Standing Firm in the Flux: On Whitehead's Eternal Objects

By Matthew David Segall

"There is one point as to which you–and everyone–misconstrue me–obviously my usual faults of exposition are to blame. I mean my doctrine of eternal objects."

–Alfred North Whitehead in a letter to Charles Hartshorne (1936)[1]

"…the forms are essentially referent beyond themselves. It is mere phantasy to impute to them any 'absolute reality,' which is devoid of implications beyond itself. The realm of forms is the realm of potentiality, and the very notion of potentiality has an external meaning. It refers to life and motion. It refers to hope, fear, and intention. Phrasing this statement more generally,–it refers to appetition. It refers to the development of actuality, which realizes form and is yet more than form. It refers to past, present, and future."

–Alfred North Whitehead, *Modes of Thought* (1938)[2]

Alfred North Whitehead's first book as a professor of philosophy at Harvard University, *Science and the Modern World* (1925)[3], is not only a historical treatment of the rise and fall of scientific materialism. It also marks his turn to metaphysics in search of an alternative cosmological scheme that would replace *matter in motion* with *organic process* as that which is generic in Nature. Among the metaphysical innovations introduced in this book are the somewhat enigmatic "eternal objects," a category not without its detractors even among those otherwise positively disposed to Whitehead's process philosophy. The publication of the first and second volumes of Whitehead's Harvard Lectures on the philosophical presuppositions (HL1[4]) and general metaphysical problems (HL2[5]) of science provides students of his corpus with an opportunity to catch the thinker in the act of creating his concepts. In searching through student notes for glimpses of what Whitehead really meant, I have kept in mind his admonition that "no thinker thinks twice" (PR 29). Whitehead never ceased philosophizing, and surely intended for us to continue thinking with but beyond the letter of his ideas. In this spirit and in light of HL1 and HL2, this paper seeks not only to elucidate the role of eternal objects as a category of existence in Whitehead's Philosophy of Organism, but also to acknowledge areas that remain obscure, at least to this author.

I begin by introducing Whitehead's initial conception of the realm of eternal objects in *Science and the Modern World*, fleshing out his published presentation with relevant notes from his Harvard lectures delivered concurrently. I also draw upon his more developed exposition in *Process and Reality* (1929) and the late lecture at Harvard "Mathematics and the Good" (1940), with the goal not simply of textual exegesis but of showing how the meaning of the fifth category of existence is exemplified in the gradual ingression of the idea in Whitehead's

[1] Lowe, Victor. *Alfred North Whitehead. The Man and His Work, Volume II.* Baltimore: The Johns Hopkins University Press (1990), 346.
[2] Whitehead, *Modes of Thought*, 69.
[3] Originally delivered as the Lowell lectures in March 1925.
[4] Bogaard, Paul A. and Bell, Jason (eds.). *The Harvard Lectures of Alfred North Whitehead, 1924-1925: Philosophical Presuppositions of Science*. Edinburgh University Press, 2017.
[5] Henning, Brian G., Petek, Joseph, and Lucas, George (eds.). *The Harvard Lectures of Alfred North Whitehead, 1925-1927: General Metaphysical Problems of Science.* Edinburgh University Press, 2021.

imagination. I then address some of the prominent criticisms of Whitehead's account of possibility. Given all the controversy and disagreement on the subtlest points of Whitehead's doctrine over many decades of interpretation, I cannot now pretend in this brief essay to resolve the final meaning much less establish either the metaphysical necessity or extravagance of eternal objects. I aim only to sustain the effort at constructive thought begun by Whitehead, making his speculative hypothesis as explicit as possible while exploring the applications of his idea of ideas to the interpretation of experience, thus better preparing it for critical improvement (PR xiv).

The Nature and Function of Eternal Objects

Though Whitehead had been developing a doctrine of specific types of objects for several years—e.g., the "sense objects," "percipient objects," "perceptual objects," and "scientific objects" discussed in Chapter V of *An Enquiry Concerning the Principles of Natural Knowledge* (1919) and in Chapter 7 of *The Concept of Nature* (1920), and the "enduring objects" discussed his first semester of Harvard lectures in 1924 (HL1 133, 148, 151)—the more generic category of "eternal objects" was first introduced during a lecture on January 8, 1925 (HL1 161). Despite the changing designations and contexts of use, there is a great (though not perfect[6]) continuity of meaning in his various conceptions. In *Principles of Natural Knowledge*, for example, he gives an account of "objects" in general:

> "Objects enter into experience by recognition and without recognition experience would divulge no objects. Objects convey the permanences recognized in events, and are recognized as self-identical amid different circumstances; that is to say, the same object is recognized as related to diverse events. Thus the self-identical object maintains itself amid the flux of events: it is there and then, and it is here and now; and the 'it' which has its being there and here, then and now, is without equivocation the same subject for thought in the various judgments which are made upon it" (PNK 62).

He adds that common sense wavers in its ability to distinguish objects from events, but that without such discrimination it would be "intrinsically impossible" for rational thought to compare events with one another (PNK 64). The term "eternal object" was further elaborated in the most technical chapter of *Science and the Modern World*, "Chapter X: Abstraction." In this chapter Whitehead puts aside the peculiar problems of the special sciences treated earlier in the book, directing attention instead to a dispassionate consideration of the nature of things as such (SMW 158). He admits that many may find the procedure "irksome," and advises those without the patience for such an inquiry to skip the chapter entirely. Practical men, he tells us in HL2 (66), are interested in everyday "enduring" objects like trees, chairs, and mountains; while for the mathematician, the artist, and the philosopher, it is "eternal" objects that stand firm in the flux to capture attention.[7]

[6] When Whitehead says that "the continuity of nature is to be found in events," while "the atomic properties of nature reside in objects" (PNK 66), it is clear that the category of "actual entities/occasions" has not yet dawned upon him; or at least it is a metaphysical category that was not relevant to the task then at hand, namely, elaborating a philosophy of science consistent with new developments in mathematical physics.

[7] "Practical man interested in enduring objects…[Mathematician,] Artist and philosopher? Interested in eternal objects" (HL2 66).

He aims to justify the abstractions populating his metaphysics in three ways (SMW 158):

(i) *experientially* by way of a descriptive account of the actual occasions composing our immediate awareness of ourselves and the natural world;
(ii) *systematically* by bringing many types of such occasions into categoreal harmony; and
(iii) *onto-epistemically* such that the account of *what* there is to be known reveals also *how* we can know it (i.e., knowledge in Whitehead's scheme comes to be understood as an adjunct within things known, rather than as a view from nowhere).[8]

In his chapter on "Abstraction," Whitehead is seeking to unveil the metaphysical conditions of finite knowledge. "In any occasion of cognition, that which is known is an actual occasion of experience, as diversified by reference to a realm of entities which transcend that immediate occasion" (SMW 158). What must the metaphysical situation be such that minds like ours, awash in a world of becoming, can nonetheless reflect upon delimited truths and definite facts? Whitehead marks the "recurrences" exemplified by the periodicities of Nature as essential for such knowledge and constructs his category of eternal objects to account for them (SMW 31). While the process philosopher Nicholas Rescher argues that occurrences "are inherently universal and repeatable,"[9] Whitehead insists that each actual occasion, though internally related to every other, is nonetheless unique and once-occurrent, never to be repeated in its full concreteness. What *recurs* is not actual occasions, but eternal objects. Whitehead will later come to refer to the *enduring* objects of the everyday world (trees, chairs, mountains, etc.) as "historical routes" or "societies" of occasions that repeatedly ingress the definite characteristics of some constellation of eternal objects, though strictly speaking even such constellations in their complex details are also new in each moment, as "nothing ever really recurs in exact detail" (SMW 5). Trees continually exchange carbon and oxygen with the surrounding atmosphere; the springs in armchairs gradually lose their bounce, and their fabric fades in the sunlight; mountains are lifted by tectonic plates or weathered by rain and wind. "'Change' is the description of the adventures of eternal objects in the evolving universe of actual things" (PR 59), but enough sameness is retained amidst these slow changes to allow the form of these enduring societies to be recognized. Knowledge entails the abstraction of recurrent aspects of the world from what is otherwise an ongoing creative advance.

Whitehead's eternal objects come in two types:

(i) a subjective species, e.g., colors, sounds, and emotions that can be experienced in an individual occasion (and can sometimes also function relationally, as when inherited in some socially organized route of occasions), and
(ii) an objective species, e.g., geometrical patterns, which can only function relationally as a medium linking various occasions together in a spatiotemporal nexus (PR 291).

Whitehead refers to these "pure potentials for the specific determination of fact" (PR 22) as "eternal objects" in order to distinguish them from the classical philosophical conception of

[8] "If our discussion of thing known makes it impossible to get knowing into known, my metaphysics is obviously incomplete" (HL2 12); "Don't start epistemology without any metaphysics. Ought to say it all at once" (HL2 195).
[9] Rescher, Nicholas. *Process Philosophy: A Survey of Basic Issues* (Pittsburgh University Press, 2000), 10.

universals. Like universals, eternal objects are *abstract*, meaning they can be conceived independently of their ingression into any particular concrete occasion of experience. "Greenness" or "brightness," as subjective eternal objects, may be realized together in an event, say, the sun-illumined face of a moss-covered mountain. But they could also ingress separately in other situations, like as the color of a snake or the glimmer of Sirius, respectively. They can occur anywhere at any time. That said, Whitehead wants to avoid further association with the philosophical baggage of universals, especially Aristotle's system of logical classification in terms of genera and species, which while useful for the analysis of actual fact distorts the analysis of abstract possibility that he seeks to undertake. Rather than a classificatory logic, Whitehead analyzes the relations among eternal objects and between such objects and actualities in a mathematical way akin to the "absolutely abstract patterns…of algebraic forms of variables," as Ronny Desmet puts it.[10]

In the context of his mature metaphysical scheme, Whitehead's account of the conditions of finite knowledge presupposes his account of the pre-epistemic or unconscious cosmological functioning of eternal objects. How do enduring physical entities propagate themselves through spacetime from moment to moment? By way of the "efficacy of generalities," as George Allan puts it: "the constitutive functioning of moments as a kind, of which the present emerging moment is an instance."[11] In Whitehead's terms, "Wherever you get anything general you've got something that lies beyond [any] particular occasion" (HL1 57). That is, eternal objects are already incarnate in the realized definiteness of the enduring entities of the physical world *before* those entities come to be analyzed within the rare conscious occasions associated with a human mind. A minimal mental pole is operative even at the lowest grade of actuality, e.g., in the electromagnetic occasions studied by physics, but its capacity for conceptual prehension is limited to propositional lures providing an immediacy of enjoyment and purpose (PR 184). Physical occasions are thus causally related among themselves via the blind perceptivity of physical purposes. Knowledge implies more than just the repetitive entertainment of propositional feelings, however. Knowledge requires judgment of true and false. True judgments indicate eternal objects already ingressed into some portion of the antecedent physical world (i.e., they indicate "*real* potentials"): what had ingressed *there* is now prehended *here*, with the addition of self-critical cognitive apprehension. Scientists, in hypothesizing mathematical abstractions that unveil some aspect of pattern in the passage of Nature, entertain real possibilities never before irradiated by consciousness. False judgments, on the other hand, reveal our capacity not only for error but for imaginative freedom. It frequently occurs that we entertain delusive perceptions, say, mistaking a green stick for a snake, or the twinkling of Sirius for an aircraft. In some cases, as in art or literature, we intentionally imagine the world otherwise. Untrue judgments involve the conceptual prehension of alternative possibilities that *are not* but *may be* (i.e., "*pure* potentials"). As every artist knows and laments, our capacity to realize our creative imaginations is tragically limited by time and circumstance; even so, in the throes of creation the painter, the poet, and the actor can partake in and exemplify possibilities not previously realized in the physical world. While most logicians leave it at that, Whitehead

[10] Desmet, Ronald and Andrew David Irvine, "Alfred North Whitehead", *The Stanford Encyclopedia of Philosophy* (Fall 2018 Edition), Edward N. Zalta (ed.), <https://plato.stanford.edu/archives/fall2018/entries/whitehead/>.

[11] Allan, George. "Diagrams and Myths" in *Whitehead at Harvard, 1924-1925*, ed. By Brian G. Henning and Joseph Petek (Edinburgh University Press, 2020), 295.

reminds us that very often false propositions nonetheless aid us in interpreting the given facts by availing us of alternatives. Indeed, unless construed with reference to an indefinite background which we experience but cannot consciously analyze, strictly speaking *every proposition is erroneous* ("Mathematics and the Good," LoLP, 680). Our knowledge is always partial, as all finite truth is haloed by unbounded possibility. His "organic realism" is radically empirical, but unlike classical empiricists content to explain away universals as nothing more than names assigned to faded sense impressions, Whitehead affirms the necessary dipolarity of reality, such that the proper understanding of *actuality* requires that reference also be made to *ideality*, that is, to a realm of alternative suggestions or unrealized potentials. Thus, the givenness of actualities cannot be made sense of without conceptually tracing their relation to a constellation of adjacent possibilities; and, at the same time, unrealized possibilities cannot be made sense of unless contrasted with definite matters of fact.[12] "Each event can only be described as what it is among what it might be as well as what it is among community of all other things that are" (HL2 14).

Whitehead then turns to an analysis of the realm of possibility in abstraction from actualities. He tells us that eternal objects like actual occasions have both an *individual* and a *relational* essence. The *relational* essence of an eternal object is its determinate internal relation to every other object in the infinite realm of possibility, and to actuality generally. Each eternal object is systematically and necessarily constituted by its relations to every other eternal object, such that ingressing one ingresses all , though with gradation of relevance. The internal relations of eternal objects are said to take the form of an indefinite number of "abstractive hierarchies," with simple objects at their base, complex objects at their vertex, and objects of proximate complexity in-between (SMW 168-9). An eternal object in its relational essence is said to remain "isolated" (SMW 165) from actuality, only untangling its individual essence because of an actual occasion's decision to fuse it together with some finite subset of other possibilities in its novel aesthetic synthesis, with irrelevant possibilities thrust into the systematic substratum. In reflecting on the nature of abstractive hierarchies, Whitehead says we can conceive of a route of progress in any "assigned mode of abstraction" (SMW 168), which I take to mean that it is up to the one doing the analysis to define which progression of eternal objects they are interested in analyzing. Any such assignment implies the activity of conceptual prehension and assumes a spatiotemporal perspective on the realm of possibility. This stands in contrast to what Whitehead says regarding the relations among eternal objects themselves, which are entirely "unselective and systematically complete" (SMW 164). I take him to mean that the sort of assignment of mode made by defining where a finite hierarchy begins and ends (i.e., its base and vertex) is in some sense arbitrarily imposed by the interests motivating the analysis. We may ask at this point whether or to what extent it is feasible to examine the internal relations among possibilities in themselves. Is there not a problem analogous to the quantum measurement problem, whereby our very attempt to peek into hierarchies of pure possibility necessarily contaminates what it was we were attempting to analyze by dragging a selection of eternal objects from the indefinite multiplicity of their isolation into the penumbral horizon of our conscious experience? In other words, our conceptual prehension of an individual eternal object tugs various associated hierarchies of adjacent objects with it into quasi-actuality, a mental act Whitehead likens to Platonic reminiscence (PR 242). Whitehead indicates that the inevitable "abruptness" (SMW

[12] "What is possible includes the realm of actuality. It is inherent in what the universe is that it might be. You cannot divorce actual from possible" (HL2 66).

171) of our mental capacities means we can only trace these relations so far, an issue discussed further below in connection with God's primordial envisagement.

His example of a tetrahedron (SMW 166) invites consideration of the case of the Platonic solids as a candidate abstractive hierarchy of regular polyhedrons. Whitehead himself assigns the tetrahedron to a more general mode of abstraction such that it can be further analyzed into colored surfaces. Interestingly, despite the four-sidedness of a tetrahedron, Whitehead analyzes it into the colors of three surfaces, presumably because only three would be visible from some spatiotemporal perspective "anywhere at any time." Attempting to assign a mode of abstraction as the hierarchy Platonic solids leads to problems.[13] Though at first glance it might appear to be the simplest such solid, the tetrahedron cannot be assigned as the base of a finite abstractive hierarchy, since like the other solids—the octahedron, hexahedron/cube, dodecahedron, and icosahedron—it can be derived via analysis from, inscribed within, and so transform into every other such solid, thus confounding attempts to determine which is the base and which the vertex. As Plato put it in the *Timaeus* (49c), the elemental shapes form a generative cycle, rather than a hierarchy. As I explore below using the example of color, it is difficult to discriminate truly simple from more complex objects. Even when dealing with eternal objects of the objective species, like geometric points, it is not so easy to determine when we have grasped something simple. A point is abstract, indeed, having in Euclidean geometry no volume or area but simply a position. A point can also be defined as complex, e.g., a series of indefinitely converging regions, as Whitehead has it (PR 298). Isabelle Stengers has argued that by the time he wrote *Process and Reality* Whitehead abandoned his earlier idea of abstractive hierarchies, since it appeared to imply a devaluation of actuality as nothing but the realization of ideal situations predetermined in advance.[14] It is true that, in *Process and Reality*, Whitehead makes no mention of eternal objects isolated in abstractive hierarchies. Instead, he mentions only hierarchies of societies (PR 96) and of feelings (PR 166). He does speak of "grades of generic abstraction," but doubts "whether 'simplicity' is ever more than a relative term, having regard to some definite procedure of analysis" (PR 133).

It is their abstract isolation from the decisiveness of actualization that allows incompatible possibilities to coexist. Eternal objects considered in abstraction from actuality have contraries in their relational essences that cannot be simultaneously ingressed. Thus, in the realm of possibility, the law of non-contradiction cannot be applied. What else might be said about the internal relations among eternal objects isolated in abstractive hierarchies remains an open, and as Whitehead warned, vexing question. What can be said for now is that Whitehead's speculations about the logic of pure possibility were anchored by his concern to avoid devaluing the creative decisions constituting actualities by succumbing to the view Bergson complained about: the construal of eternal objects as "already stored up in some cupboard reserved for possibles."[15] Such a view would stymie Whitehead's sense of philosophy as explanatory not of

[13] Thanks to Ben Snyder, who provided invaluable feedback on this point (personal communication). See https://footnotes2plato.com/2022/08/27/standing-firm-in-the-flux-on-whiteheads-eternal-objects-draft-article/#comment-142470 (accessed 9/7/2022).

[14] Stengers, *Thinking With Whitehead: A Free and Wild Creation of Concepts* (Harvard University Press, 2011), 211-217. Stengers: "…Whitehead's text [SMW] is sometimes less clear…it is not quite categorically opposed to the interpretation that would make actuality a simple passage to reality of the ideal situation itself" (214).

[15] Bergson, Henri. *The Creative Mind: An Introduction to Metaphysics*. Transl. by Mabelle L. Andison (New York: Dover, 2007), 81.

concreteness, but of abstraction (PR 20), and would challenge his commitment to an open future of creative advance by freezing eternal objects as though in a morgue, like the pale outlines of lifeless bodies awaiting the "transfusion of blood" granted by actualization, the latter seemingly adding little more than the diminutive qualities of earthly motion (growth and decay) to a morphology already perfected in heaven. "One might as well claim that the man in flesh and blood comes from the materialization of his image seen in the mirror," as Bergson joked.[16]

Whitehead could be said to waver on these questions, if not in the form of his doctrine than at least in his emphasis. But he could also be said to be faithfully displaying the dipolar logic of the process of realization. In 1924, he is recorded as saying that "all reference to Possibility is a reference to some ground which is in the Occasion, but which is not occasional" (HL1 59), while in 1925 he writes of objects "isolated" in eternity: "The eternal objects are isolated, because their relationships as possibilities are expressible without reference to their respective individual essences" (SMW 165). In 1927 he insists that there are "no eternal objects in isolation from [the] actual world," the very idea being meaningless: "Every eternal object has a meaning with respect to its possible functioning in [the] actual world. [An] eternal object gives no information about itself" (HL2 379). By 1940, his sense of the dipolarity between possibility and actuality is even more apparent:

> "[E]very pattern can only exist in virtue of the doom of realization, actual or conceptual. And this doom consigns the pattern to play its part in an uprush of feeling, which is the awakening of infinitude to finite activity. Such is the nature of existence: it is the acquisition of pattern by feeling, in its emphasis on a finite group of selected particulars which are the entities patterned" ("Mathematics and the Good," in LoLP 679).

Can anything be said to remain "isolated" in this depiction of the process of realization? Let us consider the case of color. In *Process and Reality* (1929), Whitehead distinguishes a special category of subjective eternal objects, namely, simple sensa that "do not express a manner [or complex pattern] of relatedness to other eternal objects" (PR 114). If the color-sensa are included among the simple sensa, it would imply that an individual color can in principle ingress independently of any patterned contrast with other colors. We can at least conceptually prehend the individual essence of some particular color previously perceived, and imaginatively fill in a gap in a gradient of the same color (PR 114), but such indefinite prehensions achieve only restricted ingression of the relevant eternal objects (PR 291). Unrestricted ingression of color as an objective fact in the physical world, on the other hand, would appear to presuppose a patterned contrast of colors. When philosophers have tried to think through the abstract relations among color-sensa, they tend to think of them in terms of gradation of shade or in terms of the Newtonian spectrum (identified with diverse refrangibilities or wavelengths of light split by a prism). In the former case, contrast seems self-evident. In the latter case, colors are treated as though the spectral relation was simply an arbitrary series, with each supposedly simple color-sensum isolated on the base level of an abstractive hierarchy (save, perhaps, "white" light, which is said to include all the colors). "Green is green, and there is the end of it" (MT 38), since it "cannot be analyzed into a relationship of components" (SMW 166). But if we consider Goethe's

[16] Bergson, *The Creative Mind*, 82-83. "If we put the possible back into its proper place," Bergson continues, "evolution becomes quite different from the realization of a program: the gates of the future open wide; freedom is offered an unlimited field … [in] the continuous creation of unforeseeable novelty."

organic theory of color phenomena and cycle of prism experiments, dark/black and light/white would have to be considered primal or simple, with blue and yellow the proximate result of their contrast, followed by green as an intensification of the contrast of blue and yellow, etc.[17] The Goethean understanding of color as an archetypal pattern of metamorphosis involving the participation of eyes, atmosphere, sunlight, and shadow implies a distinct relation of the color-sensa to one another as possibilities, and to spacetime, which, if color-sensa are to be counted among the simple sensa, is not so easily reconciled with Whitehead's retreat from "empirical investigation of the physiology of the human body" into convenient metaphysical principles (PR 114). Whitehead is clear that a color sensum, though it "haunts time like a spirit" (SMW 87) nonetheless "cannot be dissociated from its potentiality for ingression" (PR 114). Apart from memories, he claims red is not accessible to us "by merely thinking of redness. You can only find red things by adventuring amid physical experiences in *this* actual world" (PR 256). Whitehead recognizes that colors can in fact only ingress under the right spatiotemporal and physiological conditions. He speaks of the emergent social organization of each cosmic epoch "shepherding" eternal objects of the subjective species—in this case, the color-sensa—into association with eternal objects of the objective species, measured in terms of "wave-lengths and vibrations" of electromagnetic energy: "Thus the transmission of each sensum is associated with its own wave-length" (PR 163). Whether or not it is phenomenologically or physiologically adequate to unambiguously link color perception to wave-lengths of light remains a matter of some contention among contemporary cognitive scientists.[18] The question raised by Goethean color theory concerns the extent to which colors, considered as possibilities, bear any necessary internal relations to one another, such that some are simple and others more complex, and such that their ingression into measurable spacetime occurs in accordance with aesthetic principles of metamorphosis rather than each coming and going on their own arbitrary individual adventures. For example, while Whitehead claims we could know nothing of red until perceiving it in Nature, since "eternal objects tell no tales as to their ingressions" (PR 256), the phenomenon of "accidental colors" studied extensively by Goethe suggests that experience of green in the visible world already calls forth the complementary color red in the inner activity of our vision (which can be demonstrated by gazing at a green surface for a time before switching to a white surface, which will then momentarily appear reddish). While there may be some tensions in the two accounts of color, there is also evidence of deeper consonance with Goethe[19], who like Whitehead (PR 162) also recognized the emotional and even moral content of each hue. This aside on the relation of colors as possibilities is intended merely to spur new angles of inquiry both into the structure of abstractive hierarchies (to the extent we can conceive them) and into

[17] The experimental phenomena are somewhat more complex, with boundary colors like yellow-red and blue-violet also appearing at the edges where light and shadow meet. The general point is that color sensa appear in ordered phases as intensifying contrasts, not as an arbitrary series. See Johann Wolfgang von Goethe, *Scientific Studies*, ed. and trans. Douglas Miller (New York: Suhrkamp, 1988), 165. See also Sepper, Dennis L. *Goethe Contra Newton: Polemics and the Project for a New Science of Color* (Cambridge University Press, 1988), 83-84. Unfortunately, an optical mixture of blue and yellow wavelengths gives white, not green, and so Goethe's experimental findings are complicated by the use of more refined instruments (Arthur Zajonc. "Goethe's Theory of Color and Scientific Intuition", *American Journal of Physics*, Vol. 44, No. 4 April (1976): 3-4). The example is used here just to illustrate how colors, as subjective eternal objects bear qualitative relations to one another that cannot be simply reduced to their wavelengths.

[18] See Evan Thompson's *Colour Vision: A Study in Cognitive Science and the Philosophy of Perception* (Routledge, 1995).

[19] See Segall, Matthew David. "Goethe and Whitehead: Steps to a Science of Organism" in *In Dialogue: Journal of Holistic Science*, Vol. 2 (2022).

how Whitehead's metaphysical categories find application in more specific forms of phenomenological research. As Whitehead himself reminds us, "The guiding motto in the life of every natural philosopher should be, Seek simplicity and distrust it" (CN 163).

The ingression of an eternal object in the realized togetherness of the aesthetic synthesis achieved by an actual occasion liberates the object's individual essence from isolation within incompatible hierarchies of abstraction so that it may make its unique contribution to that occasion's realization (SMW 159, 162). In contrast to the *determinate internal* relations among eternal objects in abstraction from actuality, the manner of relation between these objects and particular actual occasions remains *indeterminate* and so *external*. When and where they are called upon to ingress into the aesthetic syntheses of concrete occasions of experience remains open-ended, a problem awaiting solution, or an equation its satisfaction.[20] Whitehead claims that objects have "patience" for many possible relations or modes of ingression into occasions, which may misleadingly suggest that the realm is "waiting" for actualization, a point which Whitehead later explicitly denies by suggesting it would deliver a "maimed" view of God's primordial envisagement, which does not "wait" but "[yearns] after concrete fact" (PR 33). Rather than a deterministic Nature of inert particulars governed by fixed physical laws imposed externally, Whitehead's account of the ingression of possibility affords an image of Nature as an evolutionary advance into novelty. The "laws" of physics are understood not as pre-established determinants of everything that happens but rather as "habits" emergent from the accumulated decisions of actual occasions, that is, canalizations of creativity unique to the social organization dominant in a given cosmic epoch. Further, when an eternal object is ingressed by an actual occasion, it is not ingredient in that occasion simpliciter, as though with simple location; rather, an eternal object ingresses so as to mark a prehensive connection between one occasion and another (HL1 161), thus establishing an ordered spatiotemporal continuum.

It becomes apparent at this point that a further general fact about our universe must be acknowledged: that is, the systematic mutual relatedness inherent to the character of the possibilities with patience for actualization. This general fact is the spatiotemporal continuum, which for Whitehead "is nothing else than a selective limitation within the general systematic relationships among eternal objects" (SMW 161). Spacetime limits how possibilities can ingress into actualities. Spacetime is thus not a container inside of which relations occur but "the locus of relational possibility" itself (SMW 162).[21] Whitehead reserves further discussion of this selective limitation for the subsequent chapter of SMW on God, to be discussed momentarily.

Each actual occasion achieves a prehensive synthesis of the infinite realm of eternal objects, with an aesthetic gradation determining the relevant value of each eternal object for its experience. Whitehead insists that the entire realm of eternal objects is prehended with some gradation of relevance since, if only some subsets were prehended, the metaphysician would, as just mentioned, "get into [the] hopeless situation of [having to posit a] realm of eternal objects waiting" (HL2 354). Every occasion is thus a self-creative synthesis of positively prehended "being" (i.e., those eternal objects that are valued and thus individually effective in its aesthetic

[20] "…each occasion is a solution to the indetermination of eternal objects" (HL2 18).

[21] "Relational essence of an object concerns its systematic relation to its Beyond, its 'housing' 'under guise of space-time' which shows how all objects are mutually related, but only in formal externality" (HL1 85-86).

synthesis) and negatively prehended "non-being" (i.e., the systematic substratum of unfulfilled because unvalued alternatives). Negative prehension is the *excrescence* or "extrusion of neutralising elements," as Whitehead puts it in HL2 (15). The synthetic prehension or *concrescence* achieved by a particular actual occasion is the solution of the indeterminateness of its relation to the realm of possibility into the determinateness of spatiotemporal actualization. "Every actual occasion is the solution of all modalities into actual categorical ingressions: truth and falsehood take the place of possibility" (SMW 161). In other words, upon ingressing into the "realized togetherness" of a particular actual occasion, eternal objects conform to the law of non-contradiction. We cannot perceive the same datum as both a stick and a snake simultaneously. A cat cannot be both dead and alive, etc. Intriguingly, Whitehead notes in HL1 that the realm of ideas (he hadn't yet coined "eternal objects") "itself alters in its reference to the particular occasions as they flow by" (HL1 74). Not only are these otherwise *eternal* objects said to be *altered* via their ingression in actual occasions, Whitehead suggest that the light of realization casts "the shadow of truth" back upon the realm, thus *enriching* it. In this way, "each fact of realization takes its place as an eternal truth" (HL1 75), thus serving not only as an explanation of our capacity for conscious memory— "*as* the Eternal *is now* for *us* the total nature of the past belongs to it" (HL1 74)—but of a natural order characterized by long-enduring laws.[22] The enrichment of eternal envisagement by natural occurrences also points toward Whitehead's doctrine of God's consequent nature, which would not be fully developed until *Process and Reality*.

Whitehead next reminds us that his account of the ingression of possibility into actuality has been focusing on actual occasions as natural events (i.e., their physical poles), which is only half the picture. In their full concreteness, occasions also include a mental pole, i.e., "that which in cognitive experience takes the form of memory, anticipation, imagination, and thought" (SMW 170). While in the physical pole, eternal objects and their infinite associated hierarchies have full concrete ingression, in the mental pole there is only partial ingression of a finite associated hierarchy terminating in a definite complex concept. Whitehead further characterizes this partiality in terms of its "abruptness," as mentioned above. These partially ingressed eternal objects, in that they lack the full individuation that comes from complete ingression, can be grasped in conceptual terms: "There is a limitation which breaks off the finite concept from the higher grades of illimitable complexity" (SMW 171). This is in contrast to the prehension of eternal objects inherited in the physical pole, which due to their individual essences and infinite associated hierarchies remain indefinable in terms of anything other than themselves, and so also cannot be described completely by means of concepts. Whitehead explains in *Process and Reality* that "we have not the sort of understanding which embraces such indefinite progressions"; rather, prehension is a process of feeling and "what is felt is not necessarily analysed…thus there is no vicious regress [of infinite grades of relevance] in feeling, by reason of the indefinite complexity of what is felt" (PR 153). He provides the example of Kant's Transcendental Aesthetic, wherein "a complex datum is intuited as one" (PR 154). In one of his last publications, "Mathematics and the Good" (1940), Whitehead points out that this "curious limitation of conscious understanding"—namely, our lack of immediate consciousness of the infinite intricacies implicitly involved in every definite pattern—is also "the fundamental fact of epistemology" (LoLP, 668). He references the example of Euclid, whose "glorious mistake" of

[22] Allan, George. "Diagrams and Myths" in *Whitehead at Harvard, 1924-1925*, ed. By Brian G. Henning and Joseph Petek (Edinburgh University Press, 2020), 296.

defining space as one unique three-dimensional system of relations provided the necessary simplification required for physical science to advance for thousands of years until the second scientific revolution of the 19th and early 20th centuries, when new higher dimensional geometries were invented and applied (669). The lesson of such revolutions is to avoid the assumption of any self-sufficient completion in our knowledge of the unbounded universe (670).

Though our knowledge is always partial, Whitehead argued that the abruptness of conceptual prehensions also provides a basis for the correspondence theory of truth (SMW 172). "[The] fact that there are finite truths must ultimately be based on fact that [the] realm of eternal objects is analyzable into a multiplicity of complex situations which can be conceived in isolation" (HL2 43). An eternal object, no matter its mode of ingression, is just itself. Any change to its individual essence would just mean a different eternal object. Thus, we can justify the notion that our cognitive experience of knowing something corresponds to that which is known: the conceptually apprehended eternal object is (at least in true propositions) the realization of the same object in the knower as in the entity physically perceived. I quote from HL2 at length:

> "The universal element in judgment arises from the conformation of thought to the universal forms constitutive of human beings: thought arises as a functioning in connection with actual things. You think by determining the actual against a background of pure potentiality. Without potentiality, [there can be] no error. Actuality involves real synthesis of that common to thought and nature. … Correspondence of thought and object is an identity or diversity in eternal objects. The what and how of thought is identical with nature. An act of thought or nature is each gaining real unity out of indefinite multiplicity of eternal objects by primary inclusion—relevance. The content is constituted by the relevant elements which are abstracted out of the background of pure potentials" (HL2 332).

Whitehead further clarifies this epistemological principle elsewhere in HL2, describing each actual occasion as a fusion of "yes" and "no," or an identity of identity and difference in the Hegelian sense (HL2 45). In the synthesis of the physical pole, and in lower grade occasions generally, the "yes form" predominates, as "blind perceptivity" (or intuition without concepts, in the Kantian sense) leads the occasion to conform to and reiterate the past. Here Whitehead accomplishes a crucial metaphysical advance upon Kant's epistemic dualism between physical relations in general and the special form of cognitive relation called knowing. Rather than reducing the physical world to an appearance constructed in the mind of the knower, Whitehead makes blind perceptivity a "fundamental physical fact" (HL2 110, 343). Whereas Kant responded to Hume's skepticism about causality by expurgating it into rationality (HL1 4), i.e., by imposing it categorically as a necessary condition of the mind's synthetic cognition of percepts, Whitehead rereads Hume as presupposing in his own thought process the very connections he could not find in sense experience (HL2 107).[23] Whitehead then takes the panexperiential route to restoring causal connection in Nature, construing causation as a form of blind physical feeling, and equating it with what in the conscious mental pole we call memory.[24]

[23] See also PR 81: "…Hume in his many assertions of the type, we see *with* our eyes…[bears] witness to direct knowledge of the antecedent functioning of the body in sense-perception."

[24] "Causation is memory. There is no distinction. The past is in you as a formative element, is in an electron as a formative element. And the memory is perceptive. It is the past and the present as conforming to the aspect of the

"Memory is consciousness of causation" (HL2 270). In the mental poles of high-grade occasions, the growth of more originative intensity allows for the ingression of novel eternal objects not found in the repetitive physical pole, such that the "no form" comes to predominate (HL2 165). The identity retaining blind perceptivity of the physical pole is met by the diversifying conceptual functioning of the mental pole and is thus irradiated by consciousness.[25] "Knowledge is the synthesis of these two poles described from the point of view of what mentality contributes to the actual entity… [i.e.,] its self-analysis" (HL2 223). Physical occasions synthesize the entire cosmic community of other actualities as well as a gradation of all eternal possibilities, thus securing the universality Kant required of natural knowledge.[26] Knowing occurs in response to and from the standpoint of a physical occasion, achieving a partial analysis of some of the potentialities given in its synthesis. "For Kant the given is chaotic, and analysis is [the] introduction of order. For Whitehead, the ultimate given is [the] physical given, the world as perceptively organized" (HL2 166).

To round out Whitehead's metaphysical account of possibility, it is necessary to say a few words about the concept of "God" introduced in the next chapter of *Science and the Modern World*. He begins by discussing Aristotle's theology. Whitehead has criticisms of Aristotle, but he does not hesitate to declare him the greatest metaphysician. He adds that Aristotle was the last European philosopher to dispassionately consider the topic of theology: "It may be doubted whether any properly general metaphysics can ever, without the illicit introduction of other considerations, get much further than Aristotle" (173). That said, Aristotle's "Prime Mover" was based on an erroneous physical cosmology, such that his exact argument fails. But despite all the progress in physics and in logic, Whitehead still believes an analogous metaphysical problem remains to be solved. The problem to be solved in Whitehead's metaphysics of infinite possibility and creative becoming is not the source of motion, but the source of *limitation*: "Every actual occasion is a limitation imposed on possibility" (SMW 174). To explain the existence of finite actualities and the emergence of relevant novelty in their experience, Whitehead is compelled to replace Aristotle's God—the "Prime Mover"—with God as "Principle of Concretion" or "Limitation." As Whitehead puts it in *Process and Reality*:

> "This ideal realization of potentialities in a primordial actual entity constitutes the metaphysical stability whereby the actual process exemplifies general principles of metaphysics, and attains the ends proper to specific types of emergent order. By reason of the actuality of this primordial valuation of pure potentials, each eternal object has a definite, effective relevance to each concrescent process. Apart from such orderings, there would be a complete disjunction of eternal objects unrealized in the temporal world. Novelty would be meaningless, and inconceivable" (PR 40).

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past which is objectified. And this doctrine takes the fundamental perceptivity out of the mental sphere and puts it into the physical sphere, because the fundamental relationship on the physical side is the taking account of the past, and there it is fundamental as you term blind perceptivity. It is not reflective, but it is the unthoughtful achievement, … the sheer self-satisfaction arising from this concretion of the past" (HL2 400).

[25] "Mental occasion is entry of underlying character of the process into the creature which is the process. The how of creation becomes the knowledge of creation" (HL2 198).

[26] "full account of perceptivity is full account of what nature is" (HL2 176).

Possibility is described by Whitehead as a "realm" in *Science and the Modern World*, but as a "multiplicity" in *Process and Reality*, causing some consternation among interpreters.[27] Here it becomes apparent that, in Whitehead's philosophic imagination, the nature of eternal objects stands in intimate relation with the primordial nature of God, without whom "the-eternal-objects-as-mere-multiplicity" would remain an ultimate and so inconceivable abstraction.[28] The primordial nature in turn stands in intimate relation with the world and thus becomes consequent (note that these are not temporal relations). I would suggest that pure possibility can be said to transform from multiplicity into a graded realm of eternal objects if we accept that out of the noisy "static" of multiplicity one ultimately arational and accidental (ungrounded because grounding) but nonetheless primordial ideal (SMW 178) is creatively realized, the Valuer of all values: namely, that eternal Being whose infinitely anticipatory envisagement requires also that it undergo the limitations of existential embodiment (including great suffering), thus incarnating the seed of real potentiality, the object of an eternal urge of desire (PR 344) by virtue of which all is in each such that each is all. "Static" is used above in reference to multiplicity not to mean simply "unchanging," but to connote both the static noise appearing on a television set without a clear signal and so receiving uncoordinated radio waves from other sources, including deep space, as well as the sense of static electricity, i.e., charges on a surface or between surfaces of an insulating material that do not allow a current to be conducted and discharged. God is thus akin to a conduit allowing energy to flow between eternity and time, such that emergent creatures can capture the energy of the eternal for the realization of their own values: "that's all the Eternal can do: - to become so captured" (HL1 71).

"Actuality is through and through togetherness—togetherness of otherwise isolated eternal objects, and togetherness of all actual occasions" (SMW 174-5).[29] Whitehead conceives of God as the original source of the togetherness of the universe, that by virtue of which the barren inefficient disjunction of abstract possibilities obtains primordially the efficient conjunction of ideal realization.[30] God is that by reason of which there is *concrescence*. While as multiplicity, possibilities remain disjointed among themselves, God is the instigator of the *aesthetic* synthesis that transforms them into an envisaged realm of eternal objects with real relevance to each actual occasion (PR 255). To the extent that there is unity in the universe (whether the unity of the whole of that of any of its parts), God is its efficient and final cause. Materially and formally, each occasion remains its own creation. Whitehead's is a panentheistic theology: it is just as true to say that God is in the world as that the world is in God. As he puts it in HL2, "any entity is God as objectified for that entity, that aspect of God which it stands in the nature of that entity to find relevant to itself" (221). God is the generic fact ingredient in all occasions of experience and thus that by virtue of which metaphysical description is possible for finite minds like ours. We are capable of metaphysical description in terms of categoreal determinations of otherwise unbounded possibility because in addition to our physical prehensions of the temporal past and

[27] See Chris van Haeften, "Abstraction Revisited" in *Process Studies* 34.1 (2005) and "Eternal Objects: Their Multiplicity and the Structure of their Realm" in *Process Studies* 35.2 (2006).
[28] Rorty, "Matter and Event" in *Explorations in Whitehead's Philosophy*, 87. Rorty compares Whitehead's multiplicity—the "barren inefficient disjunction of abstract potentiality" (PR 40) to Aristotle's primary matter.
[29] "When you have merely creativity and eternal objects you have no binding or coming together" (HL2 107).
[30] "Every categoreal type of existence in the world presupposes the other types in terms of which it is explained. Thus the many eternal objects conceived in their bare isolated multiplicity lack any existent character. They require the transition to the conception of them as efficaciously existent by reason of God's conceptual realization of them" (PR 349).

conceptual prehensions of the spatial present, we also imaginally prehend the full sweep of eternal relatedness through our participation in God's "graded envisagement." "This graded envisagement is how the actual includes what (in one sense) is not-being as a positive factor in its own achievement. It is the source of error, of truth, of art, of ethics, and of religion. By it, fact is confronted with alternatives" (SMW 177). It is only in *Process and Reality* that Whitehead comes to refer to this envisagement as the Primordial Nature of God, complementing it with his doctrine of a Consequent or concrescent Nature, which reconfigures much of what was said of God's graded envisagement in *Science and the Modern* World. God as primordial, as principle of limitation, is also that factor in the universe which realizes the spacetime relations of our cosmic epoch—a spacetime that is not a general type but a "definite, particular community" (HL1 146), i.e., a special contingent limitation within the unbounded vastness of possible modes of extension. God's role as the initiatory agency of limitation or concretion is to unify multiplicity into a realm of eternal objects with aesthetic relevance to actual occasions. I quote Whitehead at length (PR 257):

> "Thus the endeavour to understand eternal objects in complete abstraction from the actual world results in reducing them to mere undifferentiated nonentities. This is an exemplification of the categoreal principle, that the general metaphysical character of being an entity is 'to be a determinant in the becoming of actualities.' Accordingly the differentiated relevance of eternal objects to each instance of the creative process requires their conceptual realization in the primordial nature of God. He does not create eternal objects; for his nature requires them in the same degree that they require him. This is an exemplification of the coherence of the categoreal types of existence. The general relationships of eternal objects to each other, relationships of diversity and of pattern, are their relationships in God's conceptual realization. Apart from this realization, there is mere isolation indistinguishable from nonentity."

Finite occasions of experience, thus conditioned by God and by the past, can find no perch from which to conceive the unbounded multiplicity of possibility *as such*: "but this limitation does not imply that we can provide no *account* of determinate order in abstraction from any given actual entity."[31]

The Critics

Given the abstract character of eternal objects, their being "shrouded in generality" as one critic put it[32], it may already be apparent why many commentators have been confused about this category of existence. In a philosophy supposedly emphasizing the pervasiveness of process and creativity—"Creativity is the ultimate behind all forms, inexplicable by forms, and conditioned by its creatures" (PR 20)—why does Whitehead posit entities of such eternal fixity alongside actual occasions as the most important categories of existence in his scheme? Rescher goes so far as to say that, while Whitehead ventured further toward a truly processual philosophy than

[31] Auxier and Herstein, *The Quantum of Explanation: Whitehead's Radical Empiricism* (Routledge, 2017), 165.
[32] Lango, John W. "The Relatedness of Eternal Objects in Whitehead's Process and Reality" in *Process Studies* 1.2 (1971).

anyone else, his eternal objects stand out as an awkward incumbrance, blocking the way to a fully developed process account.[33]

First, it is important to note that *in some sense* actual entities are no less unchanging than eternal objects, as it is only through societies or historical routes that physical time unfolds.[34] Second, as was unpacked above, Whitehead conceived of eternity as affected and even enriched by the historic unfolding of the cosmos, as though it were in love with the productions of time, as Blake suggested in *The Marriage of Heaven and Hell* (1794). Third, it is self-evident that human beings have the capacity for abstract thought, that is, the ability to consider general characteristics independently of their particular exemplifications.[35] Because he sought to arrive at a categoreal scheme applicable not only to knowing minds but to Nature more generally, Whitehead was not satisfied with the usual empiricist account of the capacity for abstraction (i.e., that abstract ideas are just faded sensory impressions of particulars). Whitehead insisted that abstraction, as the prehension of possibilities, must have deeper roots in the cosmic process, and so attempted to offer a more generic account. Eternal objects are said to function in various ways beyond just their role in human thought: providing definiteness of character to enduring societies from moment to moment, granting actual entities the capacity for self-criticism[36], mediating between actualities by allowing them to objectify one another[37], and mediating between God and given actualities by providing a ground of relevant novelty, thus avoiding a "static monistic universe"[38].

Despite their ghostly status, the coherence of Whitehead's categoreal scheme unravels if eternal objects are exorcised. Indeed, as Auxier and Herstein put it, "taking possibility seriously is a requirement of all process philosophy."[39] Those who attempt to do without eternal objects while still applying the other categories of Whitehead's Philosophy of Organism must keep in mind the problems they were introduced to solve, and work to provide new solutions. Assuming the function he intended his eternal objects to play in the process of realization is properly understood, the question becomes whether we can think their unreality or superfluousness

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[33] Rescher, Nicholas. *Process Philosophy: A Survey of Basic Issues* (University of Pittsburgh press, 2000), 19. Rescher was also unhappy with Whitehead's process atomism, preferring Peirce's synechism.

[34] That is, in the sense that change implies rearrangement in physical "spatialized" time, rather than the non-spatiotemporal becoming or duration of concrescence. Actual occasions can be analyzed genetically into processes of phasic growth involving the integration and reintegration of contrasts of other actualities, eternal objects, and propositions (PR 283). An actual entity is thus not an unchanging subject of change (PR 29), and yet nor is its concrescence reducible to the coordinated temporal succession of the physical world (PR 283). Further, in its superjective perishing, an actual entity transitions into "objective immortality," becoming a being or real potentiality available for subsequent concrescences (PR 45).

[35] "…abstraction is justified by the fact that there are characters…which enter into various occasions but may be considered apart from any actual occasion" (HL2 344).

[36] "Point of view of potentiality is necessary to give any meaning to obvious and immediate self-criticism, which is essential in the realization of any actual entity" (HL2 239).

[37] "[The functioning of eternal objects] constitutes the relation between you and me" (HL2 217). "Eternal object the means by which an actual entity is a complex issue out of multiplicity of other actual entities. Eternal objects are the media of actuality" (HL2 250).

[38] "It is evident that 'givenness' and 'potentiality' are both meaningless apart from a multiplicity of potential entities. These potentialities are the 'eternal objects.' Apart from 'potentiality' and 'givenness,' there can be no nexus of actual things in process of supersession by novel actual things. The alternative is a static monistic universe, without unrealized potentialities; since 'potentiality' is then a meaningless term" (PR 45-46).

[39] Randall Auxier and Gary Herstein, *The Quantum of Explanation: Whitehead's Radical Empiricism* (Routledge, 2017), 143.

without falling into self-contradiction. It should be remembered that many of the best arguments against nontemporal essences are included in Plato's dialogues (e.g., the *Parmenides*), yet in the end the Platonic stream of thought with which Whitehead identifies affirms realism as more coherent and more adequate than nominalism. The nominalist doctrine gained momentum in the medieval period due to a theological longing for a more powerful God whose will determines the Good (rather than vice versa) and who is unlimited even by logic. In our more secular age, adherence to nominalism could be said to stem instead from a desire to defend individual freedom, as the idea of a universal and eternal hierarchy of value may offend modern pluralistic sensibilities. Some realist doctrines also appear to contradict the idea of Darwinian evolution. Despite whatever other problems may be raised against it, Whitehead's reformed version of realism not only limits divine power to aesthetic and moral persuasion, it is also constructed in affirmation of individual self-creation and emergent social evolution.[40]

Hartshorne

While in deep alignment on many important metaphysical questions, Charles Hartshorne remains perhaps the most prominent critic of Whitehead's eternal objects. He attempted to provide an alternative solution to the problem of possibility by drawing on C. S. Peirce's sense of the vagueness of the continuum of possibility. For Hartshorne, the only possibilities with any degree of determinateness are those which are concretely actualized in some finite occasion, or which are proximate in their relevance to such occasions.[41] Whitehead, on the contrary, insisted that eternal objects, despite being uncreated and abstract, are perfectly determinate among themselves. For Whitehead the transition from abstract possibility to concrete actuality can only be the product of a creative decision on the part of an actual occasion. But the decision to actualize as *this* rather than *that* concrete exemplification of possibility does not impact the relational essences of the relevant eternal objects, much less cause their character to emerge from an antecedent ontological soup of vague possibility. But despite his explicit statements, given Whitehead's claim, mentioned earlier, regarding our incapacity for analytic understanding of physical feelings preventing a vicious regress of grades of relevant eternal objects (i.e., feelings of feelings of feelings, etc.), I cannot help but wonder what relation Hartshorne's sense of the vagueness of possibility bears to Whitehead's sense of the "indefinite complexity" of real potentiality (PR 153). Hartshorne further worried about the diminishment of individual creativity that would result from all definite possibilities being eternally arrayed in the divine imagination. If God knows every distinct possibility in advance of each actual instance, why even go to the trouble of instantiation at all, which, in his view, adds nothing? But this misconstrues Whitehead's account of the difference between possibility and actuality, which is not merely a *logical* but an *ontological* difference; i.e., actuality is not merely a qualifying predicate but rather the concrescent product of a creative act. In Malone-France's terms:

> "Hartshorne's take on the notion of becoming as formulated in Whitehead's conception of concrescence reverses the logic of the event. It is *not* that something is added to the

[40] Whitehead's conception of evolution has a more telic flavor than Darwin's mechanism of natural selection, of course. Darwin's account of sexual selection bears closer resemblance to Whitehead's sense that Nature includes within its processes of diversification an erotic tendency to remain in tune.

[41] See Malone-France, "Between Hartshorne and Molina: A Whiteheadian Conception of Divine Foreknowledge" in *Process Studies* 39.1 (2010), 131.

> mix of determinations in the cluster of eternal objects that prefigure the actual event; it is the relevant matrix of determinate eternal objects that are added to the indeterminate 'something' of creativity, as such, which is the *prima materia* of Whitehead's panexperiential conception of actuality. …the creative subjectivity of the individual creature is not reducible to a merely formal [or logical] characteristic, a predicate, of the state of affairs that is manifested by that creature's choice."[42]

Whitehead's primordial nature does not have pre-imaginations of concrescent actual occasions. God, alone in the beginning, feels only Its own initial aims. Only in the physical feelings of Its consequent pole does God, *moved* by the worldly decisions of a democracy of fellow creatures, become finally conscious of Itself as *in* the world and *with* all creation in the perpetual unrest of the creative advance.

Lowe

In an otherwise sympathetic treatment of Whitehead's philosophy, Victor Lowe complains of eternal objects that they represent "too intellectualistic" an approach to metaphysics (UW 317). On Lowe's reckoning (UW 318), it was obvious to Whitehead since at least his earliest philosophical book *Principles of Natural Knowledge* (1919) that the forms of definiteness characterizing actualities bear in themselves no spatiotemporal limitations whatsoever (i.e., "eternal objects tell no tales as to their ingressions" [PR 256] into particular situations). While it may be true, as Whitehead argues, that eternal objects are necessary both to explain the possibility of finite knowledge and self-criticism, and to support the sort of conceptual thought required for the construction of a metaphysical scheme, this does not prove, in Lowe's eyes, "that forms of definiteness are eternal in the universe, but only that if they are not, we must either write metaphysics as if they were or not write metaphysics" (UW 318-319). Lowe clearly grasps the insufficiency of any metaphysics that ignores the ongoing incompleteness of the universe, and thus the essential role of the notion of possibilities as yet unactualized in the past or present. But he doubts whether Whitehead's "extreme" insistence upon the eternality of each definite potential does not cause more trouble than it's worth (e.g., the need for a primordial actuality termed "God"). Lowe proposes that a reformed conception of Whiteheadian "propositions" (i.e., *impure* potentials) could do some of the work shouldered by the *pure* potentiality of eternal objects (UW 320). He also notes, importantly for the present study, that: "Any revision of Whitehead's metaphysics in which the category of eternal objects was eliminated would affect everything in his system. No such scheme can be much more than half Whiteheadian" (UW 321). Indeed, in a discussion of the dipolarity of actual entities in HL2 (197), Whitehead uses the analogy of a magnet to explain why the physical and mental sides of an occasion are inseparable except in abstraction for the purposes of intellectual analysis. While eternal objects function relationally in both poles (thus securing the possibility of finite knowledge and truth as correspondence), the magnet analogy can also be applied to the relationship between possibility and actuality.

Dewey

John Dewey expresses similar concerns about what he deems to be Whitehead's overly intellectualized approach. This seems inevitable given Whitehead's stated objective to "rescue

[42] Malone-France, "Between Hartshorne and Molina: A Whiteheadian Conception of Divine Foreknowledge" in *Process Studies* 39.1 (2010), 134-135.

[Dewey's] type of thought from the charge of anti-intellectualism" (PR xii). Nonetheless, Dewey praises Whitehead's emphasis upon the way the traits of our experience are so continuous with Nature that the former provide clues for forming generalized descriptions of the latter. But he worries about the "mathematical strain [dominating] his cosmological account" (Library of Living Philosophers, 646) leading him to "substitute abstract logical connectedness for…concrete existential temporal connectedness" (ibid., 658). By (allegedly) unduly subordinating existences to essences and assigning ontological priority to general characteristics above and beyond particular occasions, Dewey wonders whether Whitehead drifts too far from an organic empiricism into airy Platonism. Students of Whitehead aware of his "ontological principle"—"no actual entity, no reason" (PR 19)—will undoubtedly reject Dewey's construal as one-sided (even Dewey admits his uncertainty of Whitehead's position). When Dewey puts forward his own vision of philosophy as an "experimental effort at purification," a "genetic" and "functional" account of experience, and a search for the ideas with the worthiest consequences (ibid., 659), we find nothing objectionable to Whiteheadians (Whitehead may be understood to have shifted from his early search for the logical foundations of mathematics to his later emphasis on consequences in practical life). That said, while deeply appreciative of Dewey and pragmatist praxis more generally[43], Whitehead diverged on some key issues. He was unwilling to entirely jettison the correspondence theory of truth, and despite his radical empiricism found it necessary to defend imaginative rationality's freedom to speculate. In a letter to Whitehead, Dewey worries that the category of eternal objects implies a residual bifurcation of Nature. He suggests to Whitehead that, had he undertaken an existential consideration of "thinking as a process in nature," he would have found occasion to give these objects a different meaning.[44] What Dewey appears to have missed is that Whitehead secures truth as correspondence with precisely the same metaphysical machinery he uses to embed experience in Nature: eternal objects function as mediators between our physical percepts and mental concepts not only to secure finite knowledge in the mode of correspondence, but also as a neutral term between knowing subjects and physical objects that allows the Philosophy of Organism to circumvent the bifurcation of Nature. In a discussion of Whitehead's conception of the subject-object relation, Dewey does not disguise his misunderstanding: "instead of our not being able to step into the same river twice, we can step in twice—and many times, as we do whenever we make statements about an object" (ibid., 652). While it is true that eternal objects grant us knowledge of identities, the "us" who knows is occasional and not substantial. Our conscious personality is a streaming society or historical route of occasions realizing some definite togetherness of possibilities but unable to step twice into the river *as the same subject*.[45] "No thinker thinks twice" (PR 29). Subjects arise and perish. Only objects are eternal (though in perishing, subjects, too, become objectively immortal, thereby accumulating as social canalizations of creativity).

Rorty

As a graduate student, Richard Rorty showed strong interest in Whitehead's Philosophy of Organism, writing his Masters thesis on Whitehead's concept of potentiality under the supervision of Hartshorne. But he soon deserted process philosophy along with James' radical empiricism and any other speculative project in favor of a Wittgensteinian analysis of language-

[43] "Metaphysics is nothing but the description of the generalities which apply to all the details of practice" (PR 13).
[44] Dewey, John, "Letter from John Dewey to Whitehead," LET1073, *Whitehead Research Library*, accessed September 16, 2022, http://wrl.whiteheadresearch.org/items/show/1434.
[45] "Discard notion of permanent knowing self" (HL2 64).

use. For the later Rorty, the scientist, the theologian, and the artist simply have different ways of talking about the world (in terms of "Truth," "Goodness," and "Beauty," respectively). They are each playing different, incommensurable language games. The philosopher's obsession with getting to the bottom of how such words (or others, like "Mind" and "Nature") ultimately relate to one another in an "external reality" supposed to be independent of the semantic networks in which these words are assigned their meanings is no more than a confusion about the proper use of sentences. Words do not refer to real things, or real relations, or real abstractions "out there" in the world. There is no such thing as a natural abstraction. There are no nonhuman propositional feelings or meaningful communications, no realized and certainly no pure eternal objects. All abstraction is produced by human language, and there is no way to get outside it, no way to get between a word and its referent so as to achieve "sheer disclosure" (MT 49). For Rorty, unless one is writing poetry, the metaphysical effort to disclose a reality or express a self-evident experience beyond language is not simply difficult, as Whitehead supposed, but literally to be talking nonsense. Philosophical language cannot halt behind intuition, nor understanding outrun the ordinary usages of words. "If we can't say it, we don't understand it."[46]

Even during his early phase of interest in Whitehead's scheme, Rorty argued that the question of the epistemological utility of eternal objects, as conceptually prehended, should take precedence over their ontological status relative to actual entities. In relation to actualities, potentiality represents, in Rorty's view, "a somewhat suspicious intruder." Potentiality is thus construed as "an instrument, rather than an object, of explanation."[47] Despite the incisiveness of his investigation into the coherence of Whitehead's categoreal scheme, Rorty's instrumentalist starting point risks neglecting Whitehead's insistence that epistemological difficulties are only solvable by an appeal to ontology (PR 189). In other words, while Rorty is correct that "forms are pragmatically useless if unreachable by actuality,"[48] such that Whitehead's doctrine of eternal objects stands or falls together with his doctrine of pure conceptual prehensions, his conception of potentials as privative "intruders" (rather than the necessary flipside of, and provider of definiteness to, actuals) stacks the deck in favor of actualist materialism, thus preventing a properly onto-epistemic understanding of our capacity for conscious knowing as an adjunct within things known, i.e., as a mode of Nature itself. Further, Rorty's reading of the primordial nature of God as "the vertex of [an abstractive] hierarchy…a single, extremely complex, eternal object"[49] robs God of any subjective yearning after concreteness and needs to be brought into accord with what Whitehead says about the consequent nature of God, i.e., God as fellow sufferer who risks the perfection of pure Being to become with a democracy of fellow creatures. God is not the Vertex of vertexes in an abstractive hierarchy, but the Valuer of all values in a world of becoming. When he does speak of the appetition of the primordial nature, Rorty references God's envisagement as a "choice," but this is too anthropomorphic.[50] On Whitehead's telling, God is initially unconscious, and so incapable of choice as we normally imagine it. God's everlasting envisagement is not a preplanned blueprint, but an original appetition that continues occurring always and everywhere: each new creature is a unique reimagination of God's universal longing, and in consequence each makes an immortal contribution to the divine nature and to the world. Whitehead's God is not a "stage-manger"

[46] Rorty, Whitehead's Account of the Sixth Day" (at Stanford University March 30 2007), 46:54
[47] Rorty, "Whitehead's use of the concept of potentiality" (1952), ii.
[48] Rorty, "Whitehead's use of the concept of potentiality" (1952), 4.
[49] Rorty, "Whitehead's use of the concept of potentiality" (1952), 56.
[50] Rorty, "Whitehead's use of the concept of potentiality" (1952), 26.

directing Nature from behind the scenes (HL1 92), but a discloser of relevant possibility ever-enriched by the decisions of finite actualities.

Rorty's relativist nominalism leaves Mind—including our own intellectual inquiries, religious longings, and artistic visions—floating above Nature, if not as a mirror than as an aloof ironist. Whitehead sought a realistic account of Mind as Nature's highest potency and self-expression. In order to give a coherent metaphysical interpretation of our self-evident capacity not only for linguistic expression but for imaginative freedom and finite knowledge, the conceptual prehension of pure potentialities must be treated with as much ontological hospitality as the physical prehension of past actualities. To his credit, in another early essay on Whitehead, Rorty argues for the superiority of Whitehead's conception of potentiality, which is an inversion of Aristotle's original doctrine: whereas Aristotle equates definiteness with actuality, Whitehead instead grants that status to potentials and measures actuality by its decisiveness: "definiteness does not decide anything; it is what gets decided *about*."[51] Further, in his Master's thesis, Rorty considers and rejects the idea of reducing eternal objects to a "subcategoreal status" by replacing Whitehead's doctrine with a "theory of the progressive creation of essences *ex nihilo*."[52] De-eternalizing eternal objects by subordinating them to the status of emergent real potentials has a paradoxical effect: "This contamination [of potentiality with actuality] does not, as one might expect, drag the eternal objects down to the level of the actual, rather, it empties actuality into the realm of the concept."[53]

Conclusion

We must return to the crucial question, whether we can think the unreality or superfluousness of eternal objects without falling into self-contradiction. Even posing the general post-Kantian question as to whether metaphysics is really possible is already to be engaging in metaphysics. The very claim, "only actual occasions are real" presupposes we know what it means for an entity to be unreal, i.e., merely possible, unactualized, or, indeed, impossible.[54] It is precisely in order to explain such cognitive claims that Whitehead included the category of eternal objects as a speculative hypothesis.[55] "The mind does not create such objects; they stand up against the mind, in their own right" (HL1 96). As we've seen, Whitehead is thus defending a qualified

[51] Rorty, "Matter and Event" in *Explorations in Whitehead's Philosophy*, ed. By Lewis S. Ford and George L. Kline (New York: Fordham, 1983), 90. Rorty's chapter was originally published in 1963.
[52] Rorty, "Whitehead's use of the concept of potentiality" (1952), 31-32.

[53] Rorty, "Whitehead's use of the concept of potentiality" (1952), 34. More recent work by media theorist Mark B. N. Hansen attempts just such a de-eternalization, granting eternal objects "a restricted status as products of the flux of experience," i.e., as real rather than pure potentials (*Feed-Forward: On the Future of Twenty-First Century Media* [University of Chicago, 2015], 28). This move is reminiscent of Dewey's criticisms, discussed above. Hansen indeed affirms precisely what Rorty warned against, namely, the prioritization of potentiality over and above actuality: "By repudiating the canonical Whiteheadian account, we clear the ground for the development of a more radical account that situates potentiality wholly *within our world* and accords it a primacy as the source for actuality" (ibid., 239.) Hansen thus inverts the entire thrust of Whitehead's philosophy by claiming that something abstract explains and even produces that which is concrete. For a more detailed critique of Hansen's use of Whitehead, see Segall, "Whitehead and Media Ecology: Toward a Communicative Cosmos" in *Process Studies* 48.2 (2019).

[54] "any ultimate real fact must be described in terms that are not real (universals, ideas, eternal objects)" (HL2 164).
[55] "progress in philosophy consists largely in rendering presuppositions explicit" (HL2 178).

realism regarding universals as against the doctrine of nominalism, which has it that only particular entities are real with universals reduced to general names. His realism is "qualified" in that

(i) he rejects the Platonic habit of granting preeminent reality to universals[56], and
(ii) he accepts that the recognizable identity of enduring physical objects—e.g., Cleopatra's Needle, which "daily [loses] some molecules and [gains] others"[57]—is relative to the degree of abstraction of one's definition.

Eternal objects have no experience of themselves and no value independent of their function in concrescence (HL2 115). Reflection upon eternal objects within a stream of conscious occasions of experience leads to a rapid decrease in importance, as an idea becomes an idea of an idea, and so on, in a vicious spiral into abstract timeless irrelevance (HL2 105n9). It is the concrete particulars that have preeminent importance and that enhance relevance, and yet they cannot be what they are without also including what they are not. In other words, actualities necessarily refer to possibilities as part of realizing their definite value. Rather than allowing finite actual occasions to evaporate into abstraction (as both Absolute Idealists [HL1 123] and inverters of Whitehead's doctrine of possibility end up doing), Whitehead insists upon their concrete status as the locus of real value in the world. And yet, despite acknowledging various intermediate categories of existence, including *real* potentials, contrasts (or "relational tropes"[58]), and propositions which lack the "purity" of eternal objects, and which various critics of have pointed to as sufficient to play the role of said objects sans any Platonic baggage, Whitehead nonetheless maintained that metaphysics must account for our conceptual capacity to recognize entities that involve no necessary reference to any particular actual entities of the temporal world (PR 44).

In the end, Whitehead admits the obscurity of the problem he is trying to address, specifically, the "transition from Platonic ideas to reality," where on his own account his philosophical scheme traces only "a ghost of a glimmer of light" (HL1 98). The hypothesis of eternal objects does shed light on many a problem, even if it also leaves us with some "ragged-edges" (HL1 488).

[56] "Plato misled philosophy" with his vision of abstract geometric perfection rising above the flux: "For us the truth is in the harmony of flux" (HL2 56); "a particular can never be exhausted by a list of universals" (HL2 173).
[57] Whitehead, *The Concept of Nature*, 166.
[58] Schulz, Dwayne, "The Problem of Identity and Eternal Objects in Whitehead" in *Process Studies* 46.1 (2017), 13.