con+creocere) into something concrete. Concrecent unification is a subjective process, in contrast to the objective unity which comes into being when concrecence is realized. Then each completed event becomes the objectively available to be prehendend as successive events occur.

The actuality of present events—events in the process of becoming or, in Whitehead's terminology, concrecence—is subjective insofar as each entity's only direct access to it is by means of inner subjectivity. At its lowest nonmental level this subjectivity simply means the capacity to be influenced by other actualities (*i.e.*, to have internal relations). Mentality involves the added feature of being capable of being influenced by possibilities.



Consciousness is a far more complex property applicable only to very restricted actualities such as animal and human minds.

Whitehead found that his analysis of concrescence (how a completed event comes to be) was incomplete without an additional factor he called subjective aim. Without it there would be no guarantee that the various prehensions of an event in process would all grow together in the same direction. They could just grow apart, in which case no unity or being could be achieved. This aim could not come from the multiplicity of past actualities of completed events, for it was precisely they which were to be prehended and unified through concrescence. He reasoned that the unifying factor, the subjective aim experienced by the event in process, comes from God as the cosmic coordinator of the universe.

Creativity and God.

Though Whitehead does not do so, concrescence, the process of an event coming to fulfillment or completion, might be described as creation. Creation is purposeful emergence, one which doesn't simply happen by chance. This is not, however, creation in the traditional theistic sense. It does not come about *ex nihilo* by the eternal fiat of a transcendent, omnipotent Creator. Concrescence is an immanent temporal act, growing out of past events, occurring over and over in an evolutionary sequence. Nevertheless it is creation in the sense of bringing forth new beings within the sequential occurrence of events. Nor is this random emergence in the non-theistic mechanistic sense. Events do not simply repeat themselves; change is not merely accidental.

The ecological movement seems at times to avoid the question of God. This emphatically does not mean that spirituality is absent, or that this movement's attitude towards God is shaped by the increasing secularization of our culture. This spirituality, however, is purely immanent. It is, in general, piety to the Earth and its values and not to any transcendent being.

While it may be a political choice of the movement to avoid mention of God in order to unite theists and agnostics in a common ecological endeavour, I suspect the ambivalence towards the notion of God is really a distaste for any omnipotent being.

Those who trust the benevolence of an omnipotent being will usually have other reasons, grounded in their sacred scriptures or religious tradition, for doing so. But there is nothing inherently benevolent about an omnipotent being, nothing that requires that an all-powerful being will always will for the best. The character of “Q” on *Star Trek: The Next Generation*, endowed with all power but with infantile desires, illustrates this point.

Further, omnipotence undercuts any interdependence between God and the world. Understood as omnipotent, God alone is independent, while all other beings are dependent on God for their existence. God alone is immutable, self-sufficient, and needs no world to exist in perfection. An omnipotent God having unlimited power is a despot. It is possible that God, as so understood, may be a benevolent despot, but there is no intrinsic reason why this must be so.

Scientists are rightly distrustful of this notion. If God can do anything whatsoever, then God can complete any process we have only incompletely analyzed. This weakens any commitment to further scientific inquiry. Conflicts such as these led Whitehead, a scientist, during the last decade of the 19th century to a seven-year independent study of theology in which he found no adequate concept of God. While Whitehead grew up a devout Anglican, he became profoundly atheistic around 1898. Bertrand Russell collaborated with Whitehead on *Principia Mathematica* during the years around the turn of the 20th century, and found him just as atheist as Russell himself was. I suspect the notion of God Whitehead objected to was the notion of an omnipotent Creator, for when in 1925 he found a meaningful concept for God which did not require omnipotence, he immediately published it.

How can God be God and yet not be the omnipotent creator? This is possible when the notion of divinely perfect power is understood in a different way. Divine persuasion replaces omnipotence. God acts primarily by providing concrescences with their initial subjective aims (guidance experienced as a lure of feeling). The subjective aims are the possibilities which if realized achieve the best well-being for the occasion (the event as it is fulfilled in its concrescence) and its surroundings. The particular concrescence of an event is an act of self-creation which modifies the subjective aim by integrating it with the other causal relations impinging on the event (*i.e.*, the other events prehended). The creature, in this way of



thinking, escapes divine determinism by means of the causes the creature prehends, and the creature escapes causal determinism (mere repetition) by means of the freedom God provides. We may thus say that God creates by persuading the creatures to create themselves in novel ways.

God, in Whitehead's thought, is omniscient, but not in the traditional sense, which imagines an unchanging knowledge which already includes determinate knowledge of the future. Omniscient knowledge in the traditional sense is the knowledge possessed by a perfect being, assuming that perfection means immutable completeness. Process omniscience, on the other hand, is perfectly contoured to what is known, the actual as actual and the possible as possible. From this perspective it is impossible to know a future possibility as if it were already determinately actual.

God is in process in that the divine knowledge is evergrowing. What we do doesn't simply replicate knowledge which God always had. What we do makes a direct contribution to the divine life. The aims God provides are ordered to God's own life, enriches God's experience, and correspondingly God's knowledge.

There is a reciprocity here, even an interdependence. The world is dependent upon God for the order which it has, partial though it may be, since only incompletely actualized. God is dependent upon the world for the enrichment of the divine experience. This concept of God is fashioned after the order of a constitutional monarch in which God is self-limiting for the sake of a world which is truly other than God's own being (something other than an expression of God's absolute will), and can contribute to the divine well-being.

Contrast with traditional theism.

Those who conceive of an omnipotent God in the traditional sense are embarrassed by the disorder in the world. Augustine was troubled that it should take the Creator seven days to bring forth the world. An omnipotent being ought to be able to do it instantaneously. Likewise there should not be such a long and tortuous route to the emergence of humans as the fossil record has taught.

Yet the difficulties resulting from conceptions of God as omnipotent do not require the absence of a cosmic coordinator in the process sense. Without a cosmic coordinator, can we be assured that anything would come about? If the world consists basically of free beings, each intent on doing its own thing, should any order emerge? Entropy indicates that there will be growing disorder, and things will descend into chaos.

Omnipotent thinking also has a problem with evil in the world, because an omnipotent being ought to create a perfect order. The failure of an omnipotent being to do so can only be explained by some malevolence in the being of such a creator or by the hypothesis that the created order is a soul-school of suffering offering a potential for transition to the perfection of the omnipotent being in a realm beyond the world. Yet again, this difficulty with a God conceived as omnipotent does not require the absence of some cosmic persuasive power. For there is also the problem of the good. Why in the absence of God should there be any order at all? The world as we find it is partially ordered, partially disordered, partly good, partly evil. That is as we should expect it if God is a cosmic coordinator persuading the world to adopt order.

Contrast with traditional evolutionary theory.

Evolutionary theory, framed in accordance with scientific methodology, postulates two principles: random mutation and natural selection. By natural selection any organism suited to its environment will multiply and thrive and persist. Random mutation, however, basically appeals to chance. Chance is really the absence of explanation. Chance cannot be explained by reference to principles, for they are generalizations from uniform behavior. Process creation, as purposeful emergence, substitutes initial aims for the element of chance.

Religion in the Ecozoic Era

Interdependence.

Some people see the ecological movement as ushering in a new religion, one, as stated above that is based on piety to the Earth and its values and not to any transcendent being. I hope I have shown, however, how it is possible for it to revitalize personal theism in a way that is consistent with ecological concerns, provided theism is understood in interdependent terms. But whether the deep spirituality that many ecologically minded have engenders



a new religion or revitalizes an old one, values are clearly experienced and these values are intrinsic to other sentient beings.

Becoming and value.

In opposition to the scientific materialism of Whitehead's day, which held that material entities had no value in themselves, Whitehead declared "'Value' is the word I use for the intrinsic reality of an event" (SMW 93). Pure scientific theory held fact and value apart, and saw its job as investigating the facts alone in an objective fashion as possible. This has considerable plausibility as long as we confine ourselves to facts. They are what they are, and may be seen to be devoid of any value of their own.

Yet, if Whitehead is right, and every event is not just a fact, but the outcome of an act of becoming, the situation is quite different. For becoming and value are inseparably intertwined. There are many ways in which the prehensions can be integrated. This requires decision in the root sense of cutting off alternatives. Some are better or worse and must be valued as such. Also the achievement of concrecence brings a measure of self-value.

We saw that the minimal meaning of subjectivity is the capacity to be affected by other actualities. For each actuality is a dynamic recipient of internal relations to others. But these relations do not come pre-ordered. The task of the subject is to order, to integrate, and this by means of decision. But such decision is so primitive and all-pervasive that it need not yet require mentality. Mentality's capacity to be influenced by possibility intensifies the decision-making process in those events to which it pertains.¹

Martin Buber has championed the cause of intrinsic value, but he has restricted his conceptuality to the human situation, even though he has written about extending his concern to encounter a tree as a "Thou." Whitehead shows a way of generalizing Buber's concept of intrinsic value to

¹ *Editor's note:* Process philosophers take a variety of positions on whether mentality, defined by Ford as the capacity to be influenced by possibilities, is present in all actualities. Some take the position that it is and they interpret Whitehead as expressing a "pan-psychic," "pan-subjective" or "pan-experientialist" view. For example, see Leemon B. McHenry, "Whitehead's Panpsychism as the Subjectivity of Prehension," *Process Studies*, Volume 24, page 1. McHenry argues that the concepts of prehension and concrecence require that events be understood as "centers of experience actively selecting from their environments."

other-than-human actualities. We may consider Buber's three primary words from the standpoint of value. The "I" is an intrinsic source of value. The "Thou" is an intrinsic source of value I encounter, and by which I am transformed. The "It" has no value except the value I impute to it.

Jean-Paul Sartre exhibits the opposite attitude from Buber. In his terms, we can only be truly authentic if we generate and live by our own values. This means that it is strictly inauthentic to be affected by the values of another, to encounter a Thou. Every Thou, including the Source of our Being, must be reduced to an It, a projection of my own values. This is the deepest root of Sartre's atheism.

The separation of fact and value, which underlies a great deal of modern thought, means that value in the end is imputed. This is particularly true in applied science, where materialistic facts are real, but values are introduced from elsewhere, *e.g.*, in terms of economic rationality and productivity. In Whitehead's process thought, on the other hand, fact and value are inseparable. Every actuality (fact), in its process of becoming, exhibits value. Others are thus encountered as Thous, as intrinsic centers of value.

Conclusion

This has not been an empirical study in which any of the concrete interrelationships of plants, animals, humans, and their environment have been examined. It is rather the presentation of an abstract conceptual background for interrelatedness. If events are themselves minor purposeful emergences (creations), then the value they necessarily achieve for themselves will be values we can experience in them. There is an interdependence here: Each is enriched by the values of others, and each contributes its own self-value to others. This to me is the essence of ecology and a significant contribution to a conceptual framework for those who aspire to realize an Ecozoic Era.



Recommended Reading

Whitehead, Alfred North

Science and the Modern World. (Free Press, 1967).

One of the first presentations of the rise of modern science, coupled with his critique. (Skip the chapter on abstraction.)

Religion in the Making. (Fordham University Press, 1996).

Reflections on religion, coupled with an adaptation of his own metaphysics (ch. 3) to western theism (ch. 4). Accessible, provocative.

Process and Reality. (Free Press, 1978).

Read the final chapter only. (The first chapter is also accessible.)

The full process concept is really only developed in this last chapter.

This is the heart of process theism.

Introductions to Process Theism

John B. Cobb, Jr., and David Ray Griffin. *Process Theology: An Introductory Exposition.* (Westminster Press; 1976).

C. Robert Mesle. *Process Theology: A Basic Introduction.* (Chalice Press, 1993). In this book, Mesle presents a nontheistic—or pantheistic—alternative as well.

Applications to Ecology

John B. Cobb, Jr. *Is It Too Late? A Theology for Ecology.* (Environmental Ethics Books, 1995).

Herman Daly and John B. Cobb, Jr. *For the Common Good: Redirecting the Economy Toward Community, the Environment, and a Sustainable Future.* (Beacon Press, 1989, revised 1994). Daly, an economist, and Cobb have worked out a better standard for judging the economic well-being of a society than its GNP. In another book, *Sustainability: Economics, Ecology, and Justice* (Orbis Press, 1992), Cobb reflects on the theological implications of this enterprise.

Jay B. McDaniel. *Of God and Pelicans: A Theology of Reverence for Life.* (Westminster/John Knox, 1989).