Divine Name Verification: An Essay on Anti-Darwinism, Intelligent Design, and the Computational Nature of Reality

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Published by Punctum Books


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These observations about parts, wholes, and code are particularly apropos given the popularity of a new movement in Continental Philosophy calling itself ‘Object-Oriented Ontology’ (OOO). Those interested in ontology owe this movement a debt if only for the manner in which it has caused a shift in the discourse surrounding ontology. It has, at least rhetorically, heralded a shift from a focus on the way entities are accessed and known to an attempt to understand how they are constituted in themselves, from the idealism of the constituting mind (or equivalents) to a realism that seeks reality as it is in-itself. It therefore heralds a move from repeating and interpreting the theories of the great thinkers of the last centuries to an attempt to argue for and articulate new approaches. It signals, also, a desire to situate the human being within a larger field of all entities.

However, OOO’s own ontological positions, in their specificity, are not persuasive. OOO argues that beings are inherently withdrawn and bases this claim on a misreading of the infinity marking objects, contends that the mereology characterizing objects as parts and wholes is unavoidably involved in infinite regress, and believes that it has a key for rendering how entities interact with each other based on how they perceive each other when it is secretly making all
things analogous with human perception without offering an explanation as to why that is legitimate.

But rather than engage in a direct critique of OOO, let us begin first by seeing how OOO would criticize the digital philosophy we are and will be proposing. In an essay entitled “Realism Without Materialism” Graham Harman, the father and main spokesman of the OOO movement, attempts to characterize all previous ontological positions relative to OOO positions and thereby show why those previous positions come up short.\(^{36}\) For Harman, all ontologies other than OOO and those conforming to its view of objects as primary can be accused of what he calls ‘undermining’ and/or ‘overmining’ objects. An undermining ontology says that objects such as “tables and armies” are not primary as they can be decomposed into more primary components such as atoms.\(^{37}\) Undermining is thus a form of “reductionism” that does not accept, as OOO does, that, at all scales, there are objects and entities just as real as the things we see at the human scale or larger. For Harman, such atomistic, naturalist, and materialist ontologies also commit the sin of not treating objects as independent substances, but rather, due to their atomism, believe that an object is nothing more than a list of qualities.\(^{38}\) The objects we confront in daily experience that OOO wants to show are irreducible and primary such as tables, baseball teams, and oranges are thus taken to be epiphenomenal effects of some more real and deeper set of components.

On the other hand, an overmining ontology argues that the common unities and objects we experience on a day to day basis are but illusions obscuring a greater all encompassing reality.\(^{39}\) Here, monism is a good example, as it argues that all things are ultimately one (Harman says


\(^{37}\) Harman, “Realism without Materialism,” 56.

\(^{38}\) Harman, “Realism without Materialism,” 50.

\(^{39}\) Harman, “Realism without Materialism,” 60.
monism is an example of undermining, but I think, based on his own typology, it works as overmining). All particular objects or unities are thus an illusion, as differentiation itself is illusory, given the unity of all things. In other words, all the individual objects truly give way to some fundamental object or unity of which they are parts. Is it the fallacy of composition here to say that if all objects are made of objects, and objects are withdrawn, then those objects are made up of voids? Or is this again how set theory imposes itself? For Harman, monism does not really know how to deal with difference and diversity and can only treat it as external, illusory, and secondary. Harman notes that for many theories such as Anaximander’s, the real is just a single blob of oneness that only mind comes about, externally, to cut and up divide into the differentiated and diverse reality we know.40 Anaxagoras invented mind to end a state of primordial disorder, but it is not clear where mind comes from and how it relates to things if it is only ever external to them.

Another example of overmining would, of course, be Plato’s theory of the forms. Here, the dog one pets is but an illusory double of a more real, eternal object that encompasses all examples—which only ever imperfectly approximate it. The Platonic forms are, of course, eternal and unchanging. Thus, it is not clear how change occurs. Harman also takes ‘undermining’ to be synonymous with theories that say that objects exist “through relations, qualities, or givenness to a human observer.”41 Platonic forms are perfectly actual, since they are nothing but qualities. Harman notes that such theories always end in a dualistic metaphysics in which one sphere is deemed to be truly real and the other only an epiphenomenal effect of the most real level:

For on the one side, we have a rumbling unformat-

40 Harman, “Realism without Materialism,” 60.
41 Harman, “Realism without Materialism,” 65.
ted blob, free of all articulation, and other side we have specified individual entities appearing in the midst of human life. The only truly important gaps for such philosophers are the one that lies between these two layers.⁴²

Harman has interestingly characterized positions allegedly different from his own. However, characterization is not the same as critique. Undermining theories certainly do say that unities we encounter are made up of other components, but they do not have to, by any means, say that that means the unities we experience are less real or not entities in their own right. Presumably, Harman would accuse an informational ontology of bits of undermining objects. However, we will have shown that stars and light bulbs themselves can function as bits. OOO cannot admit the notion of the bit. The bit is not simply an object, even if it is a state of electricity at some point. It’s characterized first by a pure relation, 0/1. It’s a relation that involves the void itself, 0 → 1. That’s not an object, pure and simple. An object is some sort of unity. A bit is only a positive entity and unity in its guise as empty set. Harman focuses on objects. We used to just call them phenomena. Yet, the bit is prior to unity, as such. For example, phonemes in language are not yet signifiers. An OOO object is not even a signifier. It is, at best, the signified. It should really be called eidos-oriented ontology. That is, OOO is stuck in the Imaginary (so was the Phenomenology on which it is based). This is what structuralists were saying about Husserlianism all along (notice how, today, they can already take our image of an apple in the brain, have a computer read it, and produce an image of it on a screen every time one thinks of it, if one is hooked up with electrodes).

To think computation, one has to think the letter. Lacan says letters are of the Real and not the symbolic. Signifiers

⁴² Harman, “Realism without Materialism,” 62.
are of the symbolic. With modern science, the letter is what literally replaces reality and marks the real itself. AIT (Algorithmic Information Theory), for example, is a way of understanding how the real works insofar as it is about how bits compute (that is, how the letters conjugate themselves). To speak of being is, then, to speak of the letter and how it never ceases being written. OOO is saying that the apple withdraws in its unity in its being. I only have apple profiles. But if the apple is a set and computation of that set, then there is no withdrawal. The apple is incomplete (we do not yet know how it will develop), but it is not withdrawn in any sense. Being open is not the same as being withdrawn. It is just the name of a unity. But that unity itself is marked by the set containing the relations rather than being withdrawn. An acorn will become an oak. However, we already have the code for the development inscribed in the acorn.

Speaking about withdrawal is a model based on empirical perception at bottom. Think about it this way: take a flame, an amoeba, and a super duper computer that can compute much more than a human. Does a flame have any sense of object-hood? It does not experience a piece of paper as a thing independent of itself and as a unity. It burns ‘whatever’ in its path. There is no reason to say whatever perceives perceives a reality divided up into unities (although, since reality is, in itself, differentiated literally, it always engages in a differentiated reality). An amoeba probably does distinguish inside from outside and a signal to enter and exit for example. But that is far from what OOO needs. Now take a super-duper computer. I would contend such a computer only sees numbers, letters, sets, bits, etc. This is why it was so incredibly difficult to get optical sensors to distinguish distinct things at the beginning. They were just seeing bits and numbers. They had to be forced to sectionalize them into particular sets. And here even we see it is a matter of sets/letters rather than the signified. Bits are not mental units. They are phonemes and letters. There is no need for mind to determine bits. In fact, I argued in my first book that mind itself is not reducible to
bits whereas thoughts are obviously articulated as computation.

Objects cannot be sets of irreducible, complex bit strings in the OOO sense. I do not think OOO can even admit the notion of the bit, since it would only confuse it with the atoms it sees in undermining ontologies (a bit is both a positive entity as empty set and a pure relation of states, 0/1). OOO is transposing Husserlian intentional objects onto being itself in an act of reification (with the caveat that they ‘withdraw’—which just means that their unity is not perceivable and is only intended ultimately—and perceive each other, although there is no phenomenological analysis of the analogy from human perception that could flesh out such a claim in the way Husserl gives such an analysis in Cartesian Meditations relative to intersubjectivity). If an OOO object was a set of non-compressible bits, then the object itself would be the computation of those bits. That means one has a formula that captures the object itself as such. The thing and the conception of the thing would be the same. It’s then just a matter a la Wolfram to see how that computation plays out. The bit, I will argue, involves the existence of the void, numbers, pure differentiality, etc. Admitting that things are bit strings means admitting that, at bottom, there is an ‘atom,’ and that atom is relationality in itself and a positive entity at the same time.

It’s not surprising that OOO has nothing, to my knowledge, to say about numbers as objects or the nothing/void as non-object. Recursive procedures are, themselves, a series of relations and dependent on bits. This is why, at bottom, it is on/off in computers. A theory proposing atoms can simply argue that there is emergence at each scale, such that atoms give rise to new entities with their properties. This is not to say that there are not some purely reductionist versions of materialism or atomism, but, today, with theories of emergence prominent, they are rare. Harman is also right to criticize Platonic and monistic theories for both making unities and individual substances illusory and
failing to explain differentiation, as well as for dividing up the world into two spheres. But these are familiar criticisms in philosophy both ancient and modern. Hegel, for example, is the first thinker to argue that difference cannot be thought externally to things. Nietzsche demonstrated for us the problems inherent in dualistic metaphysics. In this way, all of post-Hegelian philosophy is engaged in attempting to avoid the issues Harman outlines. All of post-Hegelian theory is thus premised, in part, on beginning with the idea that difference and differentiation are inherently part of reality, rather than it being some static unity and oneness.

Harman has nicely shifted our attention to ask about “interactions between things” and to asking how different scales are made up of objects from other scales (stars and galaxies), but OOO is far from being the only way to engage with such issues, and such issues do not require, necessarily, a view of objects as totally withdrawn unities. For example, we have and will argue that, beyond parts and wholes and wholes being parts, there is a level of code that is at work. Take stars and galaxies as an example. Here, wholes (stars) become parts of the galaxy. But to understand how stars, for instance, rotate around an axis, one needs to see those stars as computing some program itself. And if we take things as but wholes and wholes that can be parts and part that can be wholes, we will never reach this dimension. In fact, for Harman, given the phenomenological and Whiteheadian background of his theory, we should seemingly ask how stars ‘perceive’ each other to know how they rotate as though each star perceived all the others. For us, there is differentiation at the heart of things, but it is due to the bit being fundamentally differential in relation. Heterogeneity is thus introduce into the core of being without having to be about, first and foremost, withdrawn substances that only ever interact with each other by perceiving each other and touching by way of intermediaries (for one of the consequences of seeing all things as irreduc-

43 Harman, “Realism without Materialism,” 63.
ible, individual substances is that things never directly interact with each other).

Harman believes that the only way to avoid the problems of a vulgar monism is to accept that there are “individual entities” and that such unities are primary and irreducible to “anything pre-individual,” but we would then never be able to understand individual words and how they mean anything. Words are certainly individual entities and unities, but they are not, as such, totally irreducible or primary, since, otherwise, we would not be able to understand how they function. They are differential in their nature, as are the phonemes out of which they are built.

At one point, Harman’s own undermining/overmining distinction begins to deconstruct itself. In attempting to characterize pre-Socratic philosophers, Harman says that Thales’ water theory is not actually an act of undermining, wherein individual things are but surface effects of more basic and more profound components, but, rather, an overmining, insofar as, at bottom, we find “properties,” “certain of palpable properties belonging to the ultimate elements, without addressing the being of these things that withdraws behind.” In other words, any position can thus be characterized as overmining and/or undermining if it does not accept Harman’s position that reality is fundamentally made up of irreducible unities that withdraw and yet can be parts of wholes, and those wholes parts of some other whole. And that means what Harman does is essentially characterize all positions not his own as failing. A position overmines, undermines, or does both (materialism, for instance, is said to do both at once). It all comes down to the same thing—if a position does not argue that reality is made up of individual things that are totally withdrawn from relations with each other, then that theory allegedly fails. The only theories that neither undermine nor overmine are the ones that Harman sees as precursors (Ar-

44 Harman, “Realism without Materialism,” 64.
45 Harman, “Realism without Materialism,” 65.
istotelianism and Husserl/Heidegger). This characterization as critique ultimately backfires on Harman’s own position, since he ends up turning his own theory into an overmining one. Harman argues that there are real objects “withdrawn behind any of the specific qualities through which they are manifest,” but that leads him to argue that there is a difference between the real and sensual objects. And this distinction ends up thrusting Harman’s OOO back into the overmining of Platonic forms, eidos. Here, instead of a form, we have a totally withdrawn and ineffable object that we only ever have imperfect approximations of in empirical, sensual perception. The withdrawn thing therefore, in its pure self-identity and presence to self, yields, not surprisingly, to sensual manifestations that only poorly mirror the thing. In arguing that real objects are not their qualities and have some sort of identity above and beyond any properties they have, Harman ends up having to reproduce one of the key distinctions of undermining/overmining theories he was keen to transcend. And that is because Harman does not get at the key issue here surrounding the problem of the one and the many. The issue is what makes something identical to itself. Harman takes it for granted that, if one posits a withdrawn object, then it is fully identical and present to itself. But such identity is always itself undermined, as Hegel showed merely by its recognition as such. This is why Harman cannot avoid the issue of vulgar Platonism, as he does not think through what makes self-identity itself possible—it is taken as a primitive categorical intuition (which only a human has) or necessary postulate.

Granted, for OOO, objects are not eternal, but one does not need to posit eternity for this problem to arise. The lack of eternity make it so that issues of the void make themselves felt, but OOO has not reached yet the point where it also posits the fundamental ontological question concerning the fact that there is something rather than nothing. Harman wants to view individual objects as being totally

46 Harman, “Realism without Materialism,” 59.
isolated substances, but, while he should be commended for focusing philosophy’s attention on engagement with entities of all types, at the same time, what makes a unity a unity and what makes unity possible is not thought through and is taken for granted. Simply arguing that things are not their qualities and that something must exist that is not reducible to them does not in itself answer the question for how that is possible. Part of the problem is that Harman is simply arguing from authority and plugs in views of past thinkers willy nilly into new views. Here, Husserl’s eidetic intuition is simply projected onto the world such that one need not ask about the self-identify of things. Saying things are not their qualities is classical Aristotelianism, but Aristotle himself could not isolate what substance truly is (beyond isolating it as form or some sort of form/matter combination). Harman simply turns substantiality into an ineffable as though that evades the inherent problems in identifying such a pure identity. Such a pure identity makes change and contact between things mysterious. Change is not explained here, but only taken as a primitive. However, not explaining change was earlier taken as a devastating blow against other theories by Harman himself. In fact, for an atomist theory to avoid the charge of undermining, it merely has to agree that atoms are not the fundamental objects but that objects pertain at all scales. An overmining theory need only admit that human consciousness does not constitute all objects as such, but that objects exist independent of mind.

Harman’s key insight is mereological in nature—that objects exist as irreducible unities at all levels and scales and that such objects can be parts of wholes or wholes with unities as parts. However, Harman’s failure to engage with set theory, the ultimate discourse on mereology, means that the very nature of unity and part-whole relations is not thought through. It also means that relations that are just as fundamental are left out of the picture or made out to be purely external between isolated things. Harman has offered us a key critique of reductionist moves in philosophy,
but he takes for granted that such mereology enables an infinite regress. However, such an infinite regress renders part-whole relations nonsensical, and an engagement with set theory would show this. If there is an infinite regress, then one has a pure, actual infinity of unities and, thereby, it is not clear why or how there is any one, any unity (recall here Badiou’s key thesis concerning the one). Admitting that both atoms and trees are really real objects is only a first step—one that cannot be thought through without the aid of engaging explicitly in set theory and the implications of the actual infinite.

Now, one of the main points in favor of substance ontology is that when we have relations, there is always seemingly a presumption that two things are related (there are two relata). One cannot seemingly say how such distinct relata arise via relations, since any relations will bring up the same need for relata. But this argument was itself premised on an avoidance of infinite regress, especially in its Aristotelian form. The monad was only needed to avoid infinite regress. But if an infinite regress is allowable for individual things and parts and wholes for Harman, then there is no reason why such infinite regress cannot be allowed for relations. Again, transfinite set theory is the theory that can decide such issues. As we have already tried to show, one must posit something like the bit, which is both empty set and inherent relation, in order to avoid these problems and the antinomy of the two positions. Aristotle thought that no primary substances are relational, and Harman proves himself to be a good Aristotelian. But to return to Aristotle is to return to the Dark Ages indeed. The true cause of the Dark Ages was Aristotelianism, not Christianity or religion. And this is why one needs to be much more Hegelian and find relationality already in the primary substance itself.

The problems for Harman’s theory do not end here, for, even though Harman claims to be offering a flat ontology in which the human is but one of many entities, human perception is itself secretly privileged throughout, as al-
ready argued. Speaking about withdrawal is a model based on empirical perception at bottom. Given the spectrum of perceptions we have laid out, it is numbers/letters/sets that prove themselves to be most comprehensive and fundamental, as all the possibilities on the spectrum can be comprehended in those terms. Most things do not simply see objects in any sense. To say reality is made up of unities, then, is already to privilege human consciousness (or, at best, a specific set of living organisms) as having the most fundamental look at reality as it is in itself. Humans then just happen to discover reality as it is in itself in a way a mountain simply will not. Part of the problem here is that everything a la Whitehead is being based on perception for Harman. But why is a thing essentially the set of perceptions something has of it? Is a tree really all the ways it is perceived, or is it a particular fractal program that is iterated and gives rise to a particular phenomenon? Harman also believes that the set of perceptions of anything is actually infinite. And it is by way of this alleged infinity that he believes he can ground the fact that no act of conceptualization can grasp things and thereby proves their withdrawal. But there is no secular, negative theology of the potato. Potatoes are not infinite things that exist beyond all things and are isolated in a realm of their own—unless one posits a Platonic potato. The number of perceptions of a potato, for instance, is only ever finite. The only way the set of perceptions of a potato is transfinite is in the sense of its being incomplete and thereby open (not withdrawn) and/or inconsistent (any perception can be added to the set of any kind). There is no withdrawal of the potato, but rather a total openness characterizing it. It is incomplete. A potato is not a closed off thing. There is no ontological closure here.

The potato is not simply a set of perceptions of it, but is a program, or mathematized expression of it. A potato is formed via the repetition of a specific code. That means again that it is open. Potatoes might, in fact, be a matter of a very simple bit string. In that way, if we do speak of what
the potato is, one can mark that bit string as its set and identity. If it is just a matter of showing its mathematical character in a very complicated way, that is due to our lack of computational abilities rather than because the object is itself some inherently hidden thing. What is not there is like a number not yet counted.

Now, Harman’s model is based on taking the Husserlian model of how phenomenological, intentional consciousness constitutes unities and transposing that model onto reality itself. But the problem is that, without consciousness to constitute the unity of things, it is not clear how it occurs, other than taking unities as primitive givens. Here again, set theory makes its need apparent. For, without consciousness itself to constitute the unity of thing, one needs to argue that a thing, in itself, is void. This point makes itself felt perhaps most forcefully when Harman considers the real implications of treating objects as withdrawn. If all real objects are totally withdrawn, then they are all rendered as the same—as pure voids. They are all the same as real objects. All is swallowed up into the great dark night of the real. Pure presence to self and self-identity are identical with the void, which is why they can only be comprehended by the empty set. The substance of a thing is never perceived and never experienced. We only ever deal with properties and qualities. For Harman, this means the object is hidden away, but Husserl was more honest insofar as he saw that consciousness itself was constituting and projecting the set that contains all these qualities. Also, substance here is emptied of all qualities and is above and beyond them. That leaves it as a literal nothing, but the only way nothing has substance is in the empty set and its equivalents. This is why we need set theory to think of bare substratums.

Harman himself never deals with the implications of saying that all objects are the same in his theory, given their withdrawal, but set theory is willing to accept such an identity between all sets insofar as it accepts the undeniable role played by the empty set. Only the empty set as name can
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mark the difference between the thing and its inscription, between the thing and what it is. This point is made in set theory via the axiom of separation (although the empty set is not referred to by it). This is why anything has to be related to as a signifier. The thing always contains absence within itself. It is not withdrawn into absence or afloat in a void. It has absence as part of it internally (and thus it is necessarily relational as well as being a positive entity). No list of properties captures a thing, since its identity is a framework, like the name and the set. But this is a Lacanian insight—an insight that leads him to say that all things of all types are signifiers. It is not that reality is discursively constituted or is the effect of human speech or language (it is the effect of divine speech). It is a way of capturing the inherently differential nature of reality. Things are unities and collections, always. Because of the way reality is marked by the transfinite, we also play a role then in isolating collectives. We are the determiner when we encounter a mountain rather than a range, for a mountain is part of the range, and the range part of the land, and the land part of the planet, and the planet part of the solar system, etc. OOO is railing against this aspect of Lacanianism when it should be reifying it rather than Husserlianism or returning to Aristotelianism. Husserl spoke of intended objects, what Derrida and Lacan showed is that what makes such objects possible is the subject’s alienation in the signifier, in a differential network of signifiers. And that is, again, why merely transposing Husserlianism onto mind-independent reality hides what was revealed in the (post-)Structuralist critique.

The empty set is, of course, included in any set. In that way, the empty set functions as the name/thing. It is the brackets around which all is included. Each thing must have a name. That name is the embodiment of the empty set and the framework of the thing. The thing itself is thus void, and this void is included in the set as the set’s name. In this way, we are saying that Harman’s notion of withdrawal is thinkable as the empty set itself, the name of each
individual thing. The name by which each thing is called is another way of inscribing it as marked by the empty set. A name is itself a rigid designator, as Saul Kripke laid out many years ago. In this way, to speak of a thing that is totally withdrawn is to transpose the rigid designator onto the real. We are not referring simply to the name as a thing spoken or written. That is something always dependent on the thing’s real, hidden name. We are speaking here of the void as the identity in itself of the thing. The two are linked and make themselves felt in their impact via the name. This way any name is a name of a thing, a name and a thing.

Harman himself rejects the substance/aggregate distinction, and the implication of that is that any unity is a thing. Ontologies traditionally argued for a distinction between substances and aggregates to ensure a grounded realism. It was with modern philosophy culminating in Husserl that consciousness intends the unity of things such that a swarm of bees can be a unity and thing as much as a bee itself is, in traditional realism. The bee is the only truly mind independent thing per the latter view. Today for us, it is a matter of following the realism of set theory. Insofar as OOO continues to see numbers as abstract things, it continues to implicitly rely on the substance/aggregate distinction, even though it claims to have toppled it.

One might ask what difference there is between saying ‘this door’ is a name and, thereby, a set that is transfinite and thus incomplete and inconsistent, rather than something withdrawn. The point is that what Harman mistakes as withdrawn and vacuum-packed is just that, the set itself, as empty set, as mark of the void. The difference between our views is important. A set contains things. It can include anything. This door can, then, be all its perceptions as well as its mathematicization. Harman’s’ rendering of things as withdrawn, real substances is about designating a transcendental signified. All the different manifestations of the door always referred to ‘this door,’ but if ‘this door’ is an embodiment of the empty set as name, then one is connecting it to the circuit of numbers and letters rather than to the ineffa-
ble world of the withdrawn. This is important, since, in Harman’s view, something is always beyond me, and, per our view, created things are always renderable and specifiable—only God and the void are truly transcendent. Why do we connect a particular image of the door to the door? Harman has no better answer than because we refer it to the transcendental signified ‘this door.’ But that is already to treat the door as a set.

What we see today in Continental Philosophy is an attempt to take the insights of the last 100 years or so and apply them to reality itself. That is to say, the structures once said to be inherent in consciousness are not just on the side of subject but also on the side of substance. In this way, the problem with Harman is not that he reifies Husserl, but that he reifies a pre-Derridean Husserl. The problem is not that what Husserl thought was inherent to the immanent space of the mind that is, in turn, inherent in mind-independent reality itself, but that the model here of phenomenology does not take into account what the Derridean and Lacanian critiques revealed about this Husserlian model. We thus need to find mind in things, but in a strict Lacanian sense. An objectified Lacan is needed rather than an objectified Husserl, and that means making things renderable in relation to the signifier, letter, and set.

OOO takes it as a given that objects are made of objects, so they see no need to offer an explanation of how one object comes to be itself an object. But that is the mystery. Husserl could offer such an explanation, but only by constantly having recourse to intentional consciousness. Aristotle could, as well, but only by having recourse to grammar and predication (some things are said of others, but substance is not said of anything else). A snowflake is an object, but it was not always there, such that we need to understand how it arose and why it looks as it does. Simply looking at things as parts and wholes will not do that. One needs the bit and letter to explain its emergence. It did not arise out of nothing and did not arise due to some agent or final cause imposing itself on inert matter. If energy is just
matter and is constantly giving rise to new things, then OOO must be aware of that and be able to account for how objects arise. But OOO can only say there is always a composition of objects. But, even if that were true, it cannot tell us why it takes this shape and in this way. Why are those objects the ones that make up a phenomenon?

Harman says other ontologies are wrong because they see reality as an apeiron chopped up by an external mind, but OOO’s reliance on perception ends up doing the same, since it cannot tell us how a reality differentiated into objects yields to change and the formation of specific new objects. One needs numbers, letters, sets, and bits to do that, since an apple is always one thing and, therefore, has a number inherent to it. That needs accounting for; perception only counts what is always there. If these things were withdrawn and vacuum-packed, no one would ever be able to write computer programs and exchange the code. I just do not see how computational irreducibility can be talked about in terms of withdrawal. At all stages of the computation, one knows that it is a computation of that particular program. Here is the problem: OOO is saying that the real itself is differentiated into real unities that are withdrawn. But those unities presuppose that numbers are not constructions but are real, since one thing is one thing and not two. If any object is just an aggregate, the only way to unlock the logic of its unity and mereology is by doing set theory, as set theory is the very ontology of mereology as such. This is why one should side with Badiou over Aristotle.

Take a cube. Husserl merely says we never see all sides of a cube at once. But consciousness always posits a cube unit as a thing over and beyond the profiles and sides we see of it. OOO now says that unity is a real, withdrawn thing. But this leaves as a mystery why a cube has the shape it does, why it looks the way it does, etc. We do not explain the inherent symmetry that is invariant in it and why that symmetry does not change, no matter how we look at it. Even if we turn it around, the cube maintains certain prop-
erties. It has six identical faces. We can see each one. There is no face that is withdrawn and only hidden. And this is why we need to understand it as a mathematized thing, as set of letters, to understand this invariance. Only then will we make sense of how each face and edge are identical. A number is all there and present with no withdrawal and no profiles. When I think the number one, it is there as one. It is not hiding. This is really why OOO theories are completely mute about numbers. They are ignoring the mark of unity itself and the notion of the mark as such.

OOO argues there is no total object. But that is the same as arguing there is no set of all sets—no universal universal, no whole or totality of totality. Again, the only way to establish such a thesis is by using set theory. But that means there must be something not contained and not an object. The empty set marks that non-containment. OOO does not say explicitly that withdrawal must be related to the void to do the same. OOO might here respond that if everything is sets of letters and bits, then we can speak of man and woman as universals rather than as individuals. But that is because there is also the signifier. OOO can only treat man and woman as Aristotelian, secondary substances, which, again, gives rise to the problem allegedly left behind with overmining and undermining theories by making one thing depend on something more fundamental (a hierarchy). But, for us, man and woman are signifiers such that to think them is to continue thinking sets and collections.

Rather than Aristotle’s substance ontology it, would have been better to adopt here Aristotle’s theory of the soul. There, Aristotle argues the soul is the form of the activity of the body. That might have lead OOO to see that a living organism, for instance, has its soul in a particular program that is iterating itself. It would then have found a need to think through programming. OOO would have been better off learning from Object-Oriented Programming about how sets and subsets work in conjunction with code. We must think compositions and collections based on letters
and syllables. This is not an arbitrary metaphor, but one that imposes itself on us and exposes the inherent structure of things. The structure of things is always mathematizable. All wholes have structural natures that show how they are always already mathematized—if only in the sense of having relations as part of them. Things are woven together. It is only in this way we can understand emergence. OOO itself is made up of three Os, such that each O alone does not speak of it. If we were to take three marks and put them together, it is clear we always get a new thing. The issue is, then, whether the new thing is compressible or irreducibly complex. I can take the things on my desk, but it is only a collection and one reducible to those three things, unlike how the letters c, a, and t come together to make ‘cat.’

Let’s finish this excursus into contemporary Philosophy (although we were always engaging in it and always will be) and return more explicitly to biology. But, to be fair to OOO, let’s look at its second articulation in the work of Levi Bryant. Bryant adds to Harman’s notion of withdrawal and objects being made up of objects the idea that objects are always systems and that, in addition to parts and wholes, such systems have elements. Parts are unities within objects, whereas elements for Bryant are parts that cannot exist independently of the system. However, as we saw in the moment/pieces distinction, such non-independent elements are very rare. Bryant needs here to think of elements as elements of code and in terms of their differential nature, rather than as parts that cannot be separated. One would then have a way of thinking through how a system itself operates in the manner it does.

Bryant sees reality as differentiated into allopoetic and autopoetic entities. Autopoetic entities constitute their parts and elements, but one cannot understand how they do that without understanding how they are computational

in nature. A cell, for instance, reproduces, but that is only because it has a code to do so. Flames also reproduce, but they do not explicitly in doing so contain a code for doing so. That element of code here is missing. Bryant also takes allopoetic entities to be ones created by another entity and that do not do anything to maintain themselves from disintegrating via entropy. For example, a factory produces a tennis shoe, but if that tennis shoe is torn, it does not, on its own, fix itself. A human being is made of trillion of cells, but if one has an arm removed it does not grow back. Are human beings then not autopoetic? It would appear that the explanation has to do with code rather than autopoiesis (some creatures are coded to repair this damage). Humans do not grow back arms, but do grow back hair. The code explains why. The factory, however, as dynamic system, will replace a worker with another one if that worker gets sick. But the problem here is that this distinction does not work, since any and all entities are produced by other entities. A human being is made by its parents, for example, so all are allopoetic. Autopoetic entities then become special cases of allopoetic entities. But the only way one can get an allopoetic entity is from autopoetic ones. One then has here a vicious circle without explanation. Where did the first autopoetic entity come from? And if it came from nowhere, then how did it create itself?

All such entities are negentropic. That means they cannot be eternal. They could all disappear. It is, then, not clear how one allows an infinite regress to take place. Also, knowing an entity was produced by another and does nothing to repeat itself tells us nothing about how an entity is in itself constituted and why in that way. The issue here is really the one between the living and the inorganic (that was the distinction the autopoetic/allopoetic was designed by its founders to replace). The living, as we have argued, requires code. Even if Bryant is willing to admit that a flame or a crystal is alive, one still is unable to explain the difference between a crystal and a cell. Bryant attempts to explain such things with reference to a virtual dimension
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and regimes of attractions. But this only seems to defer the problem by inventing another dimension of being (we will address the issue of the virtual later via a critique of Deluezeianism). In essence, I do not think such a virtual dimension can be anything more than an epistemological projection. Regimes of attractions can only be made concrete if mathematized and run through a mathematical model that sees reality itself as inherently mathematized. Even Deleuze’s virtual ontology was modeled for instance on the insights of differential equations, the notion of infinitesimals, and Riemannian geometry.

Part of the problem here is that Bryant is taking it for granted that reality being differentiated means it is differentiated into objects and objects as systems (no recourse to the work of Roy Bhaskar and the practical workings of scientists can show this, either, ontologically speaking). But this is precisely what needs explanation. Why is any unity a system? If all unities are not, then where do those systematic unities come from if the non-systematic ones only ever come from the systematic? It seems, then, that Bryant is not explaining or accounting for the empirical ontologically but merely doubling it (hence, the centrality of a virtual domain in the ontology here). He is adopting the empirical nature of things as given and then restating them without explaining or accounting for how things have the properties they do in the empirical descriptions used. This makes the entire analysis dependent on having the right empirical description to start with. For instance, Bryant would argue that asking how the first cell achieved a membrane is a purely empirical question. But it is one that he has to ontologically double, insofar as one has to account for how unities arise and exist. Accounting for the cell then gives one an occasion for making the ontological point. Instead, Bryant looks into the world and sees cells and now wants to describe them as examples of the autopoetic. The allegedly true nature of things (we are told that the account given

48 Bryant, The Democracy of Objects, §3.3.
reveals the true nature of reality) is then presupposed rather than explained.

The problem is that even that description leaves one wanting (although Bryant is very good at reproducing the empirical research he has read and presenting it as a form of phenomenological analysis in lieu of traditional Husserlian analysis of lived experience). OOO is suggesting reality is made up of black-boxed and withdrawn substances, but it does not show us how to deduce that black-boxing. We want an objectified philosophy that shows how thing are marked by undecidability and incompleteness and not to see it imported from the outside. Bryant argues that autopoetic systems are operationally closed and self-referential such that they are related to their own internal operations and not an outside. But how is that possible? Without explaining how such a thing is possible one has not given an ontological account. Bryant does not give a full account of how such things work (what makes it so that things are operationally closed, other than by taking it as a given), but that just bears witness to the extent to which his view does not go beyond a restatement of the empirical descriptions he borrows from the scientific studies he has read.

In Bryant’s system, an element of the system refers to other elements of the same type. But there is no element of code here such that those elements take on differential qualities and act as purely differential relations. Information is then taken only semiotically as something that represents something for something else. Shannon information as purely syntactical information is missed here. This is why Bryant sees all systems as closed off and only jostled by things external to them. However, no system is so closed, because they are always comprehended by codes and relations that exceed them and relate them to other things. Even if we simply look at the atomic level, a system is always receiving its parts from outside since these elements are part of its structuration at that level. The very idea of information in Shannon’s sense allows for the same thing to be transferred between two things without prob-
lem. There, substitution occurs, just as one atomic element can substitute for another. If things were closed off, the technology we now have—where I think of an apple and an apple image appears on a screen—would not be possible. It is possible because the bit allows for a universal translation system. For Bryant, my mental representations only link to other mental representations or neurons to other neurons without any hope of anything on the outside receiving more than a confused noise relating to this internal process. Bryant might be able to render out of his system a sense of elements as structurally related to each other, but this needs to be articulated as a code itself, and this code as comprehending the thing, to truly understand and explain how systems work.

But, in that way, Bryant’s OOO would be violating a principle of OOO by isolating something which is not simply an object, strictly speaking. Such elements would be differential elements within a system. Again, Bryant needs to offer us an ontological account for why what he calls ‘operational closure’ occurs and how is it ontologically possible. This means an explanation of how a system forms and how it becomes closed off. It means an explanation for why what he calls the elements in the system only communicate with each other and not with the outside. Here, for instance, it might be due to the very nature of the elements, or it might be due to the nature of relationality. We would, of course, argue that it is due to such elements being both positive entities and relational as part of their nature that makes it possible. Operational closure might be due to all entities always being related to one another, such as how the first replicated DNA was necessarily related to a cell membrane and other cellular machinery.

For Bryant, autopoiesis, as with Humberto Maturana and Francisco Varela, the two scientists who invented this distinction, is mainly about negentropy and maintenance of existence. But even pillows and buildings do that, as they do not immediately crumble. A question left unanswered here is: What is it about being, as such, that makes it en-
tropic and about all beings, such that they seem to evade it, if it is so fundamental? But if OOO is willing to admit differential elements and, thus, how differentiability is inherent in things, then it is no longer clear why objects are independent and what makes such independence possible. Bryant also needs to differentiate between parts as systems, subsets of a whole, and seeing elements as themselves parts (lack of detachability will not do the trick). Code is not made up of non-detachable parts. Things lose their statuses as simple unities when functioning in codes. Bryant may mean here that things only have a meaning effect when in relation to other things, but that should not allow us to overlook how they are detachable and how that relationality is built into them. When we speak of how, for instance, DNA chemicals can exist on their own outside of the DNA code, we miss how they function in a code. This is why we should not focus on if an element can exist independently, but on how it functions differentially.

If Bryant wants to think of substance as processes and activities, then we need the rules and code that they are computing. Once we have that code, we can then explain how a thing is not reducible to its material parts insofar as it can compute its structure and nature using any parts, such as atomic elements that are plugged in. And the separability of elements is due to a thing’s relation, minimally, to the void rather than to its being always in excess of itself.