

TIME, SPACE, ESSENCE, AND EIDOS: A NEW THEORY OF CAUSATION

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ABSTRACT: This article attempts to develop the abandoned occasionalist model of causation into a credible present-day theory. If objects can never exhaust one another through their relations, it is hard to know how they can ever interact at all. This article handles the problem by dividing objects into two kinds: the real objects that emerge from Heidegger's tool-analysis and the intentional objects of Husserl's phenomenology. Each of these objects turns out to be split by an additional rift between the object as an enduring unit and its plurality of traits. This explains Heidegger's notorious 'fourfold' model of the thing. This article shows that Heidegger's *Geviert* must be reinterpreted as a system of four tensions that can be identified as time, space, essence, and eidos. Time and space can no longer be left as peerless dimensions of the cosmos. Instead, they are shown to arise from the tensions between things and their qualities. And for this reason they are joined by essence (in the classical sense of the term) and eidos (in Husserl's sense, not Plato's) as two out of four basic features of the fabric of the world.

KEYWORDS: Times; Space; Essence; Eidos; Causation

The title of this article might sound presumptuous or strange. The presumptuous part would stem from the adjective 'new'. For some people this word implies absolute novelty, a new theory summoned from nowhere like a genie from a bottle. But such pristine newness would be neither possible nor desirable. The topic of causation has received considerable treatment from the dawn of philosophy, and the highlights of this story are widely known: Aristotle's four causes, the neo-Platonic doctrine of emanation, the divine intervention found in Islamic and French occasionalism, and Hume's skeptical doubts about causation along with Kant's half-hearted solution. While these well-known theories cannot be considered in depth in what follows, their spirit will be present in what I say.

The *strangeness* of the title, by contrast, would arise from the topic of causality itself. With the exception of Hume's doubts about causal links, the theme of causation has largely vanished from philosophy. Whether necessary causal connections can be established or not, *how* do they work? This is barely spoken of at all. While philosophers remain in perpetual anguish over the single gap between human and world, or the

denial of this gap in favor of a primal human-world correlate, causality seems to unfold in a place where philosophy no longer enters—the sphere of inanimate physical things. And since the natural sciences already deal with causation with such spectacular success, it may seem rude or unwise for philosophy to intrude on their terrain. In philosophy, we now feel most comfortable when dealing with the limited sphere of human-world interplay. We dare not venture outside, partly through fear that the sciences might strike back and invade philosophy’s humanized ghetto, reducing the mind to a brain and all things to narrowly physical interactions.

In this article I call on philosophy to rediscover its global vocation, to speak of the inanimate realm no less than the human-world gap (or non-gap, as some prefer). The way to do this is with an object-oriented metaphysics having a single problem at its core: the tension between objects and relations. The term ‘object’ as I use it means anything that exists. The term ‘relation’ means any interaction between these objects. I hold that such interaction is always a kind of translation or distortion, even at the level of inanimate things. In recent philosophy, the *human* relation with the world has been treated as an extra-special rip in the fabric of the cosmos. The human entity magically transcends the world in unprecedented fashion and becomes the star of philosophy, while inanimate relations are treated as mere boring clockwork—a dull mechanical onslaught where atoms and billiard balls slap each other into submission according to widely known physical laws. Against this assumption, I claim that human beings are objects in precisely the same way as clots of physical matter. In addition, I claim that the relation between fire and cotton is of the same kind as that between fire and the mind. The same universal problem arises in both cases. It is a problem already known to the abandoned occasionalist tradition, which cannot remain abandoned any longer due to the contributions of a surprising figure—Martin Heidegger.

1. HEIDEGGER’S OCCASIONALISM

The words ‘Heidegger’s occasionalism’ were possibly never spoken on earth until this very sentence. That is understandable, since the phrase sounds patently absurd. The occasionalists are remembered for their meddling God who intervenes in every least event in the universe, his continuous creation of a reality that otherwise disintegrates, and the impossibility of direct causal connections between any two substances. None of these topics seems even remotely relevant to Heidegger, since he barely makes room for God at all and dismisses the concept of substance as belonging to the accursed ‘metaphysics of presence’. Obviously, I will not say that Heidegger believes in an interventionist God or continuous creation. But I *will* contend that he is an occasionalist when it comes to the relations between beings. It is true that he never says anything of the sort, and to make the case requires that we do some violence to Heidegger’s self-understanding. But such violence is necessary here.

The point is this: Heidegger inadvertently shows the difficulty of relations of any sort. The heart of his philosophy is the famous tool-analysis, and when read properly

this analysis makes a metaphysical case against relationality *per se*. This is the sense in which Heidegger is an occasionalist. Notice that I do not compare him with Hume—I do not say ‘Heidegger’s *empiricism*’, a far more ridiculous phrase than ‘Heidegger’s occasionalism’. The reason he is no empiricist is that the gap he generates is not between two impressions or ideas, but between any two things. For him these things must be autonomous and inaccessible, and they have every reason to be called *substances*, in a slightly new sense of the term.

Everyone is familiar with Heidegger’s tool-analysis, so I will keep my summary brief. The phenomenology of Husserl suspends the reality of the world in favor of an exact description of how it appears to consciousness. While there is more to Husserl than this, it is accurate to say that Husserl is unconcerned with the reality of things outside their accessibility to consciousness. In this way, phenomenology is one of the ‘philosophies of human access’ par excellence—even more so than Kant’s philosophy, given Husserl’s complete lack of interest in the *Ding an Sich*. Husserl’s famous motto ‘to the things themselves’ means ‘to the *phenomena* themselves’, not to the noumena themselves.

Heidegger’s tool-analysis has been seen, and rightly so, as a counterpoint to Husserl’s extreme form of idealism. As Heidegger notes, we do not usually deal with things as phenomena in consciousness. Instead, we silently rely on them until they malfunction. The hammer is not noticed unless it breaks or is too painful or heavy to hold. We notice the ground only during earthquakes or when stepping on slippery ice. Internal bodily organs are generally noticed only when we are being rushed to the hospital. This is all true enough. But the tool-analysis is usually trivialized into a *pragmatist* reading: Heidegger thinks that all theory emerges from a shadowy background of unnoticed praxis. Once this step is taken, it is easy to claim that Heidegger merely echoes earlier insights of John Dewey. But Heidegger is a philosopher of *being*, not of human praxis—and being for him is not just a meaningless slogan. The question of the meaning of being is often viewed as inscrutably deep and mysterious, and it is rarely noticed that Heidegger gives a provisional *answer* to the question of being, if a largely negative one. Namely, being for Heidegger is that which is not present-at-hand, not *vorhanden*. Among other things, this means that the being of a thing is not identical with its presence in human consciousness.

But the insight goes further than this, and if pushed hard enough it quickly becomes as weird as a ghost story. For when we say that the hammer is not something noticed in consciousness, this means that the hammer we perceive or think of is a mere shadow of its reality. The hammer in its subterranean reality is deeper and richer than the hammer we witness in the phenomenal sphere, which is only a shallow caricature of the hammer executing its own reality. But here comes an important point: human praxis is just as guilty of this caricature as human theory. *To use* the hammer does not give us any more intimate contact with the hammer’s reality than *to see* or *to think* about it does. The same sort of translation or distortion occurs in both cases—the hammer is rendered in a foreign tongue distant from the original. Other features of this instrument, which may be of the greatest relevance to mosquitoes, bacteria,

angels, or nails, are left untranslated, ignored as if they did not exist. When it comes to distorting the subterranean life of beings, theory and praxis are equally guilty.

In other words, we should not be fooled by etymology and think that theory is about *Vorhandenheit* and praxis about *Zuhandenheit*. For surprisingly enough—both distortions give us nothing but *Vorhandenheit*! Ready-to-hand does not mean ‘useful’ and present-at-hand does not mean ‘visible’. Instead, the ready-to-hand is the reality of the hammer itself apart from any distortion by human access, and the present-at-hand is whatever exists only *in relation* to such access, whether that axis is lucidly theoretical or unconsciously practical. This reading of *Zuhandenheit* as the lonely isolation of unique things is disputed by most Heideggerians for a simple and understandable reason: namely, Heidegger refers to *Zuhandenheit* as made up of a *system* of things, and states explicitly that it is not a series of individual tools lying around in isolation. But this objection overlooks a very important point—namely, tools only blend together in this system *insofar as they do not break*. Yet the fact that they do break proves they are never fully integrated into the system of purposes in which human Dasein makes use of them. Tools break because they are something a bit more, an excess of reality that no system can ever fully exploit, and which eventually returns to haunt every user. In effect, then, Heidegger’s ready-to-hand means ‘objects’ and his present-at-hand means ‘relations’.

But now comes the most surprising step of all—one that bursts the entire framework of post-Kantian philosophy and pushes Heidegger tacitly in the direction of Whitehead. For it is not just human theory and praxis that distort the autonomous reality of objects. Humans do not have the unique gift or burden of translating entities into modified terms. Nor is the situation improved if we expand the roster of distorting and translating entities to include the intelligent higher animals. Philosophers must not cry out for dolphins, whales, dogs, monkeys, pigs, and crows to save them, for there is nothing they can do to help. In fact, any relation between any two entities must result in the same type of translation or distortion with which human Dasein treats hammers. Yes, I realize that humans display cognitive powers that only a charlatan would grant to flowers or sand. But these powers are merely a special case of what must be called ‘relations more generally’. The primary dualism in the world is not between matter and mind, but between objects and relations, and most relations will be unrecognizable as anything mental, just as objects turn out not to resemble what is usually called the physical.

In this respect all objects have autonomous reality apart from humans, apart from dolphins, apart from flowers, but also apart from stones. And since each of these hidden objects has a specific reality that distinguishes it from the others, each can be said to have a *form*—not an accidental form stamped in it by an outside entity, but a form in its own right, which the Scholastics and Leibniz call a *substantial* form. But there are at least three ways in which these substances differ from the classical kind. First, they are infinitely withdrawn and cannot be brought into any relation without significant distortion; truth cannot be correspondence, since knowledge is a translation of real things rather than a copy of them. Second, substances do not need to be so-called ‘natural kinds’. It hardly matters that sharks have existed for millions of years, iPhones

for just two, and the Obama Administration for less than a year; all can be substances if they have an autonomous reality inexhaustible by any relations, as I hold that they do. And third, while the classical difference between substance and aggregate gives us a world with only two levels, the Heidegger-inspired model of object-oriented philosophy gives us countless levels. A sports car is an autonomous reality compared with all the many uses of it. But the car is also a relational whole built of many parts, none of which the car fully exhausts (as proven by the fact that any of the parts can malfunction). Each of these car parts, in turn, is made of further parts, and I do not doubt that this chain of assemblages stretches to the dankest infinities of Hell and beyond. Kant's Second Antinomy is perhaps not an antinomy—for every entity has a definite qualitative character, and I would claim that to have such a character must mean to be articulated or constructed by pieces. In the classical theory, there was one zone of reality that was always substance and another that was always aggregate. But notice that an aggregate is like a substance when viewed from the outside—as with Latour's 'black boxes' or the 'assemblages' of DeLanda.

Objects or substantial forms, then, exist in all different sizes. But whatever size they may be, they have a problem relating to one another. And here we find Heidegger's link with the abandoned occasionalist tradition. On the one hand, objects withdraw into inscrutable depths. On the other, we know that they somehow relate, or nothing would happen and presence-at-hand would not exist. The impossibility of individual things making contact was first noted not by the French Cartesians, but by the Ash'arite school of Islamic theology in early medieval Iraq. For al-Ash'ari and his followers, the omnipotence of God goes so far that other entities are deprived not just of the power of creation, but of any causal power at all. To use their favorite example, fire does not burn cotton—it is merely the occasion for *God* to burn the cotton. The same holds for all causal relations, not just those between mind and body. This notion was attacked even within Islam, with the critique of Averroës being the most famous. But it is supported by a particular passage in the *Qur'an*, and makes a good fit with the profound sense of fate and the almighty will of God that is generally even stronger in Islam than in Christianity. While similar passages can be found in the Bible in *I* and *II Corinthians*, it took hundreds of years for the occasionalist spirit to flourish in Europe—until the seventeenth century, when relations became problematic for philosophy as never before.

This began, of course, in France. But it was perhaps foreshadowed in the 1590's in the late Scholastic writings of Francisco Suárez. On the surface, Suárez opposes all occasionalism, which he openly attacks decades before it even appears in Europe. While it is obvious that Suárez is thoroughly schooled in various figures of Islamic philosophy—Averroës, Avicenna, Avicbron—he seems unaware of the Ash'arite occasionalists of Iraq. For Suárez says only that

there was an old position which asserted that created things do nothing but instead that God effects all things in their presence, whereas action is attributed to fire, water, and so on because of the appearances and because God has resolved, as it were, to produce such effects only in the presence of such things. This opinion is

mentioned by Averroës... by Albertus Magnus... and by St. Thomas Aquinas...
*though there is no particular author whom they cite on its behalf.*¹

Suárez then digs up a few minor passages from European authors that seem to point in an occasionalist direction, which he would never have done if he were familiar with *The Incoherence of the Incoherence* by Averroës, where al-Ghazali of Baghdad is specifically attacked for occasionalist views. This scarcity of references is not so important, since Suárez attacks the anonymous occasionalists anyway. Yet a bit of the occasionalist DNA can be found even in Suárez's own writings. After all, one of his most famous teachings is the incommunicability of individuals. He rejects the idea that form stamped in matter, *materia signata*, is the source of individuation. The work of individuation belongs to form alone; each thing is a highly specific modal compound. But this means that no form can shift from one material to another and still remain what it was: forms are untranslatable, immobilized in place, incommunicable. Hence Suárez must place especial emphasis on the old Scholastic principle that things affect one another *through accidents*, not through some impossible direct contact between substantial forms. While the occasionalists see God as the glue of the world, and Hume and Kant grant this honor to the habits or categories of the human mind, Suárez gives it to the accidents of individual substances. And this is closer to the true solution than when God or the human mind take all the glory.

Heidegger obviously never meant to be an occasionalist. In fact, it is fairly clear that Heidegger never meant to abandon the interplay of human and world that has dominated philosophy since Kant. What is most typical of Kant, I would say, is that one *type* of relation becomes central to all philosophy—the duel between human and world. The relation between raindrops and sand is simply not a topic for Kant or most of his successors, and is left to the work of meteorologists. From Kant onward, natural science is granted a total monopoly on such issues, while philosophy cowers in the slum of human-world interaction, desperately fighting off the incursions of cognitive science with the mixed emotions of contempt and fear. But despite Heidegger's apparent willingness to remain in the Kantian fortress, his tool-analysis takes us much further. There is a *universal* problem in the relation between any two entities, since they withdraw into concealed depths, yet they must somehow break out of those depths to engage in the interactions that characterize our world. This cannot be done with the *deus ex machina* of the Malebranchian God, but also not with the *mens ex machina* of Hume's customary conjunction. For Heidegger these would be merely 'ontic' solutions, choosing a sole princess entity to be granted all relational power in the cosmos. A more likely solution would resemble that of Suárez, with accidents forming the glue between incommunicable substantial forms. Yet so far we have spoken only of the difference between substance and relation, and have said nothing of substance and accident.

1. Francisco Suárez, *On Efficient Causality: Metaphysical Disputations 17, 18, and 19*, trans. A. Freddoso, New Haven, Yale University Press, 1994, p. 37. Wording slightly modified, and emphasis added.

2. THE INTERIOR OF OBJECTS

Surprisingly enough, this is where Edmund Husserl comes to our assistance. It is well known that Husserl's intellectual father was Franz Brentano, a figure often cited for an idea or two but rarely read in his own right anymore. Yet Brentano's brilliance of argument is astonishing, and his charisma as remarkable as that of Rasputin—a person he physically resembles in certain photographs. Our interest for now is limited to his most famous idea: intentionality, or 'intentional inexistence'. What typifies mental acts for Brentano is that they contain immanent objects. My wishes, hatreds, and intellectual activity all aim at *objects*, and those objects are contained in the mental sphere. Brentano's great Polish disciple, Kazimierz Twardowski, noted the one-sided character of this model. It makes little room for a non-immanent reality, a world outside the mind. Twardowski's early masterpiece *On the Content and Object of Presentations* is still available in English, though at the usual outrageous price of books published by Martinus Nijhoff.² The phrase 'content *and* object' already gives us the essence of Twardowski's philosophy. Strictly speaking there are not objects immanent in the mind. Rather, there are objects *outside* the mind and mental contents *inside* the mind. In this way Twardowski establishes two layers of the world, though he also unifies these layers by saying that metaphysics is the science of objects in general—whether these be real physical masses or mental entities that never escape the immanent sphere.

Twardowski served Edmund Husserl as both an inspiration and a rival. One possible reading of Husserl's early career is that it was nothing but a struggle with Twardowski, his fellow Brentano pupil. Husserl's references to his younger peer are sometimes flattering, sometimes brutal, but always emotionally charged: all signs of a genuine struggle. It is well known that Husserl rejects the Twardowskian split between an object outside consciousness and a content lying within it. When I speak of the city of Berlin, Husserl says, the Berlin of which I speak and Berlin itself are the same thing, not two.³ While this may sound like a realist philosophy of language, in practice it pushes Husserl increasingly towards idealism as the years go by, since what he really means is that there is no Berlin-in-itself that could not be the correlate of some consciousness. And here is the source of most critiques of Husserl, justified or otherwise. For public attention has been focused almost exclusively on the 'idealist' side of Husserl, who seems to lose the real world in a way that Heidegger, natural science, and even Deleuze supposedly avoid. Nor do I say so with a sarcastic tone, since I find this criticism of Husserl to be basically correct. Yet it also misses half of the point, for Husserl makes an additional move that may be unprecedented in the history of philosophy. The dispute between Husserl and Twardowski (carried out largely in one direction) may look like a predictable quarrel between one thinker who insists on a world outside the mind and another who denies it. But in fact, Husserl never dropped Twardowski's distinction

2. Kasimir Twardowski, *On the Content and Object of Presentations*, trans. R. Grossmann, The Hague, Martinus Nijhoff, 1977.

3. Edmund Husserl, 'Intentional Objects', in *Early Writings in the Philosophy of Logic and Mathematics*, trans. D. Willard, Dordrecht, Kluwer, 1994, p. 347.

between object and content—he simply *displaced* it. For even though we never find much of a real world in Husserl, the distinction between object and content remains central for him. But it is now a distinction *within* the mental sphere rather than one that straddles the divide between inside and outside. That is to say, *phenomena themselves* are split into object and content for Husserl.

In a sense this is already familiar from the way his phenomenological descriptions work. Consider the following example: I observe a tree by circling it from many different angles, at different times of day, and in slightly different moods. In each of these cases the tree appears by way of vastly different qualities. Even so, for as long as I take it to be the same tree, I never imagine that it is anything other than a unified thing. The same *eidos* of the tree is present in all these cases, no matter how different the accidental qualities through which it might be manifest. This aspect of Husserl is generally overlooked, simply because no one feels the *need* of an insight on this front. Most philosophers silently assume that the empiricists are right—that an object of perception is nothing but a ‘bundle of qualities’. It is widely assumed that only reactionary fools believe in some reality to objects over and above qualities amassed in a packet. But Husserl teaches otherwise: in consciousness an object is always manifested through specific content, yet it always *exceeds* that content. Moreover, he does not do this through some sort of hypocritical pointing toward an outside world, for it remains purely immanent. Husserl repeatedly denies the immanence of it, but only because he does not believe in any *transcendent* world that would render the phenomenal one purely immanent by comparison. But when contrasted with a realist world, Husserl’s object/content model is entirely immanent. The unified tree that I witness through all my experience might be a sheer illusion, after all. There is no reason to identify it with a real tree. It is a unified tree-object immanent in consciousness, accompanied by a unified tree-*content* through which it always appears, but which varies in the wildest manner and is never identical with it.

As I see it, this claim is decisive for the phenomenal realm, and the works of Husserl and Merleau-Ponty do much to bolster it. But what if we abandon Husserl’s idealism and leave the sphere of consciousness? Is the same duality between object and content found in real objects as is found in intentional ones? If we believe Leibniz (and I usually do) the answer is yes. In Paragraph 2 of the *Monadology*, Leibniz says that the simplicity of the monads ‘does not prevent a multiplicity of modifications, which must be found together in this same simple substance’, and in fact a monad ‘can be distinguished from another only by its internal qualities’.⁴ Various Scholastics had said the same thing, and Aristotle in the *Metaphysics* already raised the question of whether a substance is the same as its essence. But Husserl was probably the first philosopher to double up *appearance* into an object-pole and a quality-pole, and was surely the first to show how this works concretely in our perceptions of a mailbox, blackbird, tree, or anything else.

Husserl’s insight raises new complications for us. Earlier, I spoke of the occasionalist problem of how two *separate* objects relate. But Husserl, and on a different level Leibniz,

4. G.W. Leibniz, ‘Monadology,’ in *Philosophical Essays*, trans. R. Ariew and D. Garber, Indianapolis, Hackett, 1989, p. 207.

draws our attention to relations *within* objects. How does a real object relate to its own genuine features, and how does an intentional object relate to its own accidental profiles? And further, when two real objects relate through some occasionalistic third term, are they relating through their object-poles or their quality-poles? Instead of a single kind of relation to worry about, we now have three or maybe four.

But for the moment, let's forget this Husserl/Leibniz fourfold and return to another aspect of Husserl that is too little discussed. I refer to his assertion in the *Logical Investigations* that intentionality is both one and two. The meaning of this statement is simple, yet its implications that took me seventeen years to digest after first reading it. Consider once more the perception of a tree, and forget for a moment about the duel between the tree as a tangible content of colors and shapes and the tree as an underlying unit or *eidos* that endures despite all variations in surface content. Focus instead on a simpler aspect of the intention: the relation between me and the tree. On the one hand, the tree and I are distinct. We do not fuse together in instantaneous union; I never confuse myself with the tree. In that sense the intention is made up of two equally primary elements—the object and I are two. But on the other hand the intentional relationship is *one*, since the object and I are together. Five minutes from now, even if the tree is left behind or destroyed, I can still analyze this intentional relationship in memory, and other humans can analyze it at any moment too. In short, the intentional relation has an inherent *reality* that is never exhausted by analyzing it. Husserl does usually claim that direct, perfect intuition into an intention is possible, that pure introspective evidence can be had, and he has come under heavy criticism for this both by Heideggerians and by various recent philosophers of mind. Yet if we simply ignore this part of Husserl's philosophy, nothing much changes. It seems clear enough that the intentional relation between me and the tree has a unified reality that cannot be exhausted by any description or translation of it.

And this real unity is enough to call the relation an *object*. Why would anyone dispute this? For one thing, the relation does not last very long. Goethe once remarked that the most beautiful sunset in the world would still bore anyone after fifteen minutes, and *a fortiori* it is not interesting to stare at a tree for very long. This transience of the relationship seems to be a problem, since we normally think of objects as durable solid things. But recall that there is also nothing durable about most antimatter, or Californium and the other exotic chemical elements lurking near the misty peak of the periodic table, or mayflies which die after minutes or days of adult life, or even the continent of Asia when we look at the long past and future of continental drift. Durability is not a good criterion for objects. For another thing, the intentional relation is produced by a human and does not exist by nature, whereas classical philosophies are usually willing to treat only *natural* things as real objects. But it seems foolish to deny objecthood to such artificial things as a factory or knife, or to genetically engineered tomatoes enhanced with the genes of coniferous trees and pigs. Thus, naturalness is not a good criterion for an object either. And finally, the complaint might be heard that the relation between me and the tree is *not physical*, whereas normally we like objects to be solid material things. But there are plenty of non-physical objects recognized even by those who do not believe in angels

or souls: numbers come to mind as one example. In short, the only criterion for a real object is that it be a unified thing with specific qualities, reducible neither to a bundle of qualities nor to its relation to us. And now, notice that the intentional relation between me and the tree meets all these criteria. The relation is *one* thing despite its plurality of parts. It has definite qualities that distinguish it from my grandmother's perception of the tree or from my own perception of a fire. But it is not a bundle of such qualities, nor can any phenomenologist describe it exhaustively—not even if that phenomenologist is called God. If rocks and flowers are objects, then so are intentional relations.

And this leads us to draw a strange but inevitable conclusion, the only kind worth drawing in philosophy. Insofar as intentionality is one, it is a single object. And insofar as intentionality is two, it is two objects: the tree and I. And the only place for these *two* objects to make contact is the interior of the *one* object defined by the intentional relation as a whole. This leads us toward a new theory of causation along several fronts. Heidegger's occasionalism recalled the seventeenth century lesson that there is something problematic about relations between real objects. In fact, it turned out to be impossible for real objects to make contact, since they will always confront limited caricatures or translations of each other. But the opposite model was found in empiricism: here, the contact has always already occurred, in the form of habit. Hume's doubts are not about whether customary conjunction ever happens (it obviously happens all the time) but only about whether there are hidden secret powers beyond the conjunctions that cause them to occur. These are the two opposite options. It is not so much a contrast between rationalism and empiricism, as Kant believed, since this is merely an epistemological difference as to how the world is *known*. Instead, there is a deeper difference between *occasionalism* and empiricism. The first model accepts autonomous substances that do not interact, while the second model starts from the interaction and is skeptical about autonomous substance.

But there really are autonomous objects that withdraw from all interaction, just as occasionalists think. I base this on the authority of Heidegger's tool-analysis, which really needs to be read in the way that I have described. But there is also an internal space where interactions occur, just as Hume prefers. Nonetheless, there is one key problem with the occasionalists and three key problems with Hume:

1. The problem with the occasionalists has already been mentioned. For they solve the problem of the relations between substances only by invoking God as a magical solution, shielded only by the good public repute of religion (which is merely reversed among intellectuals today). Yet it is entirely unclear in a *philosophical* context how God can do what other substances cannot. Hence, this is merely a classic instance of the 'asylum of ignorance'.

The three problems with Hume are as follows:

1. First, Heidegger's tool-analysis forces us away from the empiricist stance toward a theory of concealed real objects. For this reason, Hume's *mens ex machina* works no better than the *deus ex machina*, but for a different reason—it only accounts for half of reality, the half made up of impressions and ideas rather than the half made of *bona*

fide realities. The fact that such realities are widely unpopular in 2009 means little to me; shifts of fashion in the history of philosophy are sudden, and they occur quite often through the return of dead concepts in better-engineered form.

2. Second, Hume is too focused on the interaction or lack thereof between impressions or ideas (which I will unify with the single word ‘images’). But in fact, there is no such interaction. The image of cotton and the image of fire, or the images of two billiard balls, are merely contiguous, and always will be. The more important interaction is between *me* on the one hand, and these images on the other. I am not identical with what I see, as Hume thinks when he says that I am a bundle of perceptions. On the contrary, I do not fuse together into these images as a single thing; I am perfectly aware that I am one thing and the images are another. Hence, we should change our focus from the relation between two images to that between observer and image.
3. Third and finally, there is an asymmetry here that Hume is unable to see, since he does not acknowledge the autonomy of real things. Namely, although the intentional objects I confront are merely images, it is the *real* me that is involved in the experience. For it is not some *image* of me that sees two billiard balls collide. No, my genuine life consists in witnessing this collision right now. So although it is impossible for me as a real object to touch another real object, it is quite possible for me to touch *intentional* objects, as happens constantly. This already suggests another initial theorem for the new theory of causation: all relations occur only between *asymmetrical partners*. A real object withdraws from another real object, and two images merely sit side-by-side in an experience without touching. But a real object and an image are two kinds of objects that we already *know* can make contact, because that’s what experience is: someone or something confronting intentional objects. We may take this, then, as a basic law of causation: two objects in contact must always be of the two different kinds.

There is actually a fourth difference from Hume as well, but it seems best to approach it through a critique of Brentano’s position. For when Brentano speaks about intentionality as immanent objectivity, he thinks immanent means ‘inside the human mind’. And there are two problems with this.

First, my relation to the intentional object ‘tree’ is not inside *my mind*. Instead, both it and my mind are *inside the relation between me and the tree*. Remember: the tree-image and I are on the interior of some object, and I am not that object. On the contrary, I am simply one of its two components. The unified object is the relation as a whole.

Second—and we now enter a strange landscape where Hume and Brentano dare not venture—it is not only humans or sentient animals that do this. If two molecules of iron interact to form a new entity, they too will confront each other on the interior of that larger entity, and moreover will confront each other as translations or caricatures, as Heidegger’s occasionalism already showed. In other words, the strange interior space where a real object confronts images need not have a human or a smart animal as one of its ingredients. Sentient creatures are just a more advanced case of a universal

drama between any two things. Yes, human cognition is very different from the collision of two grains of salt, but the point is that both are built out of something even more primitive. This is overlooked both by human-centered philosophy and by many forms of panpsychism. Human-centered thinking wants experience to be restricted to people and possibly a handful of clever dolphins and monkeys. At the opposite extreme, panpsychism wants something like human cognition already tacitly inscribed in grains of dust. But against such extreme panpsychism, human cognition is a very late and highly innovative form of the primitive reactions we are describing; contra human-centered philosophy, it is not different *in kind* from physical collisions.

To summarize, two entities make contact only on the interior of a third, and it is an asymmetrical contact between a real object and an intentional one. Naturally, there are always many intentional objects in any one experience, but all are linked only as experiences of the real perceiver. The intentional trees, horses, chairs, emeralds, and hallucinations that I experience in any one moment are merely contiguous in my experience. In addition, each of these intentional objects is torn in half between its unified reality and its plurality of accidental silhouettes. And the same holds true, as Leibniz notes, at the level of real objects withdrawn from every view. Thus, we have discovered two kinds of relations between a thing and its own qualities (namely, at the real level and the image level), and one or more kinds of relation between real objects and their images as encountered by other objects—whether these others be human, animal, vegetable, plastic, or stone.

3. OBJECTS AS ASSEMBLAGES

If it is true that every relation generates a new object, it seems equally true that every object is pieced together from relations. Though I will insist on the Heideggerian principle of withdrawal, and though I will also insist that an object is an emergent reality over and above its pieces, it is still the case that an object could not exist in this very moment without *some* pieces. But whenever I say that an object is real apart from all relations with its environment, the following complaint is often made: ‘objects are obviously dependent on their environment. If I were placed on Saturn or at the bottom of the sea, I would immediately be killed by their hostile conditions. This proves that my environment is a part of who I am’. But this is an equivocal use of the word ‘dependence’. Putting me on Saturn would certainly *kill* me, and so would injecting by body beneath the surface of the sea, but neither scenario would change the nature of the person being killed. By contrast, changing my component pieces (if pushed far enough) could change who I am even if the resulting creature survived for thousands of years, or even for eternity. My *success* depends on my environment, as do my partnerships and my physical survival, but my *nature* is not thus dependent. I am the same real object whether I endure on earth for forty more years or perish instantly on Saturn. But I am *not* the same real object if my pieces are shuffled beyond a certain point—a point that can be left undefined in this article.

This gives us an *assemblage* theory of objects. According to this theory, an object is made up of a certain number of components. While it is tempting to call them ‘smaller’ components, this could betray a bias toward the physical realm. For the components are not necessarily smaller—in some sense OPEC or NATO are not physically larger than their component entities, and a friendship or marriage may not be larger than those it unites. But an object must have components; otherwise it would be purely simple and would have no qualities, as Leibniz noted with his monads. To me this suggests that an infinite regress of compound entities is necessary. And that implies a delightful violation of Kant’s Second Antinomy, thereby hinting at a method by which the rest of Kant’s transcendental dialectic may be undermined as well.

In our time an assemblage theory of entities is already in the air. It can be found in Bruno Latour’s model of black boxes opened to reveal their internal components, with those component boxes then opened, and so on to infinity. The theory is worked out with a more candidly realist twist by Manuel DeLanda in his recent book *A New Philosophy of Society*. What constitutes a true new assemblage, as opposed to a random list of words? DeLanda offers some criteria, and I will mention four of the most important. Although the term ‘assemblage’ seems to suggest that an object is ‘many’ while downplaying its unity, there is no question that DeLanda also views his assemblages as unified things. One criterion for a real assemblage, surely the most important, is that a real assemblage has true emergent properties not found in its pieces. Another, which is not openly stated but is tacitly present as the very foundation of DeLanda’s realism, is that an assemblage is deeper than any of its effects on its environment. Another interesting criterion offered by DeLanda is ‘redundant causation’, meaning that the assemblage can be created by any number of different causal chains without losing its identity. My blood could be replaced with donated blood, or some of my bones hollowed out and filled with fiberglass, and I would remain the same object. And finally, an assemblage can have retroactive effects on its parts, or even create new ones. When a city is founded, this may have backwards effects on those who come to inhabit it, and will also generate new institutions and customs that were not initially present.

When we speak of ‘causation’ in relation to an assemblage, we naturally tend to think of its outward effects on other things, whether these be outer entities or its own interior components. The city of Cairo has retroactive effects on its own pieces, such as police officers, and it also casts an economic shadow on Beni Suef, Tanta, Ismailia, and other nearby Egyptian cities, sparking and inhibiting their growth in specific ways. But all such criteria miss the *primary* meaning of cause: the reality of Cairo itself. Remember that every genuine relation *forms* a new object. To cause is to generate a new relation, and to do this is to create a new object, and objects have what was classically known as *formal cause*. But when we think of causation in daily life, we instead think of the mutual influence of *two* objects on each other, or *efficient cause* in the classical sense. When two fighter planes collide at an air show, we think that their impact caused damage so severe as to lead to the crash and explosion of both. But according to the model just sketched, this is merely a ‘retroactive effect on its parts’ of a larger collision-entity, to which we

never pay attention because it lasts so briefly and takes on little or no physical form. But the case of Cairo is perhaps even more convincing. Quite apart from Cairo's effect on its parts or on other cities, Cairo itself is a *reality*, or else it could achieve no effect at all. Its reality is generated by a certain arrangement of its components, but somehow emerges as something over and above those components. It often has many effects on its parts and on other cities, but it does not *need* to have them. It is conceivable, even necessary, that the world is filled with millions of entities that have reality without an effect on anything else, at least for the moment. I find it wrong to hold that a thing is real only when it affects something else. In classical terms, there could be formal causes that have, now or forever, no function as efficient causes.

To repeat, the primary meaning of 'cause' is to create a new object. Only secondarily does it mean that an object has an effect on others or retroactive impact on its own parts. If we see one thing influence another, this is merely a retroactive effect of a joint object that unites the two, or once did so. What I want to suggest is that this gives us a new way of reflecting on the principle of sufficient reason. For according to the model just sketched, sufficient reason is less a matter of knowing that the fire necessarily burned the cotton than of knowing that certain pieces arranged in a certain way necessarily *resulted* in the existence of cotton. If this could be shown, then the rules would be the same when fire and cotton combine to produce a joint entity called 'burning cotton ball'. But if the fire might not burn the cotton the next time under the same circumstances, as Hume holds, then it should also be true that the real components of the cotton arranged in a certain way might give rise next time not to cotton, but to steel or a rabid bat, or a miniature angel dancing in flame. A 'mereological' view of causation—objects as parts always generating new objects as wholes—would offer a new angle from which to approach Hume's problem.

4. A QUADRUPLE COSMOLOGY

The model of the world presented here has a finite number of simple features whose interactions may shed light on a number of topics. First, we have numerous objects of all different sizes, in a chain of descending entities that is probably endless—'turtles all the way down', as the old joke puts it. These real objects withdraw from mutual contact, and encounter each other only as translations or caricatures. They somehow come into relation through a vicarious medium, and I have said that this medium can only be the *interior* of some other object—a perceptual space filled with intentional objects rather than real ones. Moreover, the interiors are not just for humans and animals, since *any* entity encounters nothing but caricatures, and the relation to intentional objects must take place almost everywhere, in some ultra-primitive form from which more complicated animal cognition is built. Every relation will also create a new object, and thus a new interior space with still other relations that might one day be generated.

Before clarifying the model further, let me say a word about panpsychism, which seems to be one shocking result of this theory. The accusation is often made that it

is too ‘anthropomorphic’ to put psyche everywhere in the cosmos. But as I see it, this gets things backwards. The point is not to inject tiny human minds backwards into inanimate dirt, but the reverse: to show that what we call minds are simply enhanced versions of the crude contact with intentional objects found in any relation whatever. This sort of theory is usually the province of scientific reductionism, and it simply *assumes* that the root unit of the cosmos is mere physical impact between tiny material atoms. But this is both arbitrary and boring. By pushing Heidegger’s respected tool-analysis in an unorthodox direction, I have tried to show that even atomic collisions must involve intentional objects. Imagining what this is like without falsely ascribing human emotional or intellectual features to atoms is difficult, but it could easily become the topic of a philosophical discipline called ‘speculative psychology’, which would try to probe toward what it is like not only to be a *bat*, or my mother, or Martin Heidegger, but also an atom, a grain of dust, an army, the Exxon Corporation, or France.

But in another sense I am merely a *polypsychist*, not a panpsychist. For the panpsychists go too far when they say that *every* object has psyche; there is an option in between, and my theory is the first to make it visible. Namely, I have claimed that absorption with intentional objects occurs only on the *interior* of some object, with one of that object’s real pieces confronting intentional caricatures of one or more others. But remember, I also claimed that a thing need not enter into relations at all in order to exist! An object is real, in this theory, when it unifies pieces into an emergent reality that has genuine qualities of its own. It does not automatically follow that this new object will have an impact on other objects, whether now or ever. There will always be some turbulent surface of the cosmos that has objects below it but none above. The need for an infinite regress does not also imply an infinite *progress* of objects. In this way, panpsychism is actually overthrown. To be out of relation is not to be *dead*, however, since the ‘body’ of the object is active as long as it is real. The surface of the cosmos is made of objects that are not dead, but sleeping—or *dormant* entities, to use the wonderful word that the Anglo-Saxons copied from French long ago. In this sense, for humans to sleep is to rise to the surface of the turbulent sea, which would put dreams in a new and metaphysical perspective—giving us murky glimpses of undersea treasures.

We now return to the model itself. A real object is a unit or monad, which need not be durable, and only needs to unify pieces in order to generate new qualities. These qualities are not the same as the real object itself, and hence it lives in a kind of permanent strife with them, which is precisely what we mean by *essence*. This many-featured essence must be there, Leibniz says, or all monads would be exactly the same, which they are not. This real object hides from every view, and in my opinion (though not Husserl’s, as we will see) its qualities do as well.

Consider now the sphere of intentional objects. You can forget about panpsychism for a moment, since intentionality is much easier to grasp when thinking of the human-centered version of Brentano, or better yet Husserl. When perceiving a tree, there need not be any such tree at all; it is an intentional object, not a real one. As we saw, the intentional object also exists in strife with qualities, and these qualities can shift at

every moment without changing our recognition of the same underlying thing. And these qualities are what we call *accidents*. It is often believed that Husserl's intentional object also hides from view, since we never see every side of it at once. As was confessed earlier, I thought this way myself for nearly two decades before seeing the mistake. The intentional tree is *always* there before us whenever we recognize it. We live with the same tree no matter how many accidental profiles, adumbrations, *Abschattungen* we see of it. The intentional tree does not hide—it is there right before us, but forever encrusted with accidents. But in fact, 'accidents' is the name for the accidental qualities themselves, not for the tension between them and intentional objects. There is a different and even more famous name for this tension, but I will save it as a surprise for a minute from now.

With four poles in the cosmos (two kinds of objects, and two kinds of qualities) we also have four tensions between those poles. You might think that four terms means *six* unique pairs of relations; the reason it does not is because the tensions *must* always be between an object-pole and a quality-pole. There is simply no 'tension' at all between real and intentional objects, or between real and sensual qualities; these sorts of relations deserve other names that are given in a forthcoming book. But the four tensions themselves are direct and palpable, and hence they serve as the glue of a lonely occasionalist universe that is desperate for any contact at all. But of the four needed tensions, so far we only have two.

We are now close to the climax, assuming that metaphysics has moments of climax. Husserl claims that phenomenology allows us strip away all the accidents of an object and gain adequate intuitive insight into it. Being a good remote disciple of Heidegger, I happen to disagree with Husserl on this point, but it is not so important. What matters is only my *agreement* with him that an intentional object has two kinds of qualities. A house is encrusted by swirling patterns of lights and my own wild swings of mood. If we were somehow able to subtract all such accidents, even though we cannot, what would be left is not a featureless monadic lump. The house will always have some range of ineffable qualities, some *houseness* that makes us keep calling it the same though we never succeed in listing these features. If the swirling lights and moods that encrust the house are called accidents, the *real* features of the house can be called *moments*, and I hold that they are built of the same stuff as the qualities of *real* objects, thereby forming a link or ladder between the two layers of the world. The tension between an intentional object and its real moments is what Husserl calls *eidos*, as opposed to the essence which is a tension between real objects and their moments.

That leaves only one remaining tension, in some ways the easiest of them all, since it lies at the heart of Heidegger's tool-analysis. A real object recedes from view into a subterranean underworld of being, but is translated for us by means of certain present-at-hand features. There is a tension between a *real* object and its *accidental* manifestations. And this is what we call the object's *relations*, since it refers to what happens when one real object becomes manifest to another. The four tensions have now been exhaustively named, and there can be no others, since there are only two kinds of objects and two

kinds of qualities. However, the second as well as the fourth have more familiar but more exciting names that I held back as a surprise.

The second tension was between an intentional tree and its surface-effects—its accidents. But if we speak of enduring units that subsist beneath outward changes, this is exactly what we mean by the experience of *time*.

The fourth tension was between the real tree (if there is such a thing) and the accidental qualities through which it is manifested. It is the tension between objects and relations. But this is precisely what we mean in everyday life by *space*.

Space and time are certainly not empty containers, as Newton and Clarke believed. But neither are they systems of relations generated by objects, as Leibniz believed. Instead, they are the tension of identity-in-difference, the strife between real objects and their accidents (space) or intentional objects and their accidents (time). And since under this model both space and time involve *accidents* as one of their poles, in a sense it is true that both are forms of perception, and Kant was right to say so—though only in a Kantianism extended beyond humans to flowers and inanimate things.

Under this model, time and space are not primordial givens of the cosmos, but are derived from the inherent metaphysical tension between objects and their qualities. In childhood we all start out with a few philosophical questions that differ for each of us. Later we move on to new problems through our reading and our professional training, and the arbitrary childhood starting points can be left behind. But in the present case I have the good fortune of returning to my earliest philosophical question of childhood: not time travel, nor whether space has more dimensions than we can see. But rather, why are time and space always spoken of as two utterly unique pieces of cosmic fabric? Why is no other god ever treated as their equal? Could there be others, with all of them branching out from a more basic underlying principle? The answer, over thirty years later, turned out to be yes, at least to my own satisfaction. Time and space are derived from the permanent tension between objects and their qualities—but so, we have seen, are essence and eidos. Heidegger's fourfold of earth, sky, gods, and mortals had several problems. But one that has rarely been mentioned is that he used them for names of the four *poles*, when what is more interesting are the seismic fault-lines between them. All he did was place them on diagrams marked with diagonal lines, without ever naming them—except to speak of mirror-plays, weddings, dances, and songs, all of them interchangeable metaphors not correlated with any of the four specific rifts. But we now have a powerful new fourfold structure of *time, space, essence, and eidos*. It remains to be seen what might follow from this structure.

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