

Process vs. Procedure

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Object-oriented ontology shares a fundamental feature with the philosophy of Alfred North Whitehead. To wit, Whitehead insists that subjects exist in the world rather than in the subjectivity of the human mind. Things gets a common status for Whitehead, and a common construction, one crafted of process rather than substance.

As a result, beings of different natures and at different scales offer equal interest for Whitehead, making his thought approach *flat ontology*, to use a term that has appealed both to process philosophers and to object-oriented ontologists alike. Last night [in the context of the conference] Shaviro gave us a good reason to believe that Whitehead actually has a “two-floor” ontology, and Harman too distinguishes between two kinds of objects, but no matter, the point is this: object-oriented ontology and Whitehead’s process philosophy both reject the human-world correlate, accepting that beings of all sorts offer equal interest to philosophy.

But the rejection of correlationism alone isn’t coextensive with the object-oriented position. Speaking of his flavor of object-oriented ontology, Graham Harman adds an additional and important difference:

My own object-oriented position is the first attempt at a constructive systematic philosophy that might be called both Heideggerian and Whiteheadian... The withdrawal of objects from all presence is the

“Heidegger” side of my model, while the enforced breakup of the human-world monopoly is the “Whitehead” side.¹

Harman writes this clarification in a response to Steven Shaviro’s critique, in which Shaviro explains why he finds Whitehead’s to be philosophically preferable. In particular, Shaviro fears that Harman’s vacuum-sealed objects amount to “ontological stasis,” whereas Whitehead’s metaphysics offers “a ramshackle construction, continually open to revision.”² For Shaviro, Harman’s philosophy (and object-oriented ontology more generally) cannot account for change or creativity.

Harman counters that Whitehead “dissolves his actual entities into prehensions.”³ Since entities are made up of nothing more than a series of prehensions, argues Harman, entities become *nothing more* than their relations, their slippages from one actual occasion into the next. This would have to hold true too for Whitehead’s persistent entities, societies, which amount to occasions glued together by eternal objects. For Harman, Whitehead is right to reorient metaphysics towards entities of all sorts but makes a misstep in imposing external occasions on given entity’s existence. The result is infinite regress: “a thing must exist to in order toprehend, but we find that for Whitehead this existence consists in nothing more than a previous set of prehensions.”⁴

Harman addresses both Whitehead and Shaviro by reasserting the need for objects to exist in something deeper than their relations. But to Shaviro’s specific objection that the withdrawal of real objects arrests them, preventing change, Harman responds that it’s actually Whitehead whose philosophy makes change impossible, since properties for the latter are really eternal objects which are called up from reserve to allow the discrete if rapid procession of actual occasions—as Harman puts it, “when everything changes, nothing does.”⁵

Object-oriented philosophy, by contrast, insists that things hold something in reserve through withdrawal: “any genuine relation between two objects forms a new vacuum-sealed object.”⁶ Thanks to the principles of flat ontology and withdrawal,

the configuration of objects at any scale does indeed allow for things to take place—the combustion of an incendiary fuel, or the rotation of a drive train by an internal combustion engine, or the motion of an automobile on a freeway, or the stop-and-go crush of traffic on Interstate 10.

Together, Shaviro's critique and Harman's response help us set process philosophy and object-oriented ontology in relief against one another. Both positions share a rejection of correlationism and a preference for a world of discrete things. But thereafter, each position prefers a different fundamental feature of things: relation for process philosophy, and withdrawal for object-oriented ontology.

We could stop here and simply conclude that the two views are incompatible beyond their shared rejection of the human-world correlate. Indeed, that's where Shaviro's critique and Harman's response (both forthcoming in the collection *The Speculative Turn*) leave things—at respectful disagreement, an unusual endpoint in contemporary philosophy, and one we ought to celebrate as an alternative to endless sniping and critique.

For my part, I'd like to try to show that object-oriented ontology does in fact support a theory of processes, one that could yet inspire a more deliberately Whiteheadian variant of OOO (although, I will stop well short of offering such a one today). But to get there, we must first adopt a slightly different understanding of *process*.

In process philosophy, a "process" implies a mode of change. The very idea of creative change sits at the heart of Whitehead's thought as well as its various adoptions and adaptations. Whiteheadian being is continuous but staccatoed: everything is constantly renewing itself through a series of perishing occasions, even if those occasions are each discrete rather than truly continuous. The unity of things is insured by inheritance, prehensions binding one occasion to the next as they accrete into concrescences. Beings persist not through inertia, but activity, by creating themselves anew at every moment. Such is what it means to abandon material in favor of process; all things becoming events and continuances.

Whitehead's adoption and influence speaks to the power of such an idea, even if that influence often sneaks a good measure of Deleuze into the metaphysical milkshake. Indeed, the popularity of *becoming* in twentieth century philosophy underscores just how compelling *change* has been. The last century was one of great acceleration, and yet still little feels terribly stable, gratifying, or successful. From that perspective, I appreciate Whitehead's focus on novelty and renewal, and I understand why so many find his thinking a useful tool. At the same time, I'll admit frustration and impatience with the continued insistence that politics motivates ontology. Are the stones and the cherry turnovers also so dissatisfied that they require the flows of novelty? I suppose that's a question for another day.

For me, procession does not offer sufficient torque into metaphysics. The idea that being is an event, that beings are events, and that existence fundamentally involves flow and change and inheritance, we might call this perspective "firehose metaphysics." Being does not stop; it can't even pause. It continues, always anew, with or without us or anything else, gushing forth into the future that it fashions through both the small perturbations of prehensions and the stabilizations of societies.

But where some see the values of freedom and novelty in processes, I find the opposite. Progression mistakes mere continuance for productive refreshment. For firehose metaphysics, being is linear, a set of vectors progressing forward, outward. My issue with process arises not from its attempt to describe something other than substance—indeed, a truly flat ontology would no more privilege process over material than it would humanity over inanimacy. Rather, I object to the tragic *monodirectionality* of processes. Even if I am ready to admit that process has a place alongside substance, for my money "events transpiring" offers an unsatisfying account of being. Even if Whitehead turns our attention from *what* things are to *how* they are, that *howness* remains effectively limited by the punctuated flows of inheritance from occasion to occasion.⁷ I question whether flows—be they

punctuated like Whiteheadian occasions or continuous like Deleuzean becoming—offer the most productive purchase on being.

The problem starts when we think of a process as a unity of distinct stages progressing over time. No matter how closely one adopts Whitehead’s own version of process metaphysics, a process remains *processual*. As Whitehead himself puts it, “each actual entity...is a process proceeding from phase to phase, each phase being the real basis from which its successor proceeds toward the completion of the thing in question.”⁸

A process proceeds. First it awakens, then it showers, then it gets dressed, then it brews coffee, then it drives to work, then it opens Microsoft Excel. It travels between two points. Then, then, then, then, then. A metaphysical firehose.

From the perspective of time’s arrow, this might even be the case. But even if I wanted to put events at the center of being (and I don’t), mere procession would remain a misleading way to understand their nature. To see why, we need to revisit why object-oriented ontology insists that beings always withdraw, or hold something in reserve. Rather than getting there through Heidegger as per usual, I’ll try to sail a different tack today.

As it happens I’ve thought extensively about processes of a different kind, in a different context: those that comprise the representational and rhetorical nature of computational media. In computer science, we sometimes use the word *procedurality* to describe “ways of creating, explaining, or understanding processes.”⁹ In this context, *process* means two things.

First, it refers to *the way things work*, the “methods, techniques, and logics that drive the operation of systems.”¹⁰ Those systems might be anything whatsoever—air traffic control, or thermodynamics, or university administrative politics, or zombie infestation.

But second, *process* also describes the particular way that computation works representationally. Thanks to the influence of the World Wide Web and its progeny, today we tend to think of computers merely as networked communication

appliances. But a computer is actually a quite special device, one that uses logical and mathematical models to produce various outputs. *Procedurality* is a name for this capacity, a term my Georgia Tech colleague Janet Murray has defined concisely as “the computer’s defining ability to execute a series of rules.”¹¹

Building on both senses of *procedure*, I’ve previously advanced a theory of *procedural rhetoric*, a way of making arguments and expressing ideas with processes in general and computational processes in particular. There’s no time for a complete account of this theory, but here’s the important bit: procedural representation, such as that afforded by the unique type of symbol manipulation intrinsic to computation, *explains processes with other processes*.¹²

I am used to using the word “process” to name all three notions—the flow of events, worldly logics, and the computational logics that represent them. But in the interest of clarity, for today’s discussion I’ll call the first, process-philosophical idea “process” and the latter two, the terrestrial-and-computational dyad, “procedure.”

Hopefully you can see the distinction. The former is a flow of events, a sequence of actions, while the latter is a logic of behavior, a way of operating. The distinction doesn’t just hold up for occasions, but also for other concepts in Whitehead’s metaphysics. *Prehensions*, for example, involve an actual occasion’s appropriation of actual or eternal entities in order to realize that occasion’s becoming—a hydraulic rush of the firehose. And a *concrecence* amounts to a momentary droplet in the punctuated flow of actual entities, since an entity’s satisfaction remains too fleeting to be pinned down.¹³ Metaphysics becomes a kind of trick photography, focused on the infinity of bullets passing through playing cards rather than the ballistics that got them there.

To ask *how a thing proceeds* surely yields an important perspective on that thing. And I can’t deny that a way of operating may entail an unfolding, but I remain unconvinced that enfolding satisfactorily creates the novelty Whitehead and his groupies equate with his thinking. Becoming is an epiphenomenon. Contrary to the belief that prehension and subjective form characterize *how things are*, I’d suggest

that they instead characterize *what happens to things*. It is procedurality, not processuality that asks *how things work*.

The mismatch between process and procedure in philosophy exemplifies a more general confusion in the world at large. When the topic of “procedure” arises, it’s usually met with scorn and distaste, understood as an established, entrenched way of doing things.¹⁴ The procedures of the human resource office or the motor vehicle division: steps to be followed mindlessly, the bureaucratic tragedy of modernism. “I was just following procedure,” says the TSA agent, the mortgage broker, the taco engineer.

But such a perspective is wrong for two reasons. For one, it reeks of correlationism, and relegates process and procedure to the realm of human culture alone. But for another, it mistakes outward processuality for inward procedurality.

While specific accounts vary, we OOO proponents insist that things withhold something from relation. Within the withdrawn core of an object, swirls of murky logics churn, regulating the ways an object might enter and exit relations with other objects in order to constitute still different objects.

This molten core of an object remains inaccessible and unknowable. The nature of the split object differs depending on which object-oriented theory you embrace. For Harman, there are real objects (which withdraw) and sensual objects (which enter relation). For Bryant, there are virtual proper beings, which have powers that can be expressed in local manifestations, which always fail to exhaust the power of a thing’s potentiality. And for me, there are objects (which I call *units*, a less material-specific term), which possess hidden operations that characterize their experience.

In all of our approaches, but more explicitly in Bryant’s and my own, objects take on generative powers that make them more like *systems* or *machines* than anonymous material atoms. These machines are not metaphorical Deleuzean systems of coupling and interruption along flows, but machines in the usual sense of the term—contraptions that run.

Think of an ordinary machine, one like a printing press or a hydroelectric dam or a toaster or an articulated bus. What is most distinctive about it? Not its moment-to-moment positionings, but *how it works*. The behaviors of a thing can be thought of as its *procedures*, which are distinct from the *processes* through which those procedures proceed. When it comes to firehoses, I'm more interested in systems of pressure and circulation than I am in streams of water.

As a further example, I'd like to reprise the specimen with which I begin *Persuasive Games*, my book on procedural rhetoric. It describes *Tenure*, a game created in 1975 for the PLATO computer education system. The program was intended to give new high school teachers an understanding of the impact of seemingly minor decisions on the teaching experience.

During play, the player must make successive decisions, each of which impacts different people in different ways. Some decisions may please the students but contradict the principal's educational philosophy. Others may provide a higher quality educational experience but put performance pressure on fellow teachers, causing workplace conflict. The player can judge the state of affairs by listening to student reactions, requesting a conference with the principal, or overhearing gossip in the teacher's lounge.

... at the start of the game, the player must take a job interview with their prospective principal. The principal may ask about the player's educational philosophy or his willingness to advise student organizations. Later, the player must choose a grading methodology, classroom rules, student seating arrangements, and a curriculum plan. The simulation then presents very specific quandaries the player must address, such as how to manage another teacher's students at a school assembly, whether or not to participate in the teacher's union, dealing with note-passing in class, contending with parents angry about their

children's grades, and even managing students' difficult personal issues, like home abuse.

No decision is straightforward, and the interaction of multiple successive decisions produces complex social, educational, and professional situations. Situations are further influenced by the gender of the teacher, the influence of the principal, student learning styles, and other subtle, social factors. In one run of a recent PC port of *Tenure*, Jack, one of my best students had been arriving late to class. I could choose to ignore his tardiness, talk to him privately, or give him detention. I chose to talk with Jack about the problem, which earned me praise from the principal, whose progressive philosophy encouraged direct contact and student empathy. However, after speaking with the student, I learned that his tardiness was caused by Mr. Green, the math teacher, who had been holding class after the bell to complete the last problem on the board. Now I was faced with a new decision: confront Mr. Green, make Jack resolve the issue or take the necessary discipline, or complain to the principal. Asking the student to take responsibility would avoid conflict with my colleague and principal on the one hand, but would put Jack in an uncomfortable situation on the other, perhaps changing his opinion of me as a teacher. Confronting Mr. Green might strain our relationship and, thanks to lounge gossip, my rapport with other teachers as well. Complaining to the principal might cause the same reaction, and might also run the risk of exposing me as indecisive. All of these factors might change given the outcome of other decisions and the personalities of my fellow teachers and principal.¹⁵

Tenure (the game) is a representational system, one that *makes procedural claims* about how an educational system operates. From the perspective of rhetoric, it

argues that educational practice is deeply intertwined with personal and professional politics.

The authorship of *Tenure* attempts to penetrate the logic of the high school. It enacts a version of the practice I call *alien phenomenology*, a method by which we trace the edges of objects, finding evidence from the sensible exhaust of their withdrawn natures in order to comprehend them imperfectly.¹⁶

But *Tenure* also reminds us of the nested-yet-equal nature of flat ontology. A high school is comprised of many things, including classes, administrators, teachers, students, schedules, unions, parents, notes, and so on. Each of those components has its own hidden logics, their own ways of operating, from the principal to the chalkboard. And yet, a high school also stands on its own as a coherent object, one that inherits the exhaust of hidden logics from the withdrawn objects that constitute it, but that then uniquely synthesizes all of them into its own, aggregate logic. That logic too withdraws, and an artifact like *Tenure* does its best to characterize its hidden nature through a representational process I call metaphorism.¹⁷ It's a wristwatch, not a firehose.

The differences between process and procedure offer instructive shorthand for some of the differences between process philosophy and object-oriented ontology. Most succinctly, process entails flow, while procedure entails operation; process is concerned with events, while procedure is concerned with logics; process is concerned with outward becoming, procedure is concerned with inward essence. For the object-oriented ontologist, the Whiteheadian question, "how does something reinvent itself" is less appealing than the question, "how does something work."

Making appeals to organic assemblages, as does Manuel DeLanda (who insists that "the component parts are constituted by the very relations they have to other parts in the whole") is also an unsatisfactory solution for OOO, because it overmines entities into their relations.¹⁸ Rather, the object-oriented ontologist holds that emergence and complexity is not a processual trajectory, but a particular after-effect of a hidden logic in an object of scale subjected to a particular encounter.¹⁹

From such a perspective, creativity and novelty are insured not through the constant tumbling of one occasion into the next, nor in the all-encompassing organicity of virtuality, but from the rather mundane if quite enormous possibility space of unit operations, which facilitate new configurations when objects touse and dance to form other objects.

Graham Harman borrows the term “object-oriented” from computer science, giving it a bold new life within philosophy. In the past I have expressed concern about connecting object-oriented philosophy (abbreviated OOP) with object-oriented programming (also abbreviated OOP) too explicitly.²⁰ But I’ve since warmed considerably to the idea. Perhaps object-oriented programming can offer a productive metaphor for understanding object-oriented philosophy, even if it remains important not to think of the one as an instantiation of the other.

In the software subsystems created in the object-oriented programming paradigm, certain behaviors can be revealed for programmatic invocation outside of the object, by other objects. These “public” methods and properties reveal something about the hidden, “private” functions whose operation remains invisible from the outside, their secrets encapsulated away through compilation. Unlike Bruno Latour’s black box, which emerges from the habituation of scientific convention, the hidden nature of the software object or the unit operation was never visible. It remains hidden as a consequence of the state of things.²¹

Given the unfortunate way that both “hard” artificial intelligence and philosophy of mind sometime use computation as a literalization of thought, I want to be sure to stop short of such a move; computational processes merely offer a metaphor for how withdrawn objects go about encountering the world and entering into relation with it. But given the overlap in name and concept, computational procedurality offers a helpful lens through which to understand how procedures work in object-oriented ontology, and how they differ from Whiteheadian processes.

What next, then? As I mentioned already, perhaps someday a more deliberately Whiteheadian variant of object-oriented ontology will emerge, one that

is able to synthesize the processual and the procedural sides of process. To accomplish this task will surely require the decomposition of Whitehead's thinking into raw materials, rather than dogmatically insisting on adopting his position wholesale. For example, the metaphorical similarity between public and private logics in object-oriented programming might bear a tentative similarity not only to the principle of withdrawal in OOO, but also to that of public and private matters of fact in Whitehead. Or likewise, the unit operations within a withdrawn object—what I've distinguished here as procedure—could potentially be theorized out of Whiteheadian subjective form if that concept could be cajoled to escape from the momentariness of concrescence.

Such creative new applications of Whitehead certainly seem promising, even if I still have big questions about their feasibility vis-à-vis object-oriented ontology. No matter, in the Whiteheadian spirit of novelty, I'm hopeful that someone will soon take up such a project in earnest.

¹ Graham Harman, "Response to Shaviro," *The Speculative Turn* (Victoria: Re:Press, forthcoming).

² Steven Shaviro, *Without Criteria: Kant, Whitehead, Deleuze, and Aesthetics* (Cambridge, Mass.: MIT Press, 2009), xii.

³ Harman, "Response to Shaviro."

⁴ Ibid.

⁵ Ibid.

⁶ Ibid.

⁷ Shaviro, 56.

⁸ Alfred North Whitehead, *Process and Reality* (New York: Free Press, 1979), 215.

⁹ Ian Bogost, *Persuasive Games: The Expressive Power of Videogames* (Cambridge, Mass.: MIT Press, 2007), 3.

¹⁰ Ibid.

¹¹ Janet Murray, *Hamlet on the Holodeck: The Future of Narrative in Cyberspace* (New York: Free Press, 1997), 71.

¹² Bogost, 9.

¹³ Whitehead, 244-245.

¹⁴ Ibid., 3.

¹⁵ Ibid., 1-2.

¹⁶ Ian Bogost, *Alien Phenomenology* (Open Humanities Press, forthcoming).

¹⁷ Ibid.

¹⁸ Manuel DeLanda, *New Philosophy of Society: Assemblage Theory and Social Complexity* (London: Continuum, 2006), 9.

¹⁹ Manuel DeLanda, *Intensive Science and Virtual Philosophy* (London: Athlone, 2002), 14.

²⁰ Cf. http://www.bogost.com/blog/units_and_objects.shtml and http://www.bogost.com/blog/objectoriented_p.shtml.

²¹ Bruno Latour, *Science in Action: How to Follow Scientists and Engineers Through Society* (Cambridge, Mass.: Harvard University Press, 1988), 137.