Evolution’s God: Teilhard de Chardin and the Varieties of Process Theology

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A year and a half before his death, Pierre Teilhard de Chardin (1881-1955) asked “Who then at last will give evolution its God?”¹ His endeavor to answer that question often bears striking similarities to the process theism of Alfred North Whitehead (1861-1947) and Charles Hartshorne (1897-2000). Yet, the differences are also important. All three are rightly classified as promoting versions of process-relational philosophy, but they show by their divergences that process thought—especially process theism—is far from yielding a monolithic viewpoint.² Teilhard’s education as a priest included philosophy, but he was a practicing geologist with a good understanding of paleontology. Whitehead was a mathematician, logician, and a philosopher with a deep knowledge of mathematical physics. Hartshorne was first and foremost a philosopher, but he also made a significant contribution to the study of oscines.³ All three were conversant with both philosophy and science, but none identified as a theologian.

My task here is three-fold: first, to argue that Teilhard’s posthumously published writings are most akin to what Whitehead called speculative philosophy; second, to clarify what Teilhard means by evolution; and third, to address his question about “evolution’s God” by articulating, with insights from Whitehead and Hartshorne, what I call the ontological principle of correlativity between God and the world (abbreviated as CP for correlativity principle). As we


shall see, CP brings these three thinkers together without resolving their differences. Teilhard is at his greatest conceptual distance from the philosophies of Whitehead and Hartshorne in his thoughts about the future of the evolutionary process. Even so, the three speak with one voice in condemning our most narrowly constructed tribal, national, and religious identities.

**Teilhard and the question of metaphysics**

Before Teilhard was acclaimed as a religious visionary, he was known as a scientist. Even as his scientific career advanced, however, he expressed criticisms of the traditional metaphysic of *Esse* [to be] and spoke frankly of replacing it with a metaphysic of union, *Unire* [to unite]. He was advised to steer clear of philosophy and theology, but he soon realized that even an apparently innocent note on original sin could get him into trouble. In 1922, Teilhard was asked by some theologians to sketch ideas about original sin in view of evolution. The note, which was never meant for publication, mysteriously made its way to Rome. In July 1925, Teilhard’s superiors required that he sign a statement of obedience to Church teaching on six propositions concerning original sin. He was conflicted, but finally signed the statement. This episode weighed so heavily on him that he wrote to his friend Auguste Valensin in January 1926 that he sometimes felt like a bird caught up in a great whirlwind; he said that he no longer had much confidence in the “official decisions and directions” of the Church. Those decisions included a consistent pattern of prohibiting Teilhard from publishing his major works, which were widely available only after his death. In the words of his close friend and colleague, Pierre Leroy, “... to the final moment of his life, Teilhard suffered the intransigence of Rome ...”

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Teilhard was under no illusions about the obstacles he faced. In a letter to Max and Simone Bégouën in May 1940, he predicted that he would have both the “pure scientists as well as the pure disciples of metaphysics” against him. He was not mistaken. Six years after Teilhard’s death, Peter Medawar, a Nobel laureate in chemistry, published a bad-tempered, patronizing, and uncharitable review of the first translation of *Le phénomène humain*. Medawar considered Teilhard to be a mediocre and confused scientist, and he called Teilhard’s book “philosophy-fiction.” The great medievalist, Étienne Gilson avoided personal attacks, but he neatly balanced Medawar’s language by speaking of Teilhard’s work as “theology-fiction.”

Teilhard endeavored to speak, as he had been directed, only as a scientist. He advises the reader of *Le Phénomène Humain* to read the book “uniquely and exclusively as a scientific treatise.” He conceded that his book might appear philosophical because of the breadth of the study, which endeavors to consider the *entire* human phenomenon, encompassing aspects of it that Teilhard believed had too often been ignored or overlooked. He noted that the appearance of doing philosophy was characteristic of the works of great modern scientists like Poincaré, Einstein, and Jeans, who attempted a broad-based and scientifically informed understanding of the universe. He claimed, “It is impossible to attempt a general scientific interpretation of the universe without *seeming* to want to explain things completely. But only take a closer look at it, and you will see that this ‘hyper-physics’ is still not a metaphysic.”

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His critics often do not take Teilhard’s qualification seriously enough; Medawar, for example, did not even mention “hyper-physics” in his review. Yet, Teilhard’s caveat should not be finessed. Some insight into what he meant by hyper-physics can be found in an April 1934 letter to Henri du Lubac:

I mistrust metaphysics (in the usual sense of the word), because I smell a geometry in it.

But I am ready to recognize another sort of metaphysics which would really be a hyper-Physics,—or a hyper-Biology.

Teilhard explained that he instinctively distrusted reasoning that is “abstract, geometrical, extra-temporal,” a “pseudo-absolute knowing” grounded in “the world of ideas and principles.” This sort of knowledge, he believed, ends up in “Geometry (and Theology).”12 One is led to believe that Teilhard’s project is also a version of hyper-physics that stops short of metaphysics, understood as an examination of the essence of being.

What would Teilhard’s work have looked like had he not been trying to appease Rome? My interpretive key to answering that question is that, late in life, when he wrote essays that he knew would not be approved by the censors and thus would never be published during his lifetime, he returned to his metaphysics of union and, in his letters to friends and colleagues, he was more openly critical of traditional metaphysics. I believe that Teilhard’s hyper-physics has strong affinities to what Whitehead called speculative philosophy. Whitehead speaks of “the endeavor to frame a coherent, logical, necessary system of general ideas in terms of which every element of our experience can be interpreted.”13 It is, in effect, a reimagining of metaphysics as an open-ended enterprise which attempts to provide a general understanding of the world, taking

into account not only the deliverances of the sciences but also an expanded range of the human experience of reality. Teilhard’s description of his own project sounds similar: “to develop a homogenous and coherent perspective of our general experience extended to the human.”14 He was, as I have argued elsewhere, a philosopher in spite of the Church.15

Because of his commitment to the Society of Jesus, Teilhard felt pressures that were foreign to Whitehead and Hartshorne. Nevertheless, all three ventured bold speculative hypotheses that emphasize the dynamic processes of nature, especially as these are evident in evolution. Yet, each thinker exhibited epistemic caution—in Teilhard’s words, we should always be ready for reality to disturb us.16 In the same vein, Whitehead wrote, “In philosophical discussion, the merest hint of dogmatic certainty as to finality of statement is an exhibition of folly.”17 Hartshorne was equally emphatic: “Man’s grasp of the absolute is not absolute.” Later, he said: “All philosophy is risky: cognitive security is for God, not for us.”18

**Evolution and Hyper-physics**

For all of Teilhard’s passion for evolution, he rarely spoke of Darwin or Darwinism and he devoted no essay to these topics, although he was clearly familiar with the man and his work.19 It was Henri Bergson’s *L’Évolution créatrice* (1907), which he read while at Hastings (1910-1912), which triggered some of his most creative thinking about evolution. Nevertheless,
neither Darwin’s idea of natural selection nor even Bergson’s *la durée* or *élan vital*, capture what Teilhard means by evolution. Nothing more characteristic of Teilhard than the following:

Truly blind are those who do not see the amplitude of the movement whose orbit, infinitely surpassing the natural sciences, has successively won and invaded the surrounding domains of chemistry, physics, sociology, and even mathematics and the history of religions. One after another, all the fields of human knowledge have been shaken and carried away by the same basic current that leads to the study of some development. Evolution: a theory, a system, a hypothesis? Not at all, but much more than that, a general condition to which all theories, all hypotheses, all systems, must henceforth bow and satisfy if they are to be thinkable and true. A light illuminating all facts, a curve all lines must follow: such is evolution.20

Darwinian natural selection is applicable beyond biological organisms and species, but what Teilhard is talking about is more expansive. It is the deceptively simple idea of development, that a thing—a physical object, an organism, an individual, a species, an ecosystem, etc.—cannot be understood apart from a process that produced it, and beyond that, the thing produced is itself a process. As Teilhard says, “Today, positive knowledge of things is identified with the study of their development.”21 He understood that the machine metaphor for natural processes—as in the idea of a “clock-work universe”—had nearly run its course and that development was the key to the intellectual discoveries and theories of the nineteenth century, from astronomy to zoology.

Teilhard recognized development for the revolutionary idea that it is.

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Teilhard, Whitehead, and Hartshorne stressed the necessity of developmental categories, but Teilhard was most insistent about this, especially when it comes to the concept of thresholds of life and thought in the evolutionary process. Whitehead and Hartshorne never doubt the truth of evolution, and Hartshorne argued for the primacy of asymmetrical relations in both logic and metaphysics. For Teilhard, evolution is an organizing principle of his vision. We are tempted, he says, to imagine the universe throughout space and time as a vast garden in which flowers are interchangeable at the gardener’s caprice.\(^\text{22}\) The more we learn about the world, however, the more we understand that individual organisms, as well as species, and the ecosystems of which they are parts, grow or develop in stages, the later stages presupposing the earlier.

Many of those in the nineteenth century who began to think developmentally were overly fond of mechanistic metaphors. They supposed that every state of the world is the necessary result of the previous state of the world, traceable into the past through a chain of causes and effects. Much of developmental thinking continues to make this assumption, but a strict deterministic model is not only extraneous to the idea of development, it is arguably antithetical to it. Determinism posits an *absolute regularity* in things, whereas genuinely developmental processes introduce *novel forms* of matter, life, mind, and culture. The regularity is *absolute* in the sense that, given an arbitrary set of causal factors, there is only *one possible* effect. The idea that there is nothing new under the sun is exactly wrong—there was a time when the sun itself was new. To be sure, development requires regularity and is incompatible with sheer chaoticism, but the point is that it does not require absolute regularity. Hartshorne was admirably clear about this: the logical contradictory of absolute regularity is non-absolute regularity, *not* absolute irregularity. Time and again, Hartshorne argued that determinism and chaoticism, are logical

contraries, both may be false, and process-relational philosophers hold that, indeed, both are false.

Teilhard’s metaphysics of union provides the framework for combining the regularity of the elements of the universe in accordance with nature’s laws with the novelty required by developmental processes. In Teilhard’s words, “Each new union realized increases the absolute quantity of being in the universe.” The yet-to-emerge union he refers to as an outline (ébauche), or a shadow, of being. On this subject, Teilhard was consistent throughout his life. In the words of Madeleine Barthélemy-Madaule, “being as incessantly fused, incessantly increasing itself; the cosmos as creative actuality. All of Teilhardianism is there.” These ideas are also at the heart of the philosophies of Whitehead and Hartshorne. In Whitehead’s pithy phrase, “The many become one, and are increased by one.” Hartshorne says, “‘Creative’ means additions to the definiteness of reality. Every effect is in some degree, however slight, an ‘emergent whole’.” These formulae are only verbally different from Teilhard’s metaphysics of union.

In keeping with the idea of a dynamic, unfinished, universe, Teilhard conceived of development as more than a combinatorial unfolding of physical forms. There is also a deepening or an expanding of subjectivity. Teilhard was keenly aware of the inadequacy of the Cartesian identification of experience with human experience, and he refused to follow materialist theories of reality for which questions of “interiority,” or what it is like to be a unit of reality “from the inside,” are so often ruled inadmissible. Whitehead remarked that Leibniz “explained what it must be like to be an atom” in contrast to others who declared such ideas to be...
mistaken.\textsuperscript{27} Teilhard did not consider it a mistake. He is well-known for the claim that there is both a Without of Things (\textit{le Dehors des Choses}), corresponding to the aspects of the stuff of the universe studied by physics, chemistry, and biology, and a Within of Things (\textit{le Dedans des Choses}), corresponding to the experiential or psychical aspect of things. These two sides of reality advance together in a “law of complexity and consciousness,” a structured relation between physical complexity and psychic or qualitative depth of experience.\textsuperscript{28} It is not too much to say that the Without of Things is their behavior, and the Within of Things is their feelings.

Whitehead used the word “prehension” to name the particular way an actual entity incorporates the world into its inner life. The reflective awareness characteristic of some human experience (i.e. consciousness) is only the most developed form of prehensive relations of which we are immediately aware. Teilhard would have agreed with Whitehead that, “consciousness is the crown of experience, only occasionally attained, not its necessary base.”\textsuperscript{29} The nearest equivalent to “prehension” in Teilhard’s lexicon is \textit{la conscience} which he used to signify “every kind of psychism, from the most rudimentary forms of interior perception conceivable to the human phenomenon of reflective awareness.”\textsuperscript{30} Hartshorne defended the idea of an “affective continuum” of mind-like qualities extending throughout nature, taking a bewildering variety of forms from the dimmest stupor of feeling to the daylight of self-conscious awareness.\textsuperscript{31} In his study of oscines, he asked, in effect, what it is like to be a bird singing, and he asked a similar question of a variety of other creatures.\textsuperscript{32} He complained of a “temporal dualism” that posits an absolute break between substances lacking and substances having mind-like qualities—a mind-

\begin{footnotes}
\item[28] Teilhard, \textit{Le phénomène humain}: 58; \textit{The Human Phenomenon}: 28.
\item[31] Charles Hartshorne, \textit{The Philosophy and Psychology of Sensation} (University of Chicago Press, 1934).
\item[32] For more on this topic see Viney and Shields, \textit{The Mind of Charles Hartshorne}: 95-96.
\end{footnotes}
body dualism read into evolutionary transformations. The fact is that comparative studies in genetics, anatomy, physiology, neurology, and behavior (among others) demonstrate profound continuities among different species. Paleontology rounds out the picture by exploring the continuities through geologic time and the developmental stages that brought us to the present.

Like Teilhard, Whitehead and Hartshorne were suspicious of the concept of matter devoid of any form of subjectivity or experience, and they acknowledged this correlation between “the Without” and “the Within” of things. In their view, feeling is not appended to matter as a separate substance or even as an epiphenomenon; rather, every concrete particular (but not necessarily every grouping of particulars) has both physical and psychical qualities. Some wholes of which actual entities are parts are of varying levels of complexity, and hence, varying levels of mentality. In an almost Teilhardian turn of phrase, Hartshorne observed that physical complexity is a sign of psychical complexity.33 An important difference is that, unlike Whitehead and Hartshorne, Teilhard insisted that evolution exhibits a direction towards ever increasing forms of complexity-consciousness. This “orthogenesis” is not strictly incompatible with Whiteheadian or Hartshornean metaphysics, but it is not something that either of them endorsed. Indeed, Whitehead considered it “a fallacious conception of the universe” to suppose that “all types of seriality involve terminal instances” as in Tennyson’s phrase, “one far-off divine event / To which the whole creation moves.”34 Teilhard, on the other hand, believed that cosmogenesis is finally directed at an “Omega Point.” I find nothing in Teilhard, however, to suggest that he used the dubious premise mentioned by Whitehead that all types of seriality involve terminal instances.

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34 Whitehead, Process and Reality: 111.
The Ontological Principle of Correlativity Between God and the World

When Teilhard asked, “Who at last will give evolution its God?” it was the ideas about evolution that I have just sketched that he believed give rise to a need for reform in the concept of God, as he wrote to Pierre Leroy in 1951. More generally, reform is demanded if the idea of God has ceased to meet demands of logical consistency, of philosophical coherence, of consonance with the deliverances of science, of adequacy to experience, of fidelity to sacred texts or traditions, or the ability to illuminate religious life in some fashion. To greater and lesser degrees, these factors have contributed to process-relational theism as a school of thought, and they are apparent in Teilhard’s own reflections on the concept of God. Unlike Teilhard, Whitehead and Hartshorne did not emphasize the cosmic dimensions of Christology in reforming the idea of God, but there remains a great deal of convergence in their philosophical theologies.

A presupposition of the intellectual and spiritual endeavors of all three thinkers is what I call the ontological principle of correlativity between God and the world (abbreviated CP). This is the principle that concepts of God and of the world are correlative, they have implications for each other. The closest I have found to an explicit statement of this principle in their writings is when Hartshorne speaks of correlative errors in the ideas of God and the world.

One of my deepest convictions is that since Creator and creature as such, or in abstraction from all further specificity, are correlatives, errors about the one abstraction invariably go with errors about the other. An analogical thought about God that starts from a false idea of the ordinary case is bound to result in a false idea of God, and vice versa, for of course one may read the analogy in either direction.36

35 Leroy, Lettres familières: 98; Letters from my friend: 89.
The idea of creation *ex nihilo* in Thomas Aquinas is a case-study in CP. By virtue of Genesis, Aquinas believed that the universe, and with it, time, had a beginning. He also argued that, whether or not the universe had a beginning, it would require a creator that creates from no pre-existing material.\(^ {37} \) For Aquinas and other classical theists, the beginning of the universe is not the unique moment of God’s creative act; rather, the act of God that creates the universe occurs at *no* moment of time—it is a nontemporal act that brings into existence the entire sweep of time and space.\(^ {38} \) With many others, Aquinas used the analogy that divine eternity is related to the moments of time as the center of a circle is related to the points on the circle’s circumference.\(^ {39} \)

As the circle analogy suggests, the developmental processes of the universe “come to be” not in a step-by-step process, but by a direct and eternal creative act of God. They exist as if they had already happened. Thus, for Aquinas, the universe is the sort of thing that can exist as a completed whole without coming to exist gradually. From his earliest writings, Teilhard rejected this idea:

We have no serious reason for thinking things are not made in the same rhythm as that in which our experience unfolds them. On the contrary, that rhythm may very well disclose to us the fundamental texture of Spirit.\(^ {40} \)

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\(^ {38} \) By “classical theists,” I mean philosophers and theologians of the caliber of Philo of Alexandria, Augustine, Boethius, Anselm of Canterbury, Al-Ghazali, Maimonides, Aquinas, Leibniz, and Kant. For excerpts from these philosophers (excluding Boethius) and comments on their ideas see Charles Hartshorne and William L. Reese, *Philosophers Speak of God* (Chicago and London: University of Chicago Press, 1953): 76-164.


What Teilhard refers to as “the fundamental texture of Spirit” is precisely the development, through time, of novel forms of matter, life, and mind. Jules Lequyer (1814-1862) spoke of the “magic in the view of accomplished deeds” that makes them appear, in retrospect, as though they were going to happen all along.41 Later, Bergson made the same point: a process that is productive of novel forms can exist in a static series only retrospectively, as viewed from a present moment looking into the past, and not prospectively, looking into the future.

The Thomistic concept can be clarified by using a variation of J. M. E. McTaggart’s distinction between two ways of marking time. On one hand, we imagine a moving present bordered by the past and future (an A-series); on the other hand, we speak of events arranged after the manner of a calendar, as being before some events and after others (B-series). Considered by itself, a B-series contains no present moment; it is simply a structured array of events, like a novel already written. Given only that much information, one cannot say “where,” in time, one is. Information about a “now” or a present moment is missing. For Aquinas, when God creates the universe, it is as a B-series. Knowing only this much, provides no information about the date of the present moment. The present moment has no privileged status in a B-series. For classical theism, the only “now” that is fundamentally real is the entire expanse of time that God experiences; the eternal now is unlike any present moment of which we are aware, for it is not bordered by past or future—paradoxically, it is a timeless now.

Teilhard’s view—shared by Whitehead and Hartshorne—is tantamount to the claim that the B-series itself is a product of temporal process. For example, Socrates died before Aristotle was born. But it was not always so. At Socrates’ death, there were only outlines of what the future might hold, such as “someone named Aristotle born in Stagira after the death of Socrates.”

Until Aristotle was born, there was no fact-of-the-matter such as we now know as Aristotle having been born after Socrates died. Teilhard’s metaphysic of union requires that events are added to the evolutionary-historical process in a cumulative fashion. This is not precisely an A-series, but it is a variation on it. McTaggart presented the A-series as positing a moving present (like a cursor on a slide rule) along a series of events; future events are the ones over which the cursor has yet to pass. The view I am attributing to Teilhard is that, strictly speaking, there are no future events—as Teilhard said, there is only a sketch, a draft, or an outline, (ébauche) of what is to come. According to this view, there is an asymmetry of past and future, and the knife-edge, “specious,” present moment is the transformation of a relatively indeterminate future into a determinate past.⁴²

If there is a genuine cosmogenesis, a becoming of the cosmos, as Teilhard believed, one must ask what “does” the becoming? What is the agency or the agencies that generate(s) this coming-to-be of the real? One occasionally hears someone say that the laws of nature determine the world-process; but this is a category mistake, for the laws of nature do not “do” anything; they are mathematical formulae that require the variables and constants to be filled in with actual values. What does the “work” of creation is something with causal agency. It seems that there are only three possibilities for the causal agencies: either the creatures alone, or God alone, or some combination of God and the creatures. Atheists adopt the first alternative, but this was not the way of Teilhard, Whitehead or Hartshorne. Nor could our trio accept the second idea in which the creatures unerringly play roles for them decided by God. They embraced the third possibility. As far as the creatures are concerned, Teilhard maintained that “the Within of Things,”

consciousness, and spontaneity are three names for the same thing. However, in accord with the law of complexity and consciousness, the most primitive levels of matter appear “dead,” lacking all spontaneity, but Teilhard argues by analogy: the difference in a body’s mass as a function of speed becomes noticeable only at speeds approaching the speed of light; in like manner, mentality varies with physical complexity, but the difference becomes noticeable only at high levels of complexity (as in central nervous systems). Teilhard argues that the regularity of nature itself is the product of multiple minute points of activity. He argues:

. . . from a qualitative point of view, there is no contradiction in admitting that a universe that is mechanistic in appearance may be built of ‘freedoms’ [libertés]—provided that these freedoms be in a state that is sufficiently great in division and imperfection.

In effect, the tiny “freedoms” are half of what Teilhard intended when he spoke of creation of “an evolutionary type”; the other half is God’s activity of making things make themselves.

Once again, Whitehead and Hartshorne were on parallel tracks with Teilhard. Whitehead discusses various ideas about laws of nature, but he preferred the doctrine that they are “immanent” in the sense that they express “the characters of the real things which jointly compose the existences to be found in nature” including God, whose creativity is co-extensive with the cosmos. Hartshorne often quoted Lequyer who spoke of “God, who created me creator

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43 Teilhard, Le phénomène humain: 53; The Human Phenomenon: 25.
45 Teilhard, Le phénomène humain: 58; The Human Phenomenon: 28.
of myself,” but he generalized this idea beyond the human to include other creatures.\textsuperscript{48} Here is one of Hartshorne’s clearest summaries of how a universe in process works:

The causal drift itself is merely the mass of data formed by acts of freedom already enacted on various levels, human, subhuman, and perhaps superhuman. Causality is crystallized freedom, freedom is causality in the making. There is always freedom, for there is always novelty. There is always causality, for always freedom has already been exercised, and a decision once made can only be accepted, it cannot be remade. Past decisions made with at least minimal freedom furnish the only content of new acts of emergent synthesis. Reality is sheer creation, but present creation adds only its little mite to the organic totality of data already accumulated.\textsuperscript{49}

According to Hartshorne, “God’s part in making the world is not the whole of its making; for free creatures are, in their lowly fashion, co-creators, making themselves and the world with the help of God.”\textsuperscript{50} For Hartshorne, God’s creativity guarantees order on a cosmic scale, whereas localized forms of order can be attributed to the joint action of God and the creatures.\textsuperscript{51}

One can imagine Aquinas saying that the “making” of the creatures is God’s “making” of them in such a way that their activity or decisions are instruments that God uses for God’s own designs. Aquinas identified creation with bringing something from nothing, which is the exclusive prerogative of God.\textsuperscript{52} For Aquinas, God is the primary cause of the processes of the universe, whereas the creatures are secondary causes; causation in the two cases, however, is entirely different. This is not the view of process philosophy. Whitehead, Teilhard, and

\textsuperscript{48} Lequier, \textit{Œuvres completes}: 70.
\textsuperscript{50} Hartshorne and Reese, \textit{Philosophers Speak of God}: 140.
\textsuperscript{51} Charles Hartshorne, \textit{A Natural Theology for Our Time} (La Salle, Illinois: Open Court, 1967): 53. For more on Hartshorne’s view on this topic see Viney and Shields, \textit{The Mind of Charles Hartshorne}: 170, 213-215.
\textsuperscript{52} \textit{Basic Writings of St. Thomas Aquinas}, Vol. I: 440 [ST I, Q. 45, art. 5].
Hartshorne all reject the traditional idea of creation *ex nihilo*; as a consequence, they give “creation” a univocal meaning as between God and the creatures. God is the necessary condition of any creaturely activity whatsoever, *but* what the creatures do is create in their own creaturely ways. This is part and parcel of the developmental concept of being that I outlined above. In accepting an evolutionary view of matter, Whitehead saw himself as rejecting the idea of “a wholly transcendent God creating out of nothing an accidental universe.”

In one of his wartime essays, Teilhard called the idea of pure nothingness “an empty concept, a pseudo-idea”—creation, including divine creation, is always an act of unification of a pregiven multiple or multitude. Hartshorne, if possible, was even more emphatic in opposing creation *ex nihilo*.

The concept of creation *ex nihilo* is a perfect fit with the idea that the relation between God and the world is asymmetrical. All creativity goes from God to the creatures, and the creatures can create nothing in God. This is expressed by Aquinas when he says that “creatures are really related to God . . . whereas in God there is no real relation to creatures, but a relation only in idea . . .” The traditional God of *pure act*, with no principle of potency, leaves no conceptual room for saying that the creatures, by their decisions, can have effects upon God. Teilhard’s reason for adopting a metaphysic of union was to counteract this idea, which he considered to be “brutal” because it “dangerously devalues” the created Universe itself, “which the scientific vision tends, on the contrary, to valorize.” Teilhard spoke of “a strictly bilateral and complementary relation between God and the world” and he maintained that what gives life to Christianity is not so much the contingency of the world as “the sense of the mutual

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54 Teilhard, *Écrits du Temps de la Guerre*: 114; *Writings in Time of War*: 95.
55 For a discussion of this point see Viney and Shields, *The Mind of Charles Hartshorne*: 166-169.
56 *Basic Writings of St. Thomas Aquinas*: 124 [ST I, Q 13, art. 7].
completion of the world and God.” By our “zeal for living” we contribute “something irreplaceable to God.” Whitehead and Hartshorne are well-known for the same ideas, although neither was trying to defend Christianity. Whitehead spoke quasi-poetically: “It is as true to say that God creates the World, as that the World creates God.” Hartshorne developed the idea of “divine relativity,” saying, “We are not simply co-creators, with God, of the world, but in last analysis co-creators, with him, of himself.”

These are startling claims to the ears of a classical theist, so it is well to explain them in more detail. In my view, Hartshorne’s discussion of the problem is the clearest. Moreover, it complements Teilhard’s views and promises to lend them more conceptual rigor. Hartshorne drew a three-fold distinction of logical type, applicable to both God and the creatures, among an individual’s existence, its enduring characteristics, and the actual ways in which its characteristics are concretized in experience. Imagine a woman listening to a bird singing, and identifying it as a Wood Thrush. One may infer from her actual state of identifying the birdsong that she has certain cognitive abilities or characteristics, and that she exists. But the inference cannot go the other way: One may not infer from her existence and her characteristics that she is listening to a bird. In moving from existence to character to actuality, one goes from the more abstract to the most concrete. One’s actual experiences are information-rich compared to one’s enduring characteristics. This is recognized in modern logic in the use of the existential quantifier which, by itself, gives no details about the existent object.

Hartshorne argued that the same distinctions apply to God. The difference between God and the creatures, is that, in God, existence and character (i.e. essence) are modally distinct from

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58 Teilhard, Comment je crois: 271, 272; Christianity and Evolution: 227, 228.
60 Hartshorne, A Natural Theology for Our Time: 113.
the divine actuality—actuality is always contingent (i.e. could have been otherwise), whereas existence and essence are necessary (i.e. could not have been otherwise). In the creaturely case, existence, character, and actuality are all contingent.\footnote{Hartshorne used his three-fold distinction to clarify Whitehead’s view of God’s primordial and consequent natures. Both natures are abstract compared to the concrete states of God’s awareness and activity. The consequent nature is the abstract feature of the divine character as necessarily and \textit{somehow} actualized—the “somehow” providing the element of contingency in God. See Hartshorne, \textit{Whitehead’s Philosophy: Selected Essays, 1935-1970} (Lincoln: University of Nebraska Press, 1972): 75-76.} Hartshorne remarked that Aristotle anticipated the tripartite distinction of existence, essence, and actuality when he spoke of substance, essence, and accident. Hartshorne’s criticism of the Stagirite is that he considered substance as ontologically basic and thus could speak of accidental compounds. For Hartshorne, actuality is ontologically basic in the sense of being most concrete. According to Hartshorne, “It is actuality of accidents, not existence of substances that is prior”\footnote{Hartshorne and Reese, \textit{Philosophers Speak of God}: 72.}

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  \textit{Creatures} & \textit{God} & \textit{Concrete} \\
  \hline
  \textit{Actuality} & Woman listening to bird singing (contingent) & God knowing the woman as listening to the bird (contingent) \\
  \hline
  \textit{Essence} & Human nature as including various cognitive capacities (contingent) & God as knowing whatever is knowable, i.e. as omniscient (necessary) \\
  \hline
  \textit{Existence} & The woman existing (contingent) & God existing (necessary) \\
  \hline
\end{tabular}

\textbf{Hartshorne’s Model of Actuality / Essence / Existence as Applied to God and the Creatures}
\end{center}

Among the reasons that Hartshorne’s distinction is important is that it allows for give-and-take relations between God and the creatures without reducing God to the status of a
creature. Contrary to the ancient tradition of divine impassibility, God can be conceived as affected by the creatures. The woman listening to the bird brings it about that God knows that she is listening to the bird, although she does not bring it about that God is omniscient, for God would have been omniscient even had she never existed. Aquinas argued that any contingency in God implies the possibility of God’s non-existence, thereby reducing God’s existence to the status of a creature. Doubtless, the metaphysical issues run deep, but in view of the difference between existence and actuality, the inference is invalid. God’s actual states can be contingent while God’s existence and essence remain necessary. Moreover, the essence of God must now be described not merely as necessary but as necessarily somehow actualized. The example of God’s knowledge of the woman listening to the bird applies, mutatis mutandis, to divine responsiveness. God’s responses, though equally loving in all cases (due to God’s essence), would be different, and hence contingent, depending on whether the woman was listening to the bird or was engaged in some other activity. In this way, God can be conceived as both changing and unchanging, but in different respects, and without impugning divine perfection.

Dieu en haut, en avant, et même hors du temps?

The foregoing summary shows how Teilhard tried to resolve the struggle to bring together what he called “the God of the Above” (Dieu de l’En Haut) and “the God of the Ahead” (Dieu de l’En Avant). I have shown that Whitehead and Hartshorne were in fundamental agreement with much of the picture that Teilhard paints; in some instances, Teilhardian thought

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64 Aquinas, On the Truth of the Catholic Faith, Book One: God: 100, 16.2.

can be clarified and strengthened through a creative interchange with the works of Whitehead and Hartshorne. There are other points of contact that I have not stressed such as the way the three speak of the “complexity of God” in contrast to the traditional idea of divine simplicity.\footnote{Whitehead, \textit{Process and Reality}: 348; Teilhard, \textit{L‘Énergie Humain}: 86; \textit{Human Energy}: 68. Hartshorne, \textit{Man’s Vision of God and the Logic of Theism} (Chicago: Willett, Clark & Company, 1941): 217-218.} They agree, moreover, that entropy cannot be the final truth, metaphysically speaking.\footnote{A. N. Whitehead, \textit{The Function of Reason} (Boston: Beacon Press, 1958 [1929]): 24; Teilhard, \textit{L’Apparition de l’Homme}: 304; \textit{The Appearance of Man}: 215; Hartshorne, \textit{Man’s Vision of God}: 201.} There is a noteworthy affinity between Teilhard and Hartshorne in considering the universe as the body of God, with the creatures likened to molecules, or cells of it.\footnote{Teilhard, “La GrandeMonad” in \textit{Écrits du Temps de la Guerre}: 248, in English in \textit{The Heart of Matter}: 191. C. Hartshorne, “The New Pantheism, part II” \textit{The Christian Register} (February 27, 1936): 141; Hartshorne, \textit{Man’s Vision of God}: 185.} In addition, Teilhard and Hartshorne both speak of the fragmentary nature of human life, and the necessity of finding peace through renunciation.\footnote{Teilhard, \textit{Écrits du Temps de la Guerre}: 55; \textit{Writings in Time of War}: 66; C. Hartshorne, “Religion as Acceptance of Our Fragmentariness” in \textit{Wisdom as Moderation: A Philosophy of the Middle Way} (Albany: State University of New York Press, 1987): 83-94.} If one looked no further, one might almost suppose that there was a “gospel of process” of which Whitehead, Teilhard, and Hartshorne were its three synoptic evangelists.

But it is not so simple. Jean Piveteau spoke of those who admire Teilhard’s view of the evolution of the living world, but who have difficulty following him to his vision of the future.\footnote{See the preface of Teilhard’s \textit{La Place de l’Homme dans la Nature}; \textit{Man’s Place in Nature}.} This is doubtless true of Hartshorne, who knew of Teilhard’s work, but Whitehead would likely have felt the same. All three accept a metaphysic of union, but there is a striking contrast between Teilhard’s pronouncements on the future and the almost total silence from Whitehead and Hartshorne on the same. It was the future direction of evolution of which Teilhard so often spoke, and of which he spoke with such bold confidence. Thus, Teilhard described himself as a “Pilgrim of the future . . . returning from a voyage made entirely in the past.”\footnote{Pierre Teilhard de Chardin, \textit{Lettres de Voyage}: 1923-1955, edited by Claude Aragonnès (Paris: Bernard Grasset, 1956): 61; \textit{Letters from a Traveller}, translated by René Hague, Violet Hammersley, Barbara Wall, and Nöel Lindsay (New York: Harper & Brothers Publishers, 1962): 101.}
Teilhard was critical of ideas of divine power in abstraction from developmental processes. He even spoke of creation as a kind of gamble: “To create . . . is an adventure, a risk, a battle to which [God] devotes himself entirely.” These ideas are in keeping with the views of Whitehead and Hartshorne. For his part, Hartshorne argued that Albert Einstein’s rejection of a “dice-throwing God” was “a great man’s error.” The indeterminism and novelty exhibited in human decision-making are the dice, and because we are prone, by our very nature as creatures, to ignorance, error, and wrongdoing, not everything happens for the best. Teilhard too spoke of unused human resources and “a host of failures.” However, Hartshorne affirmed that there is tragedy, even for God. In conversation with A. H. Johnson, Whitehead said much the same: “there is tragedy that even God does not escape.” Teilhard knew first-hand the tragedy of the useless carnage of the First World War, but his mystic’s vision led him to believe in a supreme consummation and transfiguration of life’s suffering, symbolized by the Cross of Christ.

So, one may ask Teilhard how much of a gamble he believed God to be taking. Apart from his Christian faith, he said that he did not consider the success of cosmogenesis to be “necessary, inevitable, or assured.” But, when he followed what he believed to be the arc of complexity and consciousness, the “game” seems less and less like a game of chance. As life had covered the planet in the biosphere, so he saw the thinking layer of the earth, the noosphere, gradually increasing in complexity, and enveloping our world. Eventually, a planetary consciousness—“a sort of ‘brain’ of associated brains”—would emerge. Connecting the

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72 Teilhard, Comment je crois: 103; Christianity and Evolution: 84-85.
73 Hartshorne, A Natural Theology for Our Time: 113.
74 Teilhard, Écrits du Temps de la Guerre: 56; Writings in Time of War: 67.
75 Hartshorne, A Natural Theology for Our Time: 123.
77 Teilhard, Le phénomène humain: 342; The Human Phenomenon: 222.
noosphere to his specifically religious interests, Teilhard believed that evolution’s summit of
complexity is a personal center in which the uniqueness of all psychical centers is intensified—an
Omega Point. In one of his signature expressions: “all that rises inevitably converges.”
Perhaps the chance element is preserved since Teilhard does not say that everything inevitably rises.

Teilhard’s speculations reach their least processive dimensions when he projects, at the
summit of complexification, “the dissociation of complexity and consciousness” in which
“thinking occurs without a brain” and part of the world-stuff escapes entropy. It is a point of
“super-reflection” outside of time and space (hors du Temps et de l’Espace). All of this is made
possible by the transcendent aspect of Omega, the very personal center of God that exists
“independently of time and space.” Teilhard acknowledges that, from a scientific point of view,
this seems impossible. Doubtless, it is also difficult from a philosophical point of view. I cannot
help but ask whether, on this matter, Teilhard reached an escape velocity from the gravitational
pull of his own metaphysic of union. We have seen that traditional theology rejected the idea that
God’s creative act is “before” the existence of the universe that it creates; by parity of reasoning,
it is difficult to see how the terminus of evolution in Omega that is “hors du Temps” (outside
time) can be said to be “after” the process that gave rise to it within time and space.

Teilhard believed that one continues to exist after death, but it is not something that
greatly concerned him. Likewise, neither Whitehead nor Hartshorne seemed interested in their
own life beyond the grave, or in Hartshorne’s colorful metaphor, a career after death.

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80 Teilhard, L’Apparition de l’Homme: 362; The Appearance of Man: 264.
81 Teilhard, L’Activation de l’Énergie: 152; The Activation of Energy: 146.
82 Hartshorne, Omnipotence and Other Theological Mistakes: 4.
seemed satisfied with becoming immortal in the memory of God.\textsuperscript{83} Their only speculation on the destiny of the universe was to hold that our universe, with its particular form of cosmic order, is not everlasting, and may be replaced (and perhaps at one time was a replacement for) another “cosmic epoch.”\textsuperscript{84} Hartshorne’s vision of the future was less dominated by dreams of a differentiating unity of love in the Godhead than by warnings of a more immediate kind about the damage we have done to ourselves, to other creatures, and to the ecosystems of the planet. Because of his interest and expertise in birds, he may have been more sensitive than most to the damage we do to the nonhuman world. “We belong to a species,” says Hartshorne, “that gives signs of having lost its way.” He spoke of the “truly monstrous evils” in the world and affirms at least a functional equivalent of original sin. He advocated moderating excessive demands on human labor and resources, and reducing demands on the environment. He said that we need to think less about money and more about what makes life “deeply satisfying.”\textsuperscript{85}

Hartshorne berated Americans for their provincialism and severely criticized the bigger is better mentality. Nationalistic patriotism, he said, is an inadequate response to the challenges that face us. “Have we sufficiently repented of our imperialism?” he asked. He advocated moderation in all things except in love and wisdom.\textsuperscript{86} Hartshorne was ever willing to speak of specifically human contributions to the divine life, but he joined this cosmic perspective with moral (also aesthetic) condemnation. Our wholesale destruction of the environment, our penchant for driving other species to extinction, and our cruelty to each other on a mass scale, as in attempted genocides, make our species the “unscrupulous bullies of this planet.” For this reason, he

\textsuperscript{85} Citations from the last four sentence are in Hartshorne, \textit{Wisdom as Moderation}: 35, 49, 103, and 128.
\textsuperscript{86} Citations for the last four sentences are in Hartshorne, \textit{Wisdom as Moderation}: 34, 136, 49, and 35.
wondered whether “the billions of other solar systems [being] out of our reach” is a providential arrangement.  

Doubtless, Hartshorne’s warnings would have struck a resonant chord in Teilhard’s spirit. He was critical of absolutizing of national identities and he knew that his vision of Omega would not occur on its own, without our effort. He wrote: “The age of nations is passed. The question before us now, if we would not perish, is to shake off old prejudices, and to build the earth.”

But it was not simply a humanism that he advocated. He understood that we share the planet with other creatures. He wrote to his cousin that he aspired to express a psychology of one who sees himself not as French or Chinese, but as “a terrestrian.” A terrestrian, but of the human variety, with “the dangerous power of thought”! But human thought may call us to something even higher; as Hartshorne said, “The power of living consciously as a citizen of the cosmos is the basic human prerogative, and the more fully this power is realized, the more clearly it reveals itself as the vision of God.” That we are so often unable to harness that power, to shed regional identities, is a measure of how far we are from Omega.

Conclusion

Reading Teilhard has a magic all its own: one may experience the spirituality to which he gave voice, where a static cosmos gives way to cosmogenesis and where the vast stretches of space-time are the theater of divine activity. With Teilhard, one does not gag on sectarian dogmas. On the other hand, he proposes the audacious ideas that purpose is being worked out on a cosmic scale and that life on earth, and specifically human life, is an integral part of the plan.

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87 For the last two citations see, Hartshorne, The Zero Fallacy: 222 and 214.
89 Teilhard, Lettres de Voyage: 97; Letters from a Traveller: 133.
90 Teilhard, L’Apparition de l’Homme: 328; The Appearance of Man: 236.
91 Hartshorne, Beyond Humanism: 72.
He envisioned an organic and vectored relation from past to future. Teilhard invites us to give ourselves to a universe that resonates to what is highest in ourselves, which he identified with what is most personal within each of us.

For Teilhard, conceiving God’s role in evolution is not a question of introducing a *deus ex machina* where God is needed to infuse new information to help evolution over its bumps. Such a deity is depressingly earth-centered, and distressingly *ad hoc*, making of divine activity a variable in scientific calculations. Teilhard sought, on the contrary a God equal to the cosmos itself, and more precisely to cosmogenesis—a universe of almost unimaginable temporal dimensions, a cosmos with direction, and one that may, in some fashion, be in the process of being directed. Teilhard’s is a *more or less coherent metaphysical narrative of cosmic evolution*. I say “more or less” since it is, after all, a product of one man’s fallible vision. It is left to others who find value in that vision, to use it or to improve upon it. I have argued that Whitehead and Hartshorne provide a similar vision and can be helpful in articulating it. Of course, this requires an attention to science while moving well beyond its fields into the wilderness of metaphysics.

What seems blazingly clear to those of us who look to Teilhard as a pioneer, is that he tried to reimagine the perfection of God in evolutionary, or transformist, terms. He is not the only one to do this, but he is one of those who saw with exceptional clarity the need for, and the conditions for the construction of, a properly processive theology. As Teilhard exclaimed, “The world must have a God! the world must have a God! But let our idea of God expand to the dimensions of our World . . .”92

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