

Consequences of Panpsychism

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What is it like to be a rock? Rudy Rucker's science fiction story "Panpsychism Proved" provides one possible answer. A programmer at Apple named Shirley develops a new "mindlink" technology, which allows people to "directly experience each other's thoughts" (Rucker 2007, 248). When two individuals swallow "microgram quantities of entangled pairs of carbon atoms" (249), they enter into direct telepathic contact. Shirley hopes to seduce her co-worker Rick by melding their minds together. Unfortunately, he has other plans. She ingests a batch of entangled carbon particles; but Rick dumps his corresponding batch on a boulder. Instead of getting in touch with Rick, Shirley finds that "the mind she'd linked to was inhuman: dense, taciturn, crystalline, serene, beautiful. . ." (250). She fails in her quest for deeper human contact, but finds solace through intimacy with a "friendly gray lump of granite. How nice to know that a rock had a mind" (250).

Panpsychism defends the thesis that even rocks have minds. More formally, David Skrbina defines panpsychism as "the view that all things have mind or a mind-like quality. . . mind is seen as fundamental to the nature of existence and being" (Skrbina 2005, 2). Or in the slightly different words of Thomas Nagel, who entertains the notion without fully endorsing it, panpsychism is "the view that the basic physical constituents of the universe have mental properties, whether or not they are parts of living organisms" (Nagel 1979, 181). Most broadly, panpsychism makes the claim that mind, or sentience, is in some sense, as Rucker claims, "a universally distributed quality" (Rucker 2006). Thinking happens everywhere; it extends all the way down (and all the way up, for that matter). We cannot restrict mentality just to human beings; nor can we restrict it to mammals, or to organisms that have nervous systems, or even to the entire animal kingdom. Rather, we must say that plants, fungi, and unicellular organisms think; and what is more, that nonliving entities, like stars and lumps of granite, think as well.

Because it makes such seemingly extravagant claims, panpsychism is easily subject to derision and ridicule. The most common response is probably the one epitomized by Colin McGinn, who calls it “a complete myth, a comforting piece of utter balderdash. . . isn’t there something vaguely hippyish, i.e. stoned, about the doctrine?” (McGinn 2006, 93). Stoned or not, the problem is really one of extension. In his famous article “What Is It Like To Be A Bat?,” Nagel argues that “the fact that an organism has conscious experience *at all* means, basically, that there is something it is like to *be* that organism” (Nagel 1979, 166). For Nagel, it is evidently “like something” to be a bat – even if we can never actually know, or state in words, just what that “something” is. I presume that most people will agree that it is also “like something” to be a dog or a cat, or another familiar mammal. But how far down does “what-it-is-likeness” go? Does a lobster have inner, qualitative experience? Does a tree? How many non-stoned people will agree with Rudy Rucker that it is “like something” to be a rock? According to Whitehead, Leibniz “explained what it must be like to be an atom. Lucretius tells us what an atom looks like to others, and Leibniz tells us how an atom is feeling about itself” (AI 132). But who today is Leibnizian and Whiteheadian enough to assert that it is “like something” to be an atom, or a neutrino?

Few advocates of panpsychism expect that the doctrine could actually be verified by scientific experiment, as happens in Rucker’s whimsical story. It is not really a question of getting a rock, or a neutrino, to speak. Even if we were able, as Whitehead once put it, to “ask a stone to record its autobiography” (PR 15), the results would probably not be very exciting. But this does not mean that the question of “what it is like” to be a rock is senseless. For the issue is really an ontological one. Sam Coleman, expanding Nagel’s thought experiment into a foundational principle, argues that “absolute what-it-is-likeness” must lie “at the heart of ontology” (Coleman 2009, 97). Following Bertrand Russell, Coleman notes that “the concepts of physics only express the extrinsic natures of the items they refer to. . . . The question of their intrinsic nature is left unanswered by the theory, with its purely formal description of micro-ontology” (Coleman 2006, 52). That is to say, contemporary physics – no less than the physics of Lucretius – just “tells us what an atom looks like to others”; it describes an atom in terms of its extrinsic, relational qualities. But it does not tell us what an atom actually is, intrinsically, for itself. And this is the gap that panpsychism seeks to fill.

Of course, one can always deny – as many thinkers do – that an atom, or a neutrino, or a superstring, or a quantum field, has any such thing as an intrinsic nature

at all. Some thinkers even deny this of larger entities, like rocks and trees and human beings. But if we are not to indulge in such “brilliant feats of explaining away” (PR 17), then then we must be able to point to an entity’s inside, as well as its outside. Sam Coleman and Galen Strawson, the two analytic philosophers most strongly inclined to panpsychism, both argue that “we should – must – look to consciousness to provide the intrinsic nature” of any entity, even a microphysical one (Coleman 2009, 109). The only plausible candidate for the inner being of any entity is something akin to what we know as phenomenal, qualitative experience. This is why Coleman argues that “what-is-it-likeness” is universal. For Strawson, if we are to accept the findings of physical science, reject dualism and idealism, and also refuse to “explain away” the self-evidence of experience or consciousness, then panpsychism is the only remaining alternative. “All physical stuff is energy, in one form or another,” he says, “and all energy, I trow, is an experience-involving phenomenon” (Strawson 2006, 25). Strawson admits that “this sounded crazy to me for a long time” (25), but he firmly maintains that there is no way around it, if one is to maintain a robust realism.

Panpsychism sounds crazy to analytic philosophers and scientific reductionists – though this hasn’t stopped a number of them from taking it seriously, as if under duress. (In addition to Strawson, Coleman, and Nagel, one might also mention David Chalmers, 1997). Nonetheless, panpsychism has a long philosophical pedigree, as David Skrbina thoroughly demonstrates (2005). From the pre-Socratics, on through Spinoza and Leibniz, down to William James and Whitehead, and still today, panpsychism has been a recurring underground motif in the history of Western thought. It persists as a kind of counter-tendency to the anthropocentrism, and the hierarchical ontologies, of mainstream philosophical dogmas. It offers a rebuke both to the exaggerations of the various idealisms, which tend to dissolve “stubborn fact” into Mind, and to the pretensions of those positivisms and reductionisms which tend to deny mentality altogether. Twentieth-century philosophy, with the lonely exception of Whitehead, was crippled by its obsession with overcoming or doing away with metaphysics. But today, as we emerge at last from the shadow of that obsession, it is once again possible to entertain panpsychism as a speculative proposition. The “speculative realisms” and “new materialisms” of the last several years offer us the prospect of a basic reorientation of thought. At last we seem ready, instead of explaining things away, to pay due attention to the multitude of *things* in the world around us, in all their vibrancy, complexity, and autonomy from us. I want to argue that panpsychism has an important role to play in this process.

More specifically, and in the context of this conference on “Metaphysics and Things,” I would like to show how panpsychism – and Whitehead’s version of it in particular – responds to the questions raised by the object-oriented ontology (OOO) of Graham Harman, Levi Bryant, Ian Bogost, and Timothy Morton. As far as I can tell, OOO offers four challenges to contemporary philosophy. Each of these involves the rejection of a commonly held post-Kantian doctrine, and a requisite instead for the development of new metaphysical concepts:

1. In the first place, OOO rejects what Quentin Meillassoux calls *correlationism* (Meillassoux 2008). This is the idea that, as Harman puts it, “we cannot think of humans without world, nor world without humans, but only of a primal rapport or correlation between the two. For the correlationist, it is impossible to speak of a world that pre-existed humans *in itself*, but only of a world pre-existing humans *for humans*” (Harman 2009a, 122). To reject correlationism is to accept the meaningfulness of a world that exists, in and for itself, independently of human beings. We need to get away from the sophism that, as Harman sarcastically summarizes it, “what is thought is thereby converted entirely into thought, and that what lies outside thought must always remain unthinkable” (Harman 2010). For the whole point of philosophical speculation is to point thought outside itself, to orient thought to that which it cannot grasp or comprehend, to reach outside what Meillassoux calls “the correlationist circle” (Meillassoux 2008, 5).
2. In the second place, OOO rejects what Harman calls *the philosophy of human access*. This is not quite the same thing as correlationism, though it is closely related. In this philosophy, which has dominated Western thought at least since Hume and Kant, “everything is reduced to a question of human access to the world, and non-human relations are abandoned to the natural sciences” (Harman 2009a, 156). To reject the priority of human access is to recognize that non-human entities are active in themselves, and that they affect one another, even in the absence of human input or observation. All encounters between entities happen on the same ontological level. As Harman puts it, rightly attributing this position to Whitehead, “we can speak in the same way of the relation between humans and what they see and that between hailstones and tar” (Harman 2009a, 124). Human understanding has no special ontological privilege. We must reject the binary opposition between human subjectivity, intellect, and initiative, on the one hand, and the supposed passivity and inertness of objects, or of mere matter, on the

other. Rather, we must join Bruno Latour in seeing a world of nonhuman, as well as human, actants.

3. In the third place, OOO rejects *relationalism*, or the idea that every entity is entirely determined by, and can be completely described in terms of, its relations to other entities. For relationist thought, “there are no things; structure is all there is” (Ladyman and Ross 2009, 130; cited in Harman 2010). A structure in this sense is founded upon what Manuel Delanda calls “*relations of interiority*: the component parts are constituted by the very relations they have to other parts in the whole. A part detached from such a whole ceases to be what it is, since being this particular part is one of its constitutive properties” (Delanda 2006, 9). To reject this notion of structure, as Harman and Delanda both do, is to recognize that “there can be no relations without relata” (Harman 2010). For Delanda, as for Deleuze, “*relations are external to their terms*. . . a relation may change without the terms changing” (Deleuze and Parnet 2007, 55; partly cited in Delanda 2006, 11). Similarly, for Harman, “objects are irreducible to their relations with other things, and always hold something in reserve from these relations” (Harman 2009a, 187). There is always more to this particular tree, for instance, than is ever captured in my perception of the tree – or even in the sum total of all the perceptions of the tree by all the other entities that encounter it. This means that the tree must have an inside as well as an outside, an intrinsic nature as well as relational properties.
4. In the fourth place, OOO rejects what Sam Coleman calls *smallism*, or “the view that all facts are determined by the facts about the smallest things, those existing at the lowest ‘level’ of ontology,” so that “facts about the *microphysical* determine facts about the chemical, the biological and so on” (Coleman 2006, 40). Smallism maintains that “all physical things can be reduced to microparticles – so that a table would be nothing over and above the quarks and electrons of which it is made” (Harman 2009a, 154). Such a doctrine is upheld, not just by hardcore physical reductionists, but by nearly all analytic philosophers, including those, like Coleman, who are inclined towards panpsychism. To reject smallism is to insist upon the integrity, and the actuality, of entities of all sizes. It is to recognize that a table is every bit as real as the microparticles of which it is composed. Harman argues this point by citing Delanda’s multi-level “assemblage theory.” Actual concrete things are always “*assemblages*: real units made up of subpersonal

components” (Harman 2009b, 277; citing Delanda 2006, 32ff.). Instead of tortuously parsing out the alleged differences between ultimate and derived entities, or between mere “aggregates” and “true individuals” (cf. Skrbina 2005, 208), we should accept the ontological validity, and the actuality, of assemblages of all sizes.

I will now discuss how a Whiteheadian panpsychism responds to all four of these challenges. In the first place, I take it for granted that – as Harman insists – Whitehead rejects the philosophy of human access. All actual entities constitute themselves by prehending other actual entities; this process is not limited to the case of human beings endowed with the special gift of self-consciousness. What’s more, all actual occasions pass through the roles both of subject and of object in the course of their process: the first, in their activity of concrescence, and the second when they perish, and become data for other, subsequent occasions. It is therefore impossible to divide the world between a group of especially privileged, rational and sentient subjects (ourselves) and an undifferentiated agglomeration of supposedly mute and passive objects (everything else). More generally, for panpsychism “human access” is no different in kind from the sort of mental or epistemological access that all entities have to whatever other entities they encounter. I prehend the sunlight that warms me, or the broccoli that I have for dinner, in much the same way that (to cite one of Harman’s favorite examples – see, e.g., Harman 2007, 188) fire prehends the cotton that it consumes. Considered in such terms, “access” is not an epistemological quandary, but a matter of basic ontology.

Whether Whitehead’s panpsychism actually escapes correlationism is more open to doubt. Meillassoux himself would most likely argue that Whitehead – like Schelling, Hegel, Nietzsche, Bergson, and Deleuze – rather works by “*absolutizing the correlation itself*” (Meillassoux 2008, 37). This phrase means that the philosophy in question “hypostatizes some mental, sentient, or vital term,” thus continuing to endorse a version of intentionality or subjectivism (37). For Meillassoux, it would seem that the only way out of the correlationist circle is to reject the categories of subjectivity and experience altogether, and adopt a stance “which takes seriously the possibility that there is nothing living or willing in the inorganic realm” (37). Such is the only way to “think a world that can dispense with thought, a world that is essentially unaffected by whether or not anyone thinks it” (116). And this radical purgation of thought from being can only be accomplished, Meillassoux says, through “the mathematization of nature,” by means of which physical science indubitably allows us “to *know* what may be while we are

not” (115). In this way, Meillassoux’s critique of correlationism, with its insistence upon a reality that is “totally a-subjective,” stands at the opposite extreme from the panpsychist claim that thought, or experience, is an immanent attribute of all entities.

But is eliminating thought from the universe of things really the price we must pay in order to escape correlationism? For Meillassoux, and for Ray Brassier as well, the answer would seem to be yes. It is only through mathematization (Meillassoux, following Badiou), or through a radical eliminativism (Brassier) that we can overcome the otherwise unchallenged assumption that “objective reality must be transcendently guaranteed” (Brassier 2007, 50). OOO, however, offers a somewhat less stringent criterion. Levi Bryant suggests that we do not need to entirely abandon transcendental arguments, since the independence of objects is in fact secured by the inverted transcendental argument of Roy Bhaskar’s critical realism. For his part, Harman proposes that metaphor and other forms of *allusion* allow us to refer to things that lies outside of our own thought, without thereby transforming them into objects of thought. For the object of allusion, Harman says, is always “a unified thing *apart from* the knowable features of it” (Harman 2005, 118; emphasis added). That is to say, the object of an allusion is something that is designated without actually being grasped. We are therefore able to positively affirm its existence, without thereby positing it as an object *for thought*. And this, I believe, is entirely congruent with Whitehead’s point that, in any act of prehending things in the world, “what is thereby realized is the prehension, and not the things. This unity of a prehension defines itself as a *here* and a *now*, and the things so gathered into the grasped unity have essential reference to other places and other times”; it is only “aspects” of the things over there “which are grasped into unity here” (SMW 71). When we “realize” the existence of things in the world, we thereby also affirm their independence from us. Nothing could be further from Hume’s “sensationalist principle,” or from the phenomenological doctrine of noetic-noematic correlation.

The third requisite of OOO – the rejection of constitutive relations – is one where Harman, at least, finds Whitehead wanting. He defends both Whitehead and Latour from the charge of correlationism, but he still finds them guilty of the broader charge of relationism (Harman 2009a, 122-134). However, I think the problem here is that “relationism” can have several distinct meanings. As I have already noted, OOO’s critique of relationism is really directed against what Delanda calls “relations of interiority,” like the Hegelian dialectic, or Saussure’s syn-

chronic structure of differences without positive terms (Delanda 2006, 9). But the same does not necessarily apply to what Delanda calls external relations, which are only “contingently obligatory” (11). In such cases, Delanda follows William James and Deleuze in seeing a continual florescence of external relations. Such relations do not exhaust, or definitively determine, the terms to which they apply. But James argues that what he calls “conjunctive relations are as real as anything else. . . The continuities and the discontinuities are absolutely co-ordinate matters of immediate feeling. The conjunctions are as primordial elements of ‘fact’ as are the distinctions and disjunctions” (James 1996, 93, 95). This means that external relations are perfectly real in and of themselves, as much so as the terms which they (partially) place in relation. A relation is a concrete happening, or an event; and to the extent that it persists in time, it is a *thing*, in the same way that any persisting physical object is a thing. Harman himself accepts this point, at least to the limited extent that he says that any relation between objects itself constitutes a new sort of object.

Now, given this view of external relations, and their existence as things in their own right, Whitehead entirely agrees with OOO that terms can never be fully determined by their relations. A given term can always disentangle itself from some relations, and enter into other relations instead. But at the same time – and this is where Whitehead differs from Harman – no term can ever disentangle itself from *all* relations, and subsist entirely by itself. I can disentangle myself from the atmosphere, by isolating myself in a pressure-resistant bubble, and breathing oxygen from a canister instead. But deprive me altogether of my relation to oxygen, and I die. This means that I cease to exist as a thing, or as a term for any relations whatsoever. But after my death, my body persists as a thing; it interacts, or enters into relations, with the bacteria that dissolve and eat it. Of course, this can be avoided by cremating my remains, and sending the ashes into the depths of interstellar space. But even there, the dust that is derived by “a historic route of actual occasions” (PR 80) from the living flesh that I once was will still be affected by cosmic radiation, and will be subject to the fluctuations of the quantum fields that pervade empty space.

In general, the Whiteheadian claim is therefore that:

- On the one hand, contra OOO, every change in relations transforms the term into something different from what it was before. This is inevitable, because every change in relations is an *event*, involving an encounter that has never before taken place in quite the same way.

- But on the other hand, contra radical relationism, this change in relations only *influences* the nature of the term, and can never determine it altogether. There is always some scope for the term's own *decision* as to how it responds to the change in relations that supervenes upon it.

We might in this way oppose a Whiteheadian doctrine of *underdetermination* to Althusser's notion of overdetermination. A thing is underdetermined by its relations. It is never free of them, but it also retains a certain capacity to resist them, to alter and combine them in various ways, and to select among them. And this is always a matter of degree. Much of the time, a change in relations is minor or trivial enough (Whitehead would say it is "negligible") that we speak of the continuity of the thing that is the term of the relation. Thus, my trip earlier this week from Detroit to Claremont has only made a negligible difference in who and what I am. But at other times, the change in relations is greater, and we will be led to speak either of metamorphosis (the caterpillar becomes a butterfly) or of breakdown (my dead body is a very different sort of thing than I was when alive).

Whitehead thus meets the third requisite of OOO, that no entity can ever be entirely defined and circumscribed by even the totality of its relations. But he also insists, in contradiction at least to Harman's version of OOO, that no entity can ever be withdrawn from contact, or independent of all relations whatsoever. And this is why panpsychism is necessary. To be a thing in the world is to be engaged in relations; but it is also to exist above and apart from all of these relations. Whitehead's cosmology is grounded in what he calls "the antithesis between publicity and privacy" (PR 290). This antithesis necessarily runs through everything; for there can be no "bifurcation of actualities" (PR 289). There is no categorical separation between public objects and private objects, for the simple reason that every actual entity is necessarily both. "An actual entity considered in reference to the privacy of things is a 'subject'; namely, it is a moment of the genesis of self-enjoyment." But at the same time, the very same "actual entity considered in reference to the publicity of things is a 'superject'; namely, it arises from the publicity which it finds, and it adds itself to the publicity which it transmits" (PR 289). By its public side, or its outside, the entity encounters, and enters into relation with, a plethora of other entities. By its private side, or its inside, the entity *feels* all of these relations, and constitutes itself, attaining "self-enjoyment," by making a *decision* about how to respond to them. The inner experience of an entity, Whitehead says, "may, or may not, involve consciousness; it may, or may not, involve judgment." But in any case, "it will involve aversion, or adversion, that

is to say, decision” (PR 261). And this decision *is*, in its own right, the *psychism* that is essential to every last thing in the universe, from God to “most trivial puff of existence in far-off empty space” (PR 18). Decision is the way that an atom, or any other thing in the world, “is feeling about itself.”

In the privacy of its decision, or in its mentality, an actual entity always exists in and for itself, apart from all the other entities with which it is contemporaneous. Indeed, for Whitehead “it is the definition of contemporary events that they happen in causal independence of each other” (AI 195). I suggest that this is the source, and also the extent, of what OOO sees as the “withdrawal” of objects from one another. For Whitehead, “the vast causal independence of contemporary occasions is the preservative of the elbow-room within the Universe. It provides each actuality with a welcome environment for irresponsibility” (AI 195). Things are “withdrawn,” therefore, to the extent that they are able to be irresponsible; and this also means, to the extent that they are able to think. As Whitehead says, “‘Am I my brother’s keeper?’ expresses one of the earliest gestures of self-consciousness” (AI 195). Indeed, “the causal independence of contemporary occasions is the ground for the freedom within the Universe” (AI 198). The claim of panpsychism is precisely that all beings have this freedom, at least to a certain extent.

Isabelle Stengers has taught us, in the course of her reading of Whitehead, that the construction of metaphysical concepts always addresses certain particular, situated needs. The concepts that a philosopher produces depend upon the problems to which he or she is responding. Every thinker is motivated by the difficulties that cry out to him or to her, demanding a response. A philosophy therefore defines itself by the nature of its accomplishments, by what it is able to disclose, produce, or achieve. For Harman, the urgent task for philosophy is to account for how two entities, isolated as they are from one another, can ever possibly enter into contact. How can objects, locked away in their lonely prisons, withdrawn behind their firewalls, ever reach out into the larger world at all? Harman develops a whole theory of vicarious causation, reviving the ancient doctrine of occasionalism, in order to give an answer to this question. That is to say, for Harman, the general situation of the world is one of objects isolated in their vacuums, and any connection, or communication, between one object and another is an extraordinary, fragile, and contingent achievement.

But my own metaphysical problem is just the opposite of this. I feel that our condition is one of ubiquitous connection. We are continually beset by relations, smothered and suffocated by them. We are always threatened by overdetermina-

tion. Today we are beset by the overcodings of ubiquitous flows of capital, as well as by the demands that all the entities we encounter impose upon us, the claims that they make for our attention. Far from seeing any metaphysical problem of occasionalism, or vicarious causation, I can only wish that some of the causations that continually beset me were indeed vicarious and occasional – instead of being all too overbearingly efficacious. For me, then, the great metaphysical problem is how to get away from these ubiquitous relations, at least in part, in order to find a tiny bit of breathing room. (Indeed, this was the theme of my book *Connected*, written before I had ever encountered Whitehead). It is only by escaping from these overdetermined relations, from finding a space that is open for decision, that I may ever hope to find either Adventure or Peace (to name the highest values that Whitehead cites in the concluding chapters of *Adventures of Ideas*). To my mind, relation and causal determination is our common condition and malady, and self-creation or independence is the rare, fragile, and extraordinary achievement that needs to be cultivated and cherished.

Whitehead, I think, is more balanced than either Harman or myself. He understands the need for both relation and separation; his metaphysics posits both of these as equally crucial requisites. Indeed, Whitehead makes both relation and separation into notions that are altogether generic. Every entity in the world, he suggests to us, has both privacy and publicity, both an inside and an outside. This means that both sides of process – the beneficent widening of relationships in circles of concern, on the one hand, and the absolute self-enjoyment of the individual entity, on the other – happen at every moment, and form part of every occasion. The achievements either of community or of self-affirmation are often quite modest; but they are common rather than rare. My own predilections lead me in the direction of melodramatic exaggeration and apocalyptic despair. And this is why I continually require Whitehead's gentle admonishment that, for every generalization, "the estimation of success is exaggerated" (PR 7). It is *important* for me to be able to realize, thanks to Whitehead, that there is some small room for decision, and thereby for novelty, in every entity's process of concrescence.

The "causal independence of contemporary occasions" is what allows for any sort of self-creation, in the "specious present" of lived experience. Relations, to the contrary, are always spread across time; they derive from the past and push into the future, on both sides exceeding the boundaries of the specious present. Relations are the shackles of causal efficacy; they are the obligations, from which no entity is ever free. But relations are also, as I have already intimated, a kind

of accomplishment in their own right. Stengers reminds us that Whitehead does not take the continuing, stable existence of objects for granted. Rather, he views the persistence of societies, or of *things* that endure through a span of time, as itself an achievement that needs to be recognized, and (at least in some cases) celebrated. This brings us to OOO's fourth and final requisite, what I called the argument against smallism. For the integrity of objects of all sizes in their spatial – rather than just of their ultimate microcomponents – is really the same thing as the endurance of objects through time. In both cases, what is at stake is what Whitehead calls “the grouping of occasions” (AI 201-208), or the reach perishing actual entities beyond themselves, in the relatively stable form of what Whitehead calls societies – which roughly correspond, I believe, with what Deleuze, Delanda and others call assemblages.

In effect, Whitehead posits two levels of actuality: the individual, atomistic occasions of experience, and the societies in which they are sometimes associated, in relations that persist across both space and time. In this sense, Whitehead does not posit an entirely flat ontology, as is demanded by both Delanda and Levi Bryant. This also might be where Harman would accuse Whitehead of “undermining” objects. But the crucial thing to understand about occasions and societies is that the relation between them is not a reductionist one. Societies are made up of occasions; but they cannot be *reduced to* the occasions of which they are made up. Whitehead would never say – as analytical philosophers and scientific reductionists are more or less prone to say – that a table, or a sunset, is not real, because the only true reality is the microentities of which it is made up. (This is in fact the problem with the analytic philosophers who entertain panpsychism). Whitehead indeed refers us to “the completely real things which are the actual occasions”; but in the very next breath, he also reminds us that “the real actual things that endure are all societies” (AI 204). The point of the difference between occasions and societies is that occasions are needed to explain the development and persistence of societies (or actual things), but societies or things cannot be reduced to the occasions that make them up in the way that physicalist analytic philosophers claim that things can be reduced to the subatomic particles or fields of which they are composed. This is Whitehead's version of Latour's “principle of irreduction.” Things or societies, of all sizes, are entirely real and irreducible. The difference is that societies endure and have histories, whereas actual occasions don't. It is the agglomeration of occasions in both time and space that gives rise to societies, but this should not be taken to undermine the societies. There can be a thing, or a society (a macro-object in terms of spatial extent), only to

the extent that there is also a continual thread of inheritance from occasions to subsequent occasions (a macro-object in terms of temporal duration). Societies are actual because, and to the extent that, they persist. (This means that space and time are not external to the existence of things, but generated by the processes in which the things extend and endure). It is because of the composition of societies that we may speak of what Levi Bryant calls the “strange mereology” of objects.

Where does all this leave the question of panpsychism? Taking panpsychism seriously, and understanding it in the terms of objects or things of all sizes and sorts, should lead us to rethink a number of other things as well. In the first place, we need to consider what precisely is entailed by thought. Whitehead, at least, encourages us to redefine thought or mentality in terms of affectivity (or what he calls “feeling”) rather than in terms of cognition or computation. Conceptual prehension – or thought as affectivity – is prior both to life and to consciousness; and it is through Whitehead’s analyses of conceptual prehensions that we may best grasp the genesis, or emergence, both of life and of consciousness. In the second place, this might well lead us to displace and reframe current discourses on biopower, and on the definition and management of “life.” If life is derivative of feeling, rather than the reverse, this forces us to think of our ecological position in the world in a deeply altered way.

To affirm panpsychism is to assert, as Whitehead does, that every *thing* makes a decision. As I have previously written elsewhere, this resonates with some recent speculation in the physical and biological sciences. The physicists John H. Conway and Simon Kochen propose the “Strong Free Will Theorem,” according to which, under certain conditions that arise as a result of quantum entanglement, subatomic particles respond “freely,” that is to say, non-deterministically, unconstrained by any prior physical events. The biologist Martin Heisenberg, arguing from experiments on bacteria, fruit flies, and other organisms, states that such organisms exhibit “behavioral output” that is independent of “sensory input”; that is to say, these organisms “actively initiate behavior” that is “self-determined,” rather than being “determined by something or someone else.” Studies of plants and slime molds, as well as bacteria and fruit flies, have isolated instances of “decision” that are not causally determined by the circumstances in which they occur, or the conditions to which they are a response.

Scientists reporting on these instances of decision have tended to interpret them in cognitive terms. (There have been papers about plant cognition, and bacterial cognition, for instance). But Whitehead makes panpsychism affective instead of

conscious: consciousness is derivable from affect, but affect is non-derivable. This applies to all entities, not just proper kinds (as is the case in Hartshorne, according to Skrbina). All these instances of incipient mentality are better understood as what Whitehead calls “feelings,” or movements of “appetition.” These are the basic elements of mentality (or “inwardness,” or “qualitative experience”). Cognition, consciousness, and responsibility are consequences of this basic mentality, rather than preconditions for it. An aesthetic of decision precedes and grounds cognition and consciousness – rather than either of these being the grounds or preconditions for any process of decision.

The mindedness of all entities (their mental pole) is feeling (affect) rather than, or before it is, cognition (computation). Rudy Rucker derives panpsychism from ubiquitous, universal computation; but mind is cognitive computation (information processing) only insofar as this is part of the process of concrescence. An actual occasion prehends “data,” but its degree of mentality has to do with how it processes these data, which is a question of feeling or subjective aim. Separating panpsychism from consciousness means taking all the arguments for qualia, experiencings, etc., all the way down without these needing to be personal, or to have a conscious experiencer.

I can only end this talk by returning to the suggestions of science fiction. I am thinking of two recent texts in particular. Peter Watts’ novel *Blindsight* suggests the possibility of intelligence without consciousness; this links to the whole philosophical debate on zombies etc.; also, Watts implies (perhaps even in spite of himself) that what non-conscious intelligent beings would lack is an aesthetics. Ted Chiang’s recent novella, “The Lifecycle of Software Objects” deals with some of the dilemmas of affectivity before life. These entities in the story are not really alive, but they do have mentality, in the double sense of affectivity and intelligence.

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