

## THE CONNECTIVITY OF ALL THINGS: ON SPECULATIVE BONDS

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**ABSTRACT:** What makes *things* connect to other *things*? *Do* things connect to other things? This essay will present notes towards a speculative theory of connectivity that is focalized through the philosophical concepts of the bond in Giordano Bruno and the concept of suture in Alain Badiou. It will also offer a counterargument to object-oriented ontology's rejection of a theory of relations; this will be accomplished, in part, by situating *withdrawal*, which Graham Harman highlights as an essential component of a theory of objects, as the essence of any bond that connects humans and non-humans together.

**KEYWORDS:** Object-oriented ontology; Mathematical ontology; Speculative realm; Continental philosophy

What makes *objects* or *things* connect to other *objects* or *things*? Or, *do* things or objects connect at all? My purpose in this essay is to present notes towards a theory of connectivity or relation that is focalized through two philosophical concepts: the bond of Giordano Bruno and Alain Badiou's theory of suture. It will also offer a counterargument to Graham Harman's version of object-oriented philosophy's rejection of a theory of relations grounded in two concepts *taken from* object-oriented philosophy; namely, withdrawal and vicarious causation. Even though Bruno and Badiou are two very different philosophers or scholars, from two very different historical time periods, they each present unique theories of relationality or bonding in their respective projects and my goal in this paper will be to point to the necessity of a theory of relation in any ontology or phenomenology of objects or entities (human and non-human) and will use the two concepts of bonding and suture as a way of offering a less totalizing resistance

to notions of relation in object-oriented philosophy.<sup>1</sup>

I would like to begin by thinking about connectivity as being somehow related to touch. Two objects or things that *physically* connect with one another would be, at some level, touching. A recent understanding of connectivity can be found in object-oriented ontology, which is a philosophical approach that attempts to think things or objects in a commons, or in what Levi Bryant calls a “democracy of objects.”<sup>2</sup> In Timothy Morton’s version of object-oriented ontology, his theory of “the ecological thought” promotes an understanding of nature as “mesh.”<sup>3</sup> “Mesh” is Morton’s suggestion for a term that stands against more problematic and Romantic notions of “Nature” and it captures an image of the connectivity of all things—a connectivity wherein, in Morton’s version of object-oriented thought, parts are greater than wholes.<sup>4</sup> Another term that could be used to arrive at such an image of connectivity can be found in feminist new materialism; for example, Stacy Alaimo extends Andrew Pickering’s idea of the “mangle,” which is initially his term for dialectical complexity<sup>5</sup> and then deploys it in the use of developing her notion of the trans-corporeal<sup>6</sup> and Susan Hekman links the mangle to how “multiple elements interact, or intra-act, to produce an understanding of the reality we share.”<sup>7</sup>

However, the possibility of “touch” is unclear in any of these concepts. Arguably, touch is an anthropocentric category of connectivity—I say this because “touch” is a human word used to describe what is generally considered to be a human experience and while it is applicable to other non-human animals it is not at all clear that they would touch in the same way that a human touches or understand touch in the same way that a human would. The possibility of

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<sup>1</sup> In general, I choose to use “object-oriented philosophy” as opposed to “object-oriented ontology” because that is Harman’s preferred term; however, at points I will use the term “object-oriented ontology,” but that is only when discussing the movement instead of Harman’s particular branch.

<sup>2</sup> Levi R. Bryant, *The Democracy of Objects*, Ann Arbor, Open Humanities, 2011, p. 19.

<sup>3</sup> Timothy Morton, *The Ecological Thought*, Cambridge, Harvard University Press, 2010, p. 28.

<sup>4</sup> Timothy Morton, *Hyperobjects: Philosophy and Ecology after the End of the World*, Minneapolis, University of Minnesota Press, 2013, p. 116.

<sup>5</sup> Andrew Pickering, *The Mangle of Practice: Time, Agency, and Science*, Chicago, University of Chicago Press, 1995, p. 23.

<sup>6</sup> Stacy Alaimo, *Exposed: Environmental Politics and Pleasures in Posthuman Times*, Minneapolis, University of Minnesota Press, 2016, pp. 182-186.

<sup>7</sup> Susan Hekman, *The Material of Knowledge: Feminist Disclosures*, Bloomington, Indiana University Press, 2010, p. 93.

touch between objects is censored by object-oriented philosophy: Graham Harman (the founder of object-oriented philosophy), argues in *Tool-Being* (2002) that: “Since objects remain partially concealed from one another even during physical causation, they never touch one another directly.”<sup>8</sup> Harman insists that any object withdraws inside itself like a “*metaphysical vacuum*,”<sup>9</sup> which precludes the possibility of direct touch or immediate connectivity between objects.

The sequel to *Tool-Being*, *Guerilla Metaphysics* (2005), develops the nebulous concept of “vicarious causation.” According to Harman, “[v]icarious causation means that objects touch each other’s notes, or portions of each other’s essences,”<sup>10</sup> but this form of touch does not touch an object’s essence or an object’s “subterranean reality.”<sup>11</sup> Earlier in that same book, Harman calls this “subterranean reality” an object’s “hidden mythical depths.”<sup>12</sup> Where *Tool-Being* offers withdrawal as a theory of “non-touch,” *Guerilla Metaphysics* offers a theory of “touch without touching.”<sup>13</sup> This notion of “touch without touching” situates an object in relation to its layers and depths alongside other complex objects: what this means is that when objects interact they *indirectly* touch as sensual objects, but the “hidden mythical depths” of real objects do not; in other words, some inner kernel or volcanic core of each real object remains withdrawn from another real object’s direct access. If this “inner kernel” exists, then it suggests that real objects, as Harman understands them, have intimacy issues.

However, how can we define touch in general? I would define touch as a moment of contact between two objects or things. The object-oriented paradox of a touch without touching is tied to the distinction between real and sensual objects. However, I would prefer to raise the issue of surfaces and depths rather than a dyad between the real and the sensual; in other words, some objects touch under certain circumstances and orders of magnitude, but not at others—and the *degree of touch* is dependent on the specific object, contact in question, and scale

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<sup>8</sup> Graham Harman, *Tool-Being: Heidegger and the Metaphysics of Objects*, Chicago, Open Court, 2002, p. 11. Hereafter cited as *TB*.

<sup>9</sup> Harman, *TB*, p. 11, original emphasis.

<sup>10</sup> Graham Harman, *Guerilla Metaphysics: Phenomenology and the Carpentry of Things*, Chicago, Open Court, 2005, p. 222. Hereafter cited as *GM*.

<sup>11</sup> Harman, *GM*, p. 76.

<sup>12</sup> *ibid.*, p. 40.

<sup>13</sup> *ibid.*, p. 215.

of the object during the encounter. Let's consider two examples:

1) two lovers kissing at sunset—how many degrees or types of touch are occurring here? Maybe the two lovers are touching, but is there any kind of touch occurring between the lovers and the sunset? If there is, then how can that type of touch be quantified or even described? 2) Consider a person who inhales the particles of someone else's saliva after they sneeze on the subway and, after incubating for four days, that person develops a cold. At some level or order of magnitude, the micro-existence of the virus “touches” or bonds to the internal and cellular existence of the person who gets sick from it.

I consider these examples *scale-specific* notions of touch; i.e., certain objects, things, or entities touch at one level, but not at another. A different way of putting this is to say that there are levels of touch occurring in any person while they are touching another thing, object, or entity. Harman argues, in *Guerrilla Metaphysics*, that “we have a universe made up of objects wrapped in objects wrapped in objects wrapped in objects,” but “[t]he reason we call these objects ‘substances’ is not because they are ultimate or indestructible, but simply because none of them can be identified with any (or even *all*) of their relations with other entities.”<sup>14</sup> For this reason, object-oriented philosophy is temperamentally against holistic thinking—there is no privileging of a larger layer or a larger object at the expense of a lower layer or a smaller object. Objects exist as themselves amongst, within, and beside other objects that exist as themselves amongst, within, and beside other objects that exist as themselves. Is it possible though—in an object-oriented framework—for objects to *bond* together as relations?

Harman is insistent that objects “cannot touch their neighbors directly, since none of them can fully exhaust the reality of the others,”<sup>15</sup> but then what about the *bonds* between two objects or two things? There are material instances of objects, things, or entities in which a transformation occurs—an object or thing transforms or transitions into a different object or thing—and this type of transformation tends to occur because of a strange or even vicarious middle-ground space or boundary. In this essay, I would like to think about this liminal space or boundary as the *space of the bond*. What kind of “material instances” am

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<sup>14</sup> *ibid.*, p. 85.

<sup>15</sup> *ibid.*, p. 161.

I referring to though?

One example can be found in chemistry. The Deleuzean thinker Manuel DeLanda writes that phase transitions “are events which take place at critical values of some parameter.”<sup>16</sup> Phase transitions are physically as well as metaphysically rich moments in which an object transforms into a different kind of object, such as water to ice or liquid to steam. Also, phase transitions occur by way of bonds that link an object not only against other objects (water becomes ice and not a table or a cloud), but through its transformation—i.e., at a molecular level there is a consistency in the “essence” of the water despite its various metamorphoses. And yet, at a specific scale, a transformation appears to occur: one object hardens or melts or becomes steam, which challenges notions of an object-oriented postulate of ontological sovereignty.

Harman does not explicitly describe phase transitions like DeLanda does, but he does offer an example of a phase transition from the Ash ‘arite occasionalism of Al-Ghazali who argues that when fire burns cotton the cotton is burned by God and not by the fire. Occasionalism offers a theory of causality, but Harman’s causality does not rely on an occasionalist deity. Harman argues that: “these objects [fire burning cotton] do not fully touch one another, since both harbor additional secrets inaccessible to the other;”<sup>17</sup> furthermore, the “fire and the cotton both fail to exhaust one another’s reality.”<sup>18</sup> I would like to momentarily wear the mantle (however unlikely) of an object-oriented Derridean and pursue the question of Harman’s decidedly anthropocentric language during this moment: if the signifiers that he uses (“fire” and “cotton”) represent real, existent objects, then many more objects are involved in this manufactured “republic of things,”<sup>19</sup> such as: the fire and the cotton; some form of causality, which would be, in occasionalist terms, God; an observer or philosopher thinking about the burning cotton; and the language that describes the phase transition. This list is

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<sup>16</sup> Manuel DeLanda, *Intensive Science and Virtual Philosophy*, London, Continuum, 2009, p. 18.

<sup>17</sup> Harman, *GM*, p. 170.

<sup>18</sup> Harman, *GM*, p. 188.

<sup>19</sup> See Levi Bryant’s *The Democracy of Objects*, Ann Arbor, Open Humanities, 2011 and Bruno Latour’s article “From Realpolitik to Dingpolitik: or How to Make Things Public,” in *Making Things Public: Atmospheres of Democracy*, Bruno Latour and Peter Weibel (ed.), Cambridge, MIT Press, 2005, 4-31. In this article, Latour argues for a “republic of things,” which is grounded in the etymology of republic as *res publica* (or “public thing”). See pp. 12-13.

by no means exhaustive and it is not meant to be. Is the cotton burned in front of the observer-philosopher like the fire that motivates Descartes's meditations? Or, is the cotton burned in the memory of the observer-philosopher as a signified or as an image?

Karen Barad argues in *Meeting the Universe Halfway* (2007) that "matter and meaning, the literal and the figurative, are never as separate as we like to pretend."<sup>20</sup> The interactions and, to use her term, the intra-actions of these various objects—objects that are real and imagined, linguistic and material—are necessary to consider when asking questions about the essences of objects, things, and entities. The language used to describe the burning of the cotton is as material (in its phonematic or graphematic aspects or even in the notions of embodiment that it involves in the body of a speaker) as the burning of the cotton itself. It is only a different kind of material. The mattering of the material occurs by way of language. In Baradian parlance, the mattering of the material occurs through the bonds or the intra-actions that are forged between signifiers, signifieds, and referents. This fusion that Barad describes between matter and meaning is also at play in the object-oriented tradition—whether object-oriented thinkers want to acknowledge this point or not—in that they remain, like the rest of us, limited to the use of the tools of language in order to think or write philosophically.

This argument links to the very prefix *phainō*, which is the prefix of "phenomenology" and contains polyvalent implications for both the material and the immaterial, the present-at-hand and the ghostly: *phainō* means "to show" or "to bring to light," which suggests illumination, but such an illumination would also produce a shadow. Derrida's hauntology is a shadow of ontology. Even though Harman is at pains to maintain that the fire and the cotton withdraw at the point of their interaction or bond, however temporary that bond may be, there is also a point of exhaustion or what could be called *the exhaustion of withdrawal*. What I mean by this is that Harman's notion of the withdrawal of an object's essence leads to a kind of indefinite or even infinite regress<sup>21</sup> where the

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<sup>20</sup> Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*, Durham, Duke University Press, 2007, p. 362.

<sup>21</sup> Harman has endorsed either a "transfinite" regress, an "indefinite" regress, or an infinite regress. See Harman, *TB*, p. 171 or p. 279.

question of an essence is pushed further and further away. At which point can an object's essence be located? How deep within the object? Or, if it exists as a point that cannot be pinpointed, then is it even useful to use a word like "essence?"

Despite this point of complexity, I agree with Harman in his support of an indefinite or infinite regress of objects and I would argue for a kind of existential summarization of the parts of a whole object or thing or even a kind of disparate and diffuse understanding of essence—an essence that would be spread across the multiple and perhaps infinite layers of an object, thing, or entity. For this reason, I focus on the question of the bond or the barrier between two objects, things, or entities because the bond constitutes a place, site, or point of inexhaustible complexity.

#### GIORDANO BRUNO'S THEORY OF THE BOND

One of the foremost theorists of the bond is Giordano Bruno. Bruno's text on this topic is *De vinculis in genere*, translated as *A General Account of Bonding* (c. 1588). Bruno's Hermetic philosophy, or what could be called his "Hermetic ontology," is unique because of his theorization of the *coincidentia oppositorum* or the coincidence of opposites. Bruno situates a "bonding agent"<sup>22</sup> that exists between objects and combines them through a sort of occasionalist glue. Bruno can be described as a "Hermetic materialist" or monist because he argues that "God is matter"<sup>23</sup> and "matter itself, in its bosom, is the beginning of all forms."<sup>24</sup> This Hermetic theory of causality theorizes a world of moving, flowing, and interconnecting forms and Form. It is possible to call this framework an early instance of "process philosophy," but these forms could also be considered Aristotelian "substances," or anachronistically, proto-Harmanian "objects," proto-Heideggerian "things," or proto-Latourian "actors." Whatever name is used to describe the "Form" is less important than the linkage or bond that occurs between fellow objects, things, or entities.

Despite Harman's argument that "Bruno is one of the great anti-object-

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<sup>22</sup> Giordano Bruno, "A general account of bonding," in *Cause, Principle and Unity: And Essays on Magic* by Giordano Bruno, trans. and ed. by Richard J. Blackwell and Robert de Lucca, Cambridge, Cambridge University Press, 1998, 143-176, p. 156. Hereafter cited as *GAB*.

<sup>23</sup> Bruno, *GAB*, p. 173.

<sup>24</sup> *ibid.*, p. 172.

oriented philosophers of all time”;<sup>25</sup> Bruno is extremely useful when considering the question of the bond in relation to the schism between object-oriented ontology and process-oriented philosophy. A good question to ask would be what Bruno’s philosophy would look like if his monist and holistic commitments were stripped away or if his thinking were positioned through a secular lens. If such thinking is to be taken to its end, then the deistic ground of Bruno’s theory of the bond could be removed and “God” could be replaced by more secular and scientific concepts like “chaos” or “chance.”

When Harman writes against Bruno in his article, “On the Undermining of Objects: Grant, Bruno, and Radical Philosophy” (2011), he focuses on Bruno’s text *Cause, Principle, and Unity* (1584), but he does not consider the bond. I find this absence rather striking because Bruno’s notion of the bond is precisely the part of his philosophy that could potentially link him with an object-oriented kind of thinking brought closer to a process-oriented approach. Bruno’s framework of relations between objects and entities allows for phase transitions because, as Bruno writes, “the same material object can be changed into different forms and figures.”<sup>26</sup> Another, more contemporary term that could be adapted into a Brunonian model would be morphogenesis, which means “the birth of form” and is linked to theoretical biology and emergence theory.<sup>27</sup> Bruno’s theory of bonds is both irreducible and describes a force that permits the emergence of form—it features what Latour later calls “irreductionism” or what Harman calls “withdrawal.” As discussed before, withdrawal is Harman’s term for the fact that an object’s essence always recedes from view and can never be accessed in totality; in other words, there is some aspect of the object (or the “real object”) that resists full apprehension by any other object or entity. According to Latour, irreductionism can be partly defined by claiming that “[n]othing is, by itself, either reducible or irreducible to anything else.”<sup>28</sup> While irreductionism and withdrawal are different, they share a key feature, which is the necessity of

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<sup>25</sup> Graham Harman, “On the Undermining of Objects: Grant, Bruno, and Radical Philosophy,” in *The Speculative Turn: Continental Materialism and Realism*, ed. by Levi Bryant, Nick Srnicek, and Graham Harman, Melbourne, re.press, 2011, p. 32. Hereafter cited as *O.U.O.*

<sup>26</sup> *ibid.*, p. 145.

<sup>27</sup> See Jamie A. Davies, *Mechanisms of Morphogenesis*, Amsterdam, Elsevier, 2005, p. 3 and p. 9.

<sup>28</sup> Bruno Latour, *The Pasteurization of France*, trans. by Alan Sheridan and John Law, Cambridge, Harvard University Press, 1993, p. 158.

considering an object or thing as an object or thing and, even when that object or thing consists of other objects and things (as in a Latourian actor-network or in a Harmanian object), those other objects and things do not reduce or “irreduce” to that primary object or thing. This model presents a democracy of objects or a republic of things in which each object or thing is sovereign and yet contiguous with all other objects and things.

Therefore, when Bruno writes that “bonding power is not simple or reducible to only one thing, but is composite, variable in nature and composed of contraries,”<sup>29</sup> my point is not to say that Bruno “anticipates” Harman’s notion of withdrawal or Latour’s concept of irreductionism, but to say that all three of these thinkers (from three different time periods in the history of philosophy) are each pointing to a fundamental aspect of objects and things. Bruno is uniquely able to situate this impulse towards irreductionism towards the bond and *not* the object or thing. As well, Bruno repeatedly emphasizes that the bond is composed of contraries, which is a detail that is absent in Latour and Harman’s theories of actants and objects. The coincidence of opposites in the bond means that two objects, things, or entities can be bonded that may not share the same aspects—they can be contrary to each other and yet still be bonded. Bruno’s insistence on the *coincidentia oppositorum* allows for the possibility of a high degree of complexity in his philosophy because it means that “like” need not be bonded to “like.” Opposites can attract in Bruno’s model and be bonded together and the irreducibility of that bond means that it cannot be theorized in full or be exhausted. A secularized interpretation of Bruno’s logic of the bond is similar to what Morton describes, in his own object-oriented methodology, as “interobjectivity.” According to Morton, interobjectivity describes “the way in which nothing is ever experienced directly, but only as mediated through other entities in some shared sensual space.”<sup>30</sup> The “shared sensual space” that Morton mentions here is a space in which objects, things, and entities bond together. Bruno’s bonds though are not sensual, but *real*.

Bruno develops the bond from Plato. In the section “*The description of the bond*,”

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<sup>29</sup> Bruno, *GAB*, p. 147.

<sup>30</sup> Timothy Morton, *Hyperobjects: Philosophy and Ecology after the End of the World*, Minneapolis, University of Minnesota Press, 2013, p. 86. Hereafter cited as *H*.

Bruno historicizes the concept to the writings of Plato,<sup>31</sup> but Bruno concludes his brief history of the bond by emphasizing its basis in the *coincidentia oppositorum* because the bond is “a joyful sorrow, and sorrowful joy.”<sup>32</sup> The Bruno scholar Arielle Saiber points out that Bruno regularly returns to paradoxical formulations like the “circularlystraight” and the “straightlycircular” because the description of “such phenomena requires a language that can imitate the inherent contradictions in the perception/ conception of the ineffable, a language that is itself a *coincidentia oppositorum*.”<sup>33</sup> In *Timaeus*, Plato writes that “it isn’t possible to combine two things well all by themselves, without a third”<sup>34</sup> and this third thing bonds the two other things together as a unity. I am reminded here of the Einstein-Podolsky-Rosen paradox in quantum mechanics where two particles that may be separated by light years can become “entangled.”<sup>35</sup> What is the filament that links them? How does this invisible thread, a thread that can extend beyond an unthinkable large distance, nonetheless bond these two particles? Unfortunately, quantum mechanics is still searching for an answer. In a philosophical context though, a bond is apparent in this example and such a bond links the particles together.

The universe described by contemporary physics is readily appearing more and more strange and metaphysics should be able to account for this strangeness. It is possible that such a linkage between contemporary physics and contemporary metaphysics could be made easier if a theory of relations becomes central to the development of a contemporary theory of objects or things, as in Karen Barad’s work for example. This new version of a theory of relations could focus on the space of the bond as a locale in which the limitations of human knowledge becomes apparent. However, an updated theory of the bond should not delimit or, to use Harman’s terminology, “overmine,” objects in such a way that bonds are privileged at the expense of objects or things-in-themselves;

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<sup>31</sup> Bruno, *GAB*, p. 169.

<sup>32</sup> *ibid.*

<sup>33</sup> Arielle Saiber, *Giordano Bruno and the Geometry of Language*, Hampshire, Ashgate, 2005, p. 134.

<sup>34</sup> Plato, *Complete Works*, ed. by John M. Cooper, Indianapolis, Hackett, 1997, p. 1237.

<sup>35</sup> Morton discusses this aspect of quantum entanglement in *H*, pp. 42-47. The physicist Roger Penrose discusses quantum entanglement in: *The Road to Reality: A Complete Guide to the Laws of the Universe*, London, Vintage Books, 2005, pp. 603-607.

instead, there should be a return to things-in-themselves *by way of* the bonds that link them. “Overmining” is Harman’s term for the anti-realist tendency to efface the reality of an object by emphasizing its properties, qualities, or relations at the expense of the object as a total unit.<sup>36</sup> Simply updating a version of Bruno’s theory of the bond and deploying it in the service of reconceptualizing object-oriented philosophy’s critique of relations is not enough to provide a useful and truly contemporary theory of the bond. For this reason, I would like to link the thinkers already mentioned with Alain Badiou’s idea of suture.

#### BADIOU’S THEORY OF SUTURE: FROM *CAHIERS POUR L’ANALYSE* TO BEING AND EVENT

On February 24, 1965, Jacques-Alain Miller intervened in Jacques Lacan’s seminar and developed a text that would eventually be published in the first issue of *Cahiers pour l’Analyse* (1966).<sup>37</sup> Slavoj Žižek points out that the word “suture” occurs only once in Lacan’s entire oeuvre—to be fair it appears twice in Lacan’s article “Science and Truth”—but Miller elevates the term to a privileged status.<sup>38</sup> Žižek links suture to the Lacanian concept of the *objet petit a* and historicizes the concept’s influence on film theory (as found in Kaja Silverman’s work).<sup>39</sup> In Miller’s article, “Suture (Elements of the Logic of the Signifier),” he argues that “[s]uture names the relation of the subject to the chain of its discourse.”<sup>40</sup> Miller’s theorization of the subject splits the subject from the imaginary order and reconfigures the subject through its suture to the symbolic order, which is the realm of language.

The importance of “suture” for psychoanalytical theory is that it acts as a concept that combines, links, or binds the subject to its own symbolic and discursive functions. Alain Badiou eventually intervenes in Miller’s own intervention and publishes “Marque et manque: À propos du zero” or “Mark and

<sup>36</sup> Harman, *OUO*, p. 24 and p. 39.

<sup>37</sup> *Cahiers pour l’Analyse* was only published for the relatively short time between 1966 and 1969, but it had a profound influence on structural and poststructural theory.

<sup>38</sup> Slavoj Žižek, “‘Suture,’ Forty Years Later,” in *Concept and Form: Volume 2, Interviews and Essays on the Cahiers pour l’Analyse*, ed. by Peter Hallward and Knox Peden, London, Verso, 2012, 147-167, p. 152.

<sup>39</sup> See Chapter 5 of Kaja Silverman, *The Subject of Semiotics*, New York, Oxford University Press, 1983.

<sup>40</sup> Jacques-Alain Miller, “Suture (Elements of the Logic of the Signifier),” 1966, in *Concept and Form: Volume 1, Selections from the Cahiers pour l’Analyse*, ed. by Peter Hallward and Knox Peden, London, Verso, 2012, 91-101, p. 93.

Lack: On Zero” in the final issue of *Cahiers pour l'Analyse* (1969). Despite the influence of Miller’s article, Badiou’s response garners less attention, but suture gradually becomes important to Badiou’s mathematical ontology. Badiou’s response is itself a response to two articles by Miller from *Cahiers pour l'Analyse*: “La Suture: Éléments d’une logique du significatif” and “Action de la structure” or “Action of the Structure.” However, the debate about the relationship between suture, the subject, and science begins in Lacan’s “La Science et la vérité” or “Science and Truth” (later collected in *Écrits*).

Lacan writes in that article that: “It is indisputably the strictly determined consequence of an attempt to suture the subject of science, and Gödel’s last theorem shows that the attempt fails there, meaning that the subject in question remains the correlate of science, but an antinomic correlate since science turns out to be defined by the deadlocked endeavor to suture the subject.”<sup>41</sup> In other words, the subject is situated in relation to the ways that it sutures to “knowledge” and “truth.” These sutures are prone to various kinds of rupture, but they temporarily orient the subject.

In that article, Lacan considers suture in relation to a subject of science, a subject of magic, and a subject of religion and each of these sutures require a grounding correlation between the subject and the specific disciplines in question. Lacan does not use the term “correlation,” but as I will show, his intention is similar to what Badiou’s student, Quentin Meillassoux—a founder of speculative realism—writes about “correlationism” as being one of the unacknowledged frameworks of Western epistemology and philosophy.<sup>42</sup> I claim that Lacan’s article “Science and Truth,” and the debate it inspires in *Cahiers pour l'Analyse*, stands as one of the unacknowledged influences on Meillassoux’s speculative materialism. This section will argue that Meillassoux’s critique of

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<sup>41</sup> Jacques Lacan, “Science and Truth,” in *Écrits: The First Complete Edition in English*, 1966, trans. by Bruce Fink, in collaboration with Héloïse Fink and Russell Grigg, New York, Norton, 2006, 726-745, p. 731. Hereafter cited as *ST*. A brief repetition of “suture” occurs on page 744 of “Science and Truth.”

<sup>42</sup> Meillassoux nicely summarizes the various correlationisms when he argues that “ever since Kant, to discover what divides rival philosophers is no longer to ask who has grasped the true nature of substantiality, but rather to ask who has grasped the more originary correlation: is it the thinker of the subject-object correlation, the noetico-noematic correlation, or the language-referent correlation?” From Quentin Meillassoux, *After Finitude: An Essay on the Necessity of Contingency*, 2006, trans. by Ray Brassier, London, Continuum, 2011, p. 6.

correlationism can be traced through Badiou's theory of suture and back to Badiou's critique of Miller—all of which leads to Lacan's "Science and Truth." I consider this part of my essay to be an attempt to address one aspect of a "poststructural unconscious" of the so-called "speculative turn."<sup>43</sup>

Lacan does not use the term "science" in a linear or a clear way in "Science and Truth"—because of his tendency towards a more obscure prose style, this decision is not altogether surprising. However, a key moment can be emphasized, such as when Lacan asks, while claiming that psychoanalysis is a science: "Is knowledge of object *a* thus the science of psychoanalysis?"<sup>44</sup> Badiou's use of the term "science" is more traditional than Lacan's: for Badiou, science is the subject of philosophy, but there "is no Subject of science."<sup>45</sup> Even though "science" is central to the debate in *Cahiers pour l'Analyse*, it becomes difficult to trace the argument because the terms "science" or "subject of science" are never fully defined and their implications are not made clear.

Certain clarifications can be made though: for Badiou, there is no lack in the knowledge provided by science; that is, in science as the subject of philosophy.<sup>46</sup> Badiou argues for the sanctity of scientific claims—grounded in the fact that science contains that which remains un-sutured.<sup>47</sup> That which would be "un-sutured" would be able to exist outside of a founding correlation or dyad. This emphasis on the importance and the idealization of scientific statements aligns with Meillassoux's later theory of "arche-fossils."<sup>48</sup> Arche-fossils are Meillassoux's term for real objects that point to a time beyond the human. These objects support the special nature of scientific statements because such statements can make "ancestral claims";<sup>49</sup> that is, claims about geology, biology, or the cosmos

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<sup>43</sup> Speculative realism was founded by Meillassoux, Iain Hamilton Grant, Ray Brassier, and Graham Harman. Each of these thinkers develop unique and diffuse approaches to the same problem, which is to think a different direction from Kantian philosophy that acts "as a deliberate counterpoint to the now tiresome 'Linguistic Turn.'" From *The Speculative Turn: Continental Materialism and Realism*, ed. by Levi Bryant, Nick Srnicek, and Graham Harman, Melbourne, re.press, 2011, p. 1.

<sup>44</sup> Lacan, *ST*, p. 733.

<sup>45</sup> Alain Badiou, "Mark and Lack: On Zero," 1969, in *Concept and Form: Volume 1, Selections from the Cahiers pour l'Analyse*, ed. by Peter Hallward and Knox Peden, London, Verso, 2012, 159-185, p. 173. Hereafter cited as *ML*.

<sup>46</sup> Badiou, *ML*, p. 174.

<sup>47</sup> *ibid.*

<sup>48</sup> Meillassoux, *AF*, pp. 10-15.

<sup>49</sup> *ibid.*, pp. 9-14.

that occurred several millennia before the evolution of the human species. Science has the ability to discuss a *non-anthropocentric* history that can point to historical moments that are entirely anterior to a “real” that is defined in a rigidly human (or a humanist) way. In other words, this “real” exists apart from the human correlation.

Badiou does not only privilege scientific statements, but also mathematics and he will eventually link mathematics to ontology in his magnum opus *Being and Event* (1988). Badiou continues to develop the idea of suture against Miller and highlights the concept in his mathematical ontology. His use of the term continues to diverge from Lacanian psychoanalysis and is the result of his own idiosyncratic combination of ontology, Maoism, and set theory. In *Being and Event* though, Badiou resituates the structure of his argument for suture from the one presented in *Cahiers pour l'Analyse* to a theory of the suture of being to a void.<sup>50</sup> “Ontology, therefore, can only count the void as existent,” Badiou writes, because ontology produces a consistency from inconsistency through its “suture-to-being of any situation.”<sup>51</sup> This argument is similar to several of Badiou’s claims in *Number and Numbers* (1990).<sup>52</sup> Badiou situates suture as an intrinsic concept in his version of philosophy because he argues that philosophy features various “sutures” already, such as the sutures of positivism, science, politics, and poetry.<sup>53</sup> “Suture” is therefore a mobile concept that appears in multiple places in Badiou’s work and always in slightly different ways; however, its function is always one of linkage and of constituting a relation between concepts, fields, or entities.

The most interesting use of suture in his work is, for my purposes in this essay, when it is used to bind being to the void. This decision is key to his mathematical ontology:

The void does not have any element; it is thus unrepresentable, and we are concerned with its proper name alone, which presents being in its lack. It is not the ‘void’ which belongs to the set  $\{\emptyset\}$ , because the void belongs to no presented multiple,

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<sup>50</sup> Alain Badiou, *Being and Event*, 1988, trans. by Oliver Feltham, London, Continuum, 2007, p. 10 and p. 55. Hereafter cited as *BE*.

<sup>51</sup> Badiou, *BE*, p. 58.

<sup>52</sup> Alain Badiou, *Number and Numbers*, 1990, trans. by Robin Mackay, Cambridge, Polity, 2008, p. 23 and p. 157. Hereafter cited as *NN*.

<sup>53</sup> Alain Badiou, *Manifesto for Philosophy*, 1989, trans. by Norman Madarasz, Albany, State University of New York Press, 1999, pp. 62-63.

being the being itself of multiple-presentation. What belongs to this set is the proper name which constitutes the suture-to-being of the axiomatic presentation of the pure multiple[.]<sup>54</sup>

Being is sutured to an initial paradox during this moment; i.e., it is sutured to the undecidability of the count when the void is nominated as  $\emptyset$  or as  $\{\emptyset\}$ . In each case, the void is counted or countable, but each instance presents different sets and different members of those sets. This situation is one in which there exist multiple voids. For example,  $\emptyset$  is the name of the void, but it is also counted as 1 in set theory, while  $\{\emptyset\}$  or the set of the empty set can be counted as 2. This grounding paradox in counting in set theory complicates the possibility of a linear ontology and requires a robust theory of the multiple. Badiou's mathematical ontology attempts to address this requirement.

The influence of the initial debate in *Cahiers pour l'Analyse* repeatedly triggers lines of inquiry in Badiou's work. Even by the time of *Being and Event*—which is published roughly 19 or 20 years after his articles appeared in *Cahiers pour l'Analyse*—the influence of the concepts of suture and the “subject of science” return in his writing. With this in mind, I would like to read the following moment from *Being and Event* as another response to Lacan's “Science and Truth”: “What *still* attaches Lacan (but this *still* is the modern perpetuation of sense) to the Cartesian epoch of science is the thought that the subject must be maintained in the pure void of its subtraction if one wishes to save truth. Only such a subject allows itself to be sutured within the logical, wholly transmissible, form of science.”<sup>55</sup> This moment arguably responds to Lacan's brief discussion of Descartes in “Science and Truth”<sup>56</sup> and Badiou's interpretation diverges from Lacan's claims. Despite the recourse to mathematical legitimation, Badiou's mathematical ontology features many non-verifiable concepts—I would include “suture” and “the void” in this category. There is no empirical or rigorously scientific way to prove the existence of these philosophical concepts. I point to these moments because, even for a mathematical ontology, an ontology that eventually (although perhaps laterally or even indirectly) influences Meillassoux's speculative materialism, there is a necessary theory of connectivity in effect.

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<sup>54</sup> Badiou, *BE*, p. 89.

<sup>55</sup> *ibid.*, p. 432.

<sup>56</sup> Lacan, *ST*, p. 727.

Despite object-oriented claims against theories of relation, I maintain that a theory of relation (or relations) is necessary for any “new metaphysical” project and, even further, such a theory is often already present, even when it is ignored or called something else. In other words, processes hide in objects.

#### VICARIOUS BONDS OR SUTURES

Bonding and suture are each concepts that denote liminal theories of relation; they are also each difficult to define in a linear or a clear manner; and they tend to include abstract formulations like Badiou’s grounding of his notion of a suture-to-being to the void. These philosophical concepts that are meant to designate points or sites of linkage or relation are often ambiguous; nonetheless, I maintain that they are vital for the development of a contemporary theory of objects. Even when a theory of relation is not explicit, there is often *still one that is present*, lurking in the background. For this reason, and in this final section, I will insist that theories of relationality are conceptually *withdrawn* in object-oriented philosophy. This is not quite the same as saying that “theories of relationality” are the excess or residue of object-oriented philosophy because, by arguing that theories of relationality are *withdrawn*, I am saying that there *is* a theory of relation that is present, but it is as withdrawn as the essence of a Harmanian object.

Despite his dislike for theories of relation,<sup>57</sup> Harman has developed a concept that is intrinsically relational, called “vicarious causation.” Much of Harman’s thinking about vicarious causation can be found in *Guerilla Metaphysics*:

the classical notion of occasional cause needs to be partially rehabilitated, despite its recent centuries as an object of philosophical ridicule by scholars and novices alike. The revival is only partial insofar as I will not recommend a traditional occasionalist theory based on a God who directly intervenes in the motion of raindrops and dust—a theory in which the deity is openly invoked but the divine mechanisms are left in darkness. The new term to be used is *vicarious* cause, and it

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<sup>57</sup> I cited moments in the first section that illustrate this point, but this is a key feature of Harman’s philosophical position. Another useful piece to point to is his essay “The Well-Wrought Broken Hammer” (2012), in which he writes that: “Allure alludes to entities as they are, quite apart from any relations with or effects upon other entities in the world. This deeply *non-relational* conception of the reality of things is the heart of object-oriented philosophy.” See Harman, “The Well-Wrought Broken Hammer: Object-Oriented Literary Criticism,” *New Literary History*, vol. 43, no. 2, 2012, pp. 183-203, p. 187. Another key moment is from *Tool-Being*: “the tool-being of a thing exists in vacuum-sealed isolation, exceeding any of the relations that might touch it.” See Harman, *TB*, p. 287.

requires no theology to support it. *Any* philosophy that makes an absolute distinction between substances and relations will inevitably become a theory of vicarious causation, since there will be no way for the substances to interact directly with one another.<sup>58</sup>

Harman argues that causation between real objects “can only be vicarious” because one real object can never touch another and “if we ask where this vicarious causation occurs,” Harman writes, “the answer is that it lies on the interior of a further entity, in the molten core of an object.”<sup>59</sup> Relationality occurs, according to object-oriented philosophy, on the *exterior* of objects, while vicarious causation occurs at the *interior*. Two or more objects commune, for Harman, in terms of the carnality of their independent “notes.” These objects do however *bond*; in fact, Harman retools the term without acknowledging Bruno’s original theory of the bond and instead situates the bond in a framework of Husserl, Heidegger, and Xavier Zubiri. Harman argues for sensual, causal, and physical bonds, each of which relate to vicarious cause:

The *sensual* bond marks the tension between the unified object of our experience and the numerous sensuous qualities that seem enslaved to it at any given moment. The *physical* bond is the same tension insofar as it plays out in the heart of things themselves rather than in the things as relative to perception. The *causal* bond concerns the interaction that occurs between separate objects despite their ultimate withdrawal from one another. But all three of these bonds are nothing other than forms of vicarious causation[.]<sup>60</sup>

Vicarious causation is a term for a kind of relationality, whether or not relations exist in object-oriented philosophy. Even if objects withdraw into themselves, they remain bonded through a kind of invisible Indra’s net—and the filaments of this net or field stretch across temporalities, spaces, and distances. Objects become entangled by way of their bonds, or, to put it in perhaps an overly Heideggerian way: *the bond bonds*. Harman’s causality becomes more complicated though because he discusses three types of cause in *Guerilla Metaphysics*: vicarious, buffered, and asymmetrical. Each of these notions of cause build on the concept of withdrawal: 1) real objects cannot touch other real objects (vicarious cause); 2) real objects and sensual objects can only “touch” indirectly (asymmetrical cause);

<sup>58</sup> Harman, *GM*, p. 2.

<sup>59</sup> *ibid.*, p. 230.

<sup>60</sup> Harman, *GM*, p. 6.

and, 3) real objects and sensual objects do not “fuse” into each other, but remain “buffered” behind their own “firewalls.”<sup>61</sup> Even if the essence of an object withdraws, and I agree with Heidegger and Harman that this is a sound ontological claim, then this process of withdrawal does not negate a theory of relationality or connectivity. A theory of bonding or suturing can be repurposed and made into a theory that is, to use Harman’s own words, more “spooky” and “mysterious”<sup>62</sup>—in other words, more *realist*. Bonds do not function in a linear fashion because the spaces between objects and things or the connections that are built between discrete objects or things are often mysterious and ambiguous—as indicated by the example of quantum entanglement discussed earlier. Bonds are liminal and this liminality itself *withdraws*, receding from view or ready interrogation.

One argument in this essay has been that objects withdraw as well as their bonds. This process occurs because objects become entangled as they transform through phase transitions or over time. Any phase transition reveals both the withdrawal of an object or thing into itself and also the withdrawal of the bond that links two instances of the same initial object or thing—when fire burns cotton, the form and the essence of the cotton recedes into itself as it transitions into a piece of ash that conceals the previous relationship between the cotton and the fire. Or, water boils on a stove-top and becomes steam and the steam registers as condensation on a window, but the relationship between the water or the water molecules and the high temperature withdraws into the history or temporality of that particular moment. For this reason, bonds are, in certain instances, entropic—they last only for a specific period of time and then they end, or they transform into a different kind of bond.

It would seem that my focus on the bond has emphasized a process-oriented approach as opposed to an object-oriented one. Already there have been some critiques of Harman and other object-oriented thinker’s arguments against relationality and against process,<sup>63</sup> including the process-oriented and Deleuzian

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<sup>61</sup> See *ibid.*, pp. 222-223 and Harman’s “On Vicarious Causation,” in *Collapse II: Speculative Realism*, London, Urbanomic, 2007, 187-221, pp. 200-201. Harman’s “On Vicarious Causation” is hereafter cited as *OVC*.

<sup>62</sup> Harman, *OVO*, p. 38.

<sup>63</sup> See Adrian Ivakhiv’s Deleuzian and Whiteheadian critique in his article: “Beatnik Brothers? Between Graham Harman and the Deleuzo-Whiteheadian Axis,” *Parrhesia*, vol. 19, 2014, pp. 65-78. Steven Shaviro also acknowledges this tension between a Harman approach and a Whiteheadian framework of process

thinker Jane Bennett who offers a different, processual theory of objects in *Vibrant Matter* (2010), and who responds to Harman and Morton in a piece in *New Literary History* (2012) when she argues that: “perhaps there is no need to choose between objects or their relations” and that we should “aim for a theory that toggles between both kinds or magnitudes of ‘unit.’”<sup>64</sup> I contend that such a toggling would be *more* rather than less realist and that a good place to start to combine process-orientation with object-orientation is in a theory of relations or bonds. I suspect that vicarious causation is a good theoretical candidate to begin this work of bonding the relational theories of process philosophies to the non-relational emphasis of object-oriented philosophy.

Harman argues that vicarious causation is the “glue of the universe”<sup>65</sup> and the “very music of the world.”<sup>66</sup> I find it telling that he often chooses to describe vicarious causation with arguably poetic terminology. Vicarious cause may lend itself to a poetic more than strictly philosophical exposition because it is a different instance of Bruno’s *vinculis* and Badiou’s *suture*. Each of these concepts are relational, connective, processual, and *causative* and they each have a degree of vicariousness or an element of abstraction. According to Badiou, philosophy bonds or sutures to poetry.<sup>67</sup> Harman writes that “science so far knows nothing”<sup>68</sup> about vicarious causation, which requires a more poetic form of expression. Science can as yet only hint at the mysterious qualities of bonding and suture; it cannot yet describe the mysteries of entanglement or the complex realities of these various notions of bonding or connectivity. This problem, that points to the limitations of scientific knowledge, is captured by Gaston Bachelard in *The Psychoanalysis of Fire* (1938): “The axes of poetry and science are opposed to one

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philosophy in *The Universe of Things: On Speculative Realism*, Minneapolis, University of Minnesota Press, 2014, pp. 30-32. Also of interest are Nathan Brown’s “The Nadir of *OOO*: From Graham Harman’s *Tool-Being* to Timothy Morton’s *Realist Magic: Objects, Ontology, Causality* (Open Humanities Press, 2013),” *Parrhesia*, vol. 17, 2013, pp. 62-71; and the recent and very strong phenomenological critique of Floriana Ferro in “Object-Oriented Ontology’s View of Relations: a Phenomenological Critique,” *Open Philosophy*, vol. 2, 2019, pp. 566-581.

<sup>64</sup> Jane Bennett, “Systems and Things: A Response to Graham Harman and Timothy Morton,” *New Literary History*, vol. 43, no. 2, 2012, pp. 225-233, p. 227.

<sup>65</sup> Harman, *GM*, p. 93.

<sup>66</sup> *ibid.*, p. 169.

<sup>67</sup> Badiou, *NN*, p. 81.

<sup>68</sup> Harman, *OVC*, p. 190.

another from the outset. All that philosophy can hope to accomplish is to make poetry and science complementary, to unite them as two well-defined opposites.”<sup>69</sup> The bond itself withdraws, but the collision of poetry and science in philosophy is an attempt to shine a light on it. In the clearing of the interrogation of the bond, we find a *Lichtung* on *vinculis*.

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<sup>69</sup> Gaston Bachelard, *The Psychoanalysis of Fire*, 1938, trans. by Alan C.M. Ross, Boston, Beacon Press, 1968, p. 2.

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