L'extermination de tout Symbolisme des Cieux: Reading the Lacanian *Letter* as Inhuman 'Apparatus' and Its Implications for Ecological Thinking

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Toward the very end of Sean McGrath's essay, 'The Question Concerning Nature,' he notes the very common dismissal of an overly pious reading of Heidegger's notion of *Gelassenheit*. Canvassing the 'Ecology without Nature' (EWN) philosophy of Timothy Morton, McGrath alludes to the problem with the 'green' reading of Heidegger that argues *Gelassenheit* leaves one bereft of political discernment, placidly accepting 'the way things are: Should we also let the BP oil spill be? Should we let the decimation of the Amazon rainforest be?'[1] McGrath correctly notes that this is a slight misreading of Heidegger, as '*Gelassenheit* was never offered as a method of environmental practice; it is, rather, an undermining of techno-scientific-capitalist thought itself, an overturning of its basic assumption, that the human is or ought to be the master of time.'[2]

Requiring *Gelassenheit* to become a method 'is to leave the will to mastery at the root of our crisis unchallenged.' According to McGrath, 'Morton's mistake is to assume that a contemplative approach to the question concerning nature has been tried and found wanting. On the

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contrary, it has been found wanting without ever being tried.' When one switches registers a bit to ask about Lacan's usefulness for the ecocritical and environmental philosophies of the late twentieth and early twenty-first centuries, one cannot help but think something identical has happened to his thought: numerous scholars have, as I hope to show, 'found it wanting without ever really trying [it] yet.'

There has been no small quantity of ink spilled showing that Lacan's work will not really help one talk about the nonhuman at all. His thought is just another exemplary case of 'structural linguistic correlationism' (Johnston)[3]; a typical anthropocentric humanist who cannot think the nature of the animal (Derrida); or, perhaps worst of all, a scatological thinker whose worry about what humans will do with their 'shit' keeps him from articulating the 'ecological thought' so necessary today in the Anthropocene (Morton).[4] Hoping to steer clear of all these criticisms, I would like to argue that understanding how ecological thinking is itself split between ecology as both a science and a philosophical regime within the humanities opens up a path that can capitalize on Lacan's views on science and mathematical symbolism and formalism.[5]

It is Lacan's focus on the 'letter in the Real'—not the 'matheme,' nor the Signifier—that allows a fruitful understanding of the fundamentally traumatic kernel of the ecological Real. Grasping how the letter in Lacan's treatment of science—which should be connected to the recent work of Mackenzie Wark on the 'apparatus'—gives one access to the nonhuman nature of reality clearly demonstrates the potential usefulness of Lacanian psychoanalysis for continuing current ecological philosophy's focus on the decentering of anthropocentric thought.

Almost 30 years ago now, the philosopher and media theorist, Vilém Flusser, composed an essay entitled 'Orders of Magnitude and Humanism,' wherein he quite clearly and parsimoniously described how humanity's scientific progress since the age of the Greeks has exploded awareness of diverse 'orders of magnitude.'[6] Flusser noted that it was 'easy for the ancients to say,' as Protagoras did, that 'man is the measure of all things' (p. 160). Truly, '[t]hen everything in the world could indeed be measured in centimeters, hours, dollars (or the contemporary equivalents thereof). What was not measurable thus was unmeasurable' (Ibid). Nevertheless, after the invention of the lens, which allows one not only to see the

incredibly distant but also the miniscule, awareness of different 'orders of magnitude' in reality becomes much more salient.

The explosion proliferates so quickly that Flusser fittingly notes that it would not have been enough for the Church to destroy all of Galileo's work—the 'penetration would not have been avoided.'

> For the world has not only expanded into space in order to bend at one of its horizons and to fray into quarks at the other, it has also expanded into time, in order to creep into the [B]ig [B]ang on the one hand, and into the quantum leap on the other. It would have been necessary to burn the stopwatches too.[7]

The inability to keep all these different orders straight results in a complete breakdown of the anthropocentric, humanist perspective, according to Flusser:

> Besides, the world has also expanded with respect to values, thereby assuming inhuman dimensions, in gross net products on the one hand, and calculations of cost on the other. The slide rules would have had to be burned too. In short: man has advanced into the inhuman, the inhuman strikes back at him, and under these blows, humanism breaks down.[8]

In this very short essay, Flusser says that one's understanding of these various orders of magnitude call for '[a] Ptolemaic counterrevolution,' a 'completely new humanism' that would 'call attention to the priority of the human order of magnitude.'[9] Flusser in his essay suggests—incredibly aphoristically—that it is impossible to put the genie back in the bottle.

Given that the bottle has already been opened, it behooves us, asserts Flusser, to be attentive to the ways in which we switch between these different orders of magnitude we have come to know:

> The new humanism cannot want to deny that different orders of measurement overlap each other and interpenetrate. On the contrary, it has to emphasize that, for each order of magnitude, there is a typical epistemology, ethics, and aesthetics that is effective, and that, in spite of the gray zones, abysses gape between the orders of magnitude. Thus, it is mischief to apply the geometry of what is perceptible by the senses to the astronomical

> order of magnitude or causal thinking to the order of magnitude of particles of atom nuclei. The specificity of each order of magnitude would have to enable the new humanism to call attention to the priority of the human order of magnitude.[10]

Now, it is perfectly possible to wonder about this bid for a 'new *humanism*,' and a redoubled effort to 'pay attention to the priority of the *human* order of magnitude.' After all, things like exponential notation and transfinite arithmetic allow us to *think* and *calculate* phenomena that so escape the terrestrial senses that they are impossible to actually picture, let alone fully understand.[11]

This is not even to mention that we have been using these tools for a really long time—exponentiation goes back to Descartes and both scientific notation and Cantor's work on transfinite arithmetic are now well over a hundred years old. Today it seems even more necessary to think intensely about the sheer uncanniness that comes through the knowledge of everything from quantum mechanical systems to the existence of gravitational waves. Flusser is right to say that awareness of differing orders of magnitude require certain 'effective theories': using Newton's Laws will not be helpful to us on the subatomic order of magnitude; employing notions of space–time manifolds 'to the production of ink pens would be stupid.'[12]

As helpful as Flusser's short remarks are, there appear to be two different kinds of prostheses in the essay. The first comes through the variety of technological inventions (e.g., the lens, the telescope, the microscope, the slide rule, etc.), whereas the second includes the slightly more abstract (though no less material) mathematical tools (e.g., scientific notation, mathematical formulas, etc.). It is the latter that needs a theorization through a Lacanian lens.

Although Lacan does not himself have any full-fledged history of science—relying, instead, largely on the work of Alexandre Koyré—he does have a great deal to say about the kind of subject that has been birthed by modern science. What is most useful in Lacan's work is his awareness of the substantially destabilizing and fundamentally traumatic nature of scientific knowledge; this is, a knowledge that, at the end of the day, puts to the sword many humanist perspectives, making them ultimately

'superfluous.'[13] Of course, Koyré and Lacan were certainly by no means the only ones to see this.

The extreme gap between the sciences and the humanities shows up in extremely clear ways (e.g., in Hannah Arendt's *The Human Condition*). In the Prologue to this text, Arendt notes the profound splitting of our knowledge, especially of the subatomic world, evidenced clearly by her mention of Erwin Schrödinger:

> The trouble concerns the facts that the 'truths' of the modern scientific world view, though they can be demonstrated in mathematical formulas and proved technologically, will no longer lend themselves to normal expression in speech and thought. The moment these 'truths' are spoken of conceptually and coherently, the resulting statements will be 'not perhaps as meaningless as a "triangular circle," but much more so than a "winged lion"' (Erwin Schrödinger). …For the sciences today have been forced to adopt a 'language' of mathematical symbols which, though it was originally meant only as an abbreviation for spoken statements, now contains statements that in no way can be translated back into speech. …[Scientists] move in a world where speech has lost its power.[14]

Given that there is very little doubt as to the accuracy of these statements, Koyré and Lacan argue that something similar was already at work much earlier in history, going back, ultimately, to the first great humiliators of human specialness—Copernicus and Kepler.

In a 1959 essay on Ernest Jones, Lacan discusses the monumental sea-change that occurs not solely when we figured out that the Earth was not the center of the Universe (Ancient sources had already floated such ideas around, to be sure), but also when we began to use the formalism of mathematical language to model and describe the 'heavenly spheres'; Lacan argues that the history of science:

> …brilliantly demonstrates, in the birth of the theory of gravitation, that it was only on the basis of the extermination of all symbolism of the heavens [*l'extermination de tout symbolisme des cieux*] that the terrestrial foundations of modern physics could be established—namely, that as long as some requirement to ascribe to the heavenly orbits a 'perfect' shape was maintained (insofar as it implied, for example, the circle's preeminence over the

> ellipse) from Giordano Bruno to Kepler and from Kepler to Newton, it thwarted the developed of the theory's key equations.[15]

Lacan's language pulls no punches here—describing the heavenly spheres with mathematics requires '*l'extermination de tout symbolisme des cieux*'; freed from the necessity for the planets to match the 'perfect' shape of the circle, we made them no longer heavenly at all. Moreover, nothing makes our 'humanist references more superfluous' than grasping science's ability to bypass the capture of the Imaginary.[16] Asking the world always to submit itself to humanism—as our Imaginary relations to the world so often do—makes it clear why Jean-Claude Milner is perfectly correct to say that '[t]he Imaginary as such is radically foreign to modern science.'[17]

My intervention here with regard to this 'extermination of all symbolism of the heavens' takes its cue from a couple of different angles, many of them very familiar to Lacanians. The first is Tom Eyers's attempt at a rapprochement between Lacanian psychoanalysis and current object-oriented ontology (OOO) forms of philosophy in his 'Lacanian Materialism and the Question of the Real.'[18] Eyers's article argues that if one grasps the way in which the *letter* in Lacan is of the Real while the Signifier is that of the Symbolic, this opens up the possibility for a discussion of certain 'non-human agenc[ies]' that have become the main theoretical objects of so many of the new speculative realisms. Eyers quite rightly argues that 'when we question the supposed inextricability of language from the world, the symmetry of a human/non-human topography, offers a complementary discourse centred on those aspects of existence that slip between binaries of human and non-human, life and death, material and ideal.'[19]

Following Lacan's definition of the 'letter' in 'The Instance of the Letter in the Unconscious' as 'the material medium [*support*] that concrete language borrows from discourse,'[20] Eyers proposes the counterargument that Lacan is hardly guilty of being 'a covert linguistic idealist,' as Nancy, Lacoue-Labarthe, and Derrida all argued. Instead, for Eyers, these critiques of Lacan all force one to 'ask whether their argument takes full cognisance of this paradoxical materiality of the signifier, its shrinking away from, and disruption of subjectivity.'[21] At times, Eyers argues for a reading that sees the letter as itself just a split within the Signifier; thus,

for Lacan, there are 'two levels of discourse—that is, the isolated letter or signifier-in-isolation, extracted from the relations of negative reference that ultimately give meaning to language. …'[22] For the purposes this chapter, it is most helpful to go to a couple of later Lacanian texts to ferret out the idea of the 'letter in the Real' as quite terminologically distinct from speaking of this very same letter as a 'signifier-in-isolation.'

Dany Nobus's reading of Lacan's later work on Joyce and also the key essay, 'Lituraterre,' lays out with great clarity Lacan's insistence that '[w]hereas the signifier is situated within the Symbolic, the letter belongs to the Real.'[23] Even though Nobus's reading focuses on the letter in the Real as it relates to literature and the work of Joyce, there is a way to see very similar functions in terms of mathematics and science and the aforementioned extermination of all heavenly symbolism. Nobus's utilization of natural languages as the example for understanding the Lacanian letter is simple enough: 'When Lacan claimed that letters belong to the Real, he intimated that as phonograms they are completely stripped of all meaning; it is impossible to say what the letter "X" means, because as a phonogram it does not have any meaning whatsoever.'[24]

Nobus also is correct to notice a strong consistency in Lacan's thinking:

> Now, some fifteen years later [after 'The Purloined Letter'], Lacan surmises that the letter cannot sustain itself as such within the Symbolic order when it is radically deprived of meaning. Formerly the signifier *par excellence*, an essentially meaningless unit, the letter now presents itself as a radical anti-signifier, an excrement that has turned against its own progenitor.[25]

Nobus's choice of the example, in the letter 'X' is coincidentally very fruitful for a discussion of how all of this relates not just to literature but also to mathematics and mathematical language. In a couple of spots in Lacan's Seminar XIV, he has recourse to Bertrand Russell's description of mathematicians' use of formulas and terms in ways that nobody knows what they are talking about 'nor whether what we are saying has the slightest truth.'[26]

Granting that all of this is no doubt old hat for Lacanians, scholars outside of psychoanalytic circles have recently taken up this focus on the

letter in the Real as well. Exemplary is Noah Horowitz's recent work, which provides even more support for arguing that Lacanian thought provides a great deal of material for understanding how exactly this 'extermination of all symbolism of the heavens' functions precisely in terms of mathematics and science. Horowitz's project in his two major texts—*Reality in the Name of God, or Divine Insistence* and *Divine Name Verification*—is admittedly rather different from this chapter's; there are several key ideas regarding the notion of the Lacanian letter that are useful here.

The texts by Horowitz should be read as instances of healthy caution toward the OOO and speculative realism (SR) movements away from the linguistic turn; instead of simply agreeing with Barad and others that we have given too much power to language,[27] Horowitz's two books double-down on the irreducibility of this very same linguistic turn (broadening this adjective, of course, to include things like the Lacanian letter).[28] His gamble relies a great deal—though it would seem not be that big a gamble for Lacanians as Horowitz's interpretation accurately reproduces the readings of Eyers and Nobus—on Lacan's placing of the *letter* within the register of the Real: '…Lacan relegates letters to the register of the Real rather than to the Symbolic. The letters are excluded from symbolization for Lacan.'[29]

Horowitz continues on to say that this focus on the letter becomes clearest when Lacan speaks of the texts of science and mathematics as he did earlier in the citations from Seminar XIV, for these texts 'are composed of formulas, equations, etc. consisting almost exclusively of numbers and letters.'[30] Following an essay by Tzahi Weiss, Horowitz asserts:

> [T]hese letters are not signifiers, but the 'material structure that creates the possibility of the signifier' itself. Letters have 'no referent' outside the register of signification itself. Since meaning is ideal, the letter is identified with materiality. And this material is opaque and resistant, but insistent insofar as it can destroy meaning. But it is not the materiality of the ink on paper. It is of the Real, which means it always returns to its place, is impossibility, and names the gaps or fractures of meaningful networks.[31]

Horowitz's keen awareness that '[f]or Lacan also, one can overcome fantasy precisely by turning to math and its way of reducing reality to letters. …'[32] Even though Horowitz does not cite the key passage cited earlier

from the essay on Ernest Jones's symbolism—nor does he put it in exactly the same language as that of Nobus's description of the letter as an 'anti-signifier'; however, he does grasp how this all resonates with Lacan's conception of modern science as 'becom[ing] possible once the real was reduced to the mathematical and that means to letters. Science thereby devotes itself to an analysis of purely differential being. It *literalizes reality* such that it can see it as diverse and multiple.'[33] It is exactly this upsetting of Imaginary–anthropocentric meaning that seems most appropriate for synthesizing with the nonhuman turn.

So many Lacanian discoveries fan out to connect with numerous post-humanist arguments—all starting from the mingling of the letter in the Real (seen through mathematical formalism), the importance of writing, and ultimately with the description of this very same Real as what *never stops writing itself*, or as the impossible itself.[34] Cary Wolfe's argument, for instance, in his now-canonical *What Is Posthumanism?* concerning the prosthetic nature of *writing* is thoroughly consistent with Lacanian thought. Wolfe's attempt to show an agreement between systems theory and deconstruction relies heavily not only on this idea of *prosthesis* but also on the fundamentally inhuman nature of this apparatus.

Wolfe mentions on several different occasions how both Derrida and Luhmann allow one to think of *writing* as itself a prosthesis of/for the human being. *Writing* is something that clues one into the fact that 'the human is, at its core and in its very constitution, radically ahuman and constitutively prosthetic.'[35] Wolfe's summary of the Derridean distinction between the obsession with the auto-affection of the voice and the privileging of speech is itself shown through the *grammè* of writing, which is defined as 'a recursive domain of iterative communication that is, properly understood, *fundamentally ahuman or even antihuman*.'[36]

In the interests of investigating a bit more closely this idea of the prosthesis in Wolfe and of its potential connections with discussions of the nonhuman, we should begin by thinking through the tools of mathematics and science—the letter in the Real for Lacan—as themselves prostheses. Despite Johnston's argument that Lacan's work suffers from a problematic overreliance on the 'pure' sciences (as opposed to the life sciences of biology, and so on), it is this focus on the letter in the Real that shows a path toward the nonhuman that travels along the fundamental

inhumanity of mathematics and science.[37] Given the understanding that the letter is relegated to the Real, we can easily see some connections with contemporary advocates of rethinking the human's connection to nonhuman reality; Mackenzie Wark's recent text, *Molecular Red*, comes to mind most readily.

In this text, which does not utilize nor even mention the psychoanalytic tradition, Wark notes something identical to Lacan; when science goes to the extreme limits of reality and knowledge, it becomes clear that:

> …[t]here is something inhuman about science. Its modes of perception, modeling and verifying are outside the parameters of the human sensorium, even though they are dependent on an apparatus that is itself the product of human labor. The objects of science are not dependent on human consciousness. And yet science happens in history, constrained by forms of social organization of a given type and of a given time. As such, existing social relations are a fetter upon science in its pursuit of the inhuman sensations of the nonhuman real.[38]

These prostheses of science—Wark follows Karen Barad and numerous others here in calling them 'apparatuses'—make available a radically *nonhuman* otherness.[39] Utilizing the word 'inhuman' in a very different way than Flusser did; *Molecular Red* draws a threefold distinction between the human, nonhuman, and inhuman.

As Slavoj Žižek notes in his review of this text: 'Crucial here is the distinction between nonhuman and inhuman: nonhuman resides at the same level as human; it is part of the ordinary world in which humans confront nonhuman things and processes. The apparatus is something different, neither human nor nonhuman but inhuman.'[40] Žižek further correctly notes:

> Although these apparatuses are made by humans and from part of our ordinary reality, they enable us [to] gain access to weird domains which are NOT part of our experiential human reality, from quantum oscillations to genomes…they enable us to discern the contours of a real that is not part of our reality. [Thus,] …[t]he inhuman mediates the nonhuman to the human. This preserves the queer, *alien* quality of what can be produced by an apparatus—particle physics for example—without saying too much about the nonhuman in advance.'[41]

What is commendable about Wark's argument—and, indeed, a great deal of Žižek's thinking about science in general over his career—is the way in which it allows one to describe science and the Lacanian letter qua mathematical formula *in the Real* as profoundly *inhuman* prostheses that gives one access to the nonhuman Real.

This view of science and mathematics needs recourse to Lacan, largely because of how different it is from the perspective on science we have inherited from the phenomenological tradition. With Husserl, in particular, there has often been a rather steadfast argument that much of the human experiences of our 'life-world' really are not completely and totally 'alien' to the world(s) that are disclosed through science and all its prostheses, *pace* Žižek. As Pierre Kerszberg puts it in his 'Natural Science and the Experience of Nature,' for Husserlian phenomenology, '[t]he scientist is not a monstrous creature from outer space, but a human being equipped with a sense of being that belongs to us all, so that the concrete life-world in which we all live cannot but remain the "grounding soil" of the "true" world according to physics.'[42]

After the numerous ecological interventions from the new materialisms' camps, it seems that with twentieth-century science—from quantum mechanics to genetics and even environmental science that teaches one about objects that completely escape everyday existence—it gets harder and harder not to see this prioritizing of the human and even the *soil* as begging the question. Why is it not far more likely that science has so pulled away from this 'grounding soil' that to say otherwise is to privilege a human order of magnitude that need have no especial ontological privileging? Kerzsberg's essay—and phenomenology in general, one could argue—does grant that science has taught us to expand our understandings of the nonhuman world, that scientific knowledge shows that 'the electrons moving in highly elaborate circuits are just as "natural" as a table or a thunderstorm.'

Notwithstanding the fact that there are modes of being now that we access solely through abstractions (e.g., of mathematical formalism in the case of quantum mechanics), the phenomenologist can still wonder: '[D]espite those artifacts, and over and above them, isn't there some original nature that continues to provide a basis, a ground, a shelter'?[43] But, again, what if this wish for 'shelter' is yet another lure—just another way to be

suspicious that the discoveries of science are not nearly as astonishing and narcissistically upsetting as they truly are—or, perhaps even worse, another way to still maintain humans as the 'monarchs of being'?[44] Flusser's demand that awareness of the degree to which scientific knowledge of orders of magnitude far outstretches the intuitions we have from the 'life-world' may indeed be just another way to domesticate and humanize the *radical otherness* that scientific knowledge unveils.

Kerzsberg argues that the scientist is no monstrous alien—perhaps not, but her knowledge certainly is. Ian Bogost, in thinking about the alien in general, says that the key question one must ask of the alien, of the radically foreign, is not '"Do you come in peace?" but rather, "What am I to you?"'[45] The natural sciences have given us the age of the Universe, and we know the Earth began the process of accretion billions of years ago. We know that life itself on this planet needed an inordinately ungraspable amount of time to get enough cyanobacteria cranking out oxygen to completely alter the entire planet's atmospheric composition, and science has taught us how old the genus *Homo* is.

Moreover, as Ray Brassier notes in his *Nihil Unbound*, the sciences also have told us a great deal about the future. For example, the Milky Way is on a crash-course trajectory with the Andromeda galaxy after another three billion years; the Sun will go red giant in four billion years; and somewhere around a trillion, trillion, trillion years from now, everything in the Universe will have been reduced back down into elementary particles.[46] Brassier is completely correct to say that '[p]hilosophers should be more astonished by such statements than they seem to be …' (Ibid., p. 50).

One could transfer Bogost's quip about aliens to this very (alien) knowledge: 'What am I to all this knowledge?' Perhaps the only legitimate answer is: 'Nothing at all.' These numbers stretch back to a point in time when there was no soil, no Earth to ground anything nor provide any 'shelter'; they also point to a future wherein '[t]he sun, our earth and your thought will have been no more than a spasmodic state of energy, an instant of established order, a smile on the surface of matter in a remote corner of the cosmos.'[47] Trying to deal with these drastic differences in scale granted by the natural sciences—trying to keep oneself solely within the Flusserian 'typical epistemology, ethics, and aesthetics' of a particular scale of reality—seems unthinkably difficult.

How do we get comfortable with the double-bind created by the fact that we know so many of these scales of magnitude 'overlap each other and interpenetrate' all while carving out a space of priority for 'the human scale'? What if they do not simply 'overlap and interpenetrate' each other, but create problematic contradictions between these scales? What if it is simply impossible to maintain the privileging of the human scale in all its humanist past within a world where 'we can no longer claim that our existence is special *as existence*,' as Bogost puts it?[48]

There is no doubt a great deal more to be said about Flusser's descriptions of our new reality *post*humanism, which is, in every way, a post-Galilean world. All the scales of magnitude seem to be fully continuous—they 'overlap each other and interpenetrate'—while at the same time being dotted with discontinuities and 'gray zones' where 'abysses gape.' When one looks at computer simulations of the evolution of the Universe, it becomes clear that there is just nothing smooth about it. Our Universe is indeed pockmarked with black holes, huge galaxies composed of incredibly massive systems that warp, contort, and distort the space around them in incredibly violent ways. Full of discontinuities, spaces in the Universe where, to be sure, 'abysses gape' as there are areas devoid of matter.

Žižek is fond of noting something analogous to this cosmological picture within the realm constrained by Darwinian Evolution. Any hint of a smooth, romantic view of the world is something we can no longer entertain: 'There is no Evolution: catastrophes and broken equilibriums are part of natural history; at numerous points in the past, life could have turned in an entirely different direction.'[49] The utter contingency of biological history goes just as well for cosmological history; both regimes, again, are shot through not with *meaning* but with abysses, discontinuities, 'catastrophes and broken equilibriums.' In other words, the aesthetics of the world, where different scales overlap and yet produce abysses, cannot be ordered toward the categories of harmony and balance.

Utilizing Lacanian categories to fundamentally upset these aesthetic ones so prided by Romantic conceptions of the nonhuman world makes psychoanalysis and ecological thinking into rather nice bedfellows. As a well-known anthology of ecological poetry recently noted, one of the key facets of this kind of poetry is how it so often formulates a critique of 'a

form historically taken for granted—that of the singular, coherent self.'[50] The way in which the letter in the Real becomes a kind of 'excrement that has turned against its own progenitor' almost perfectly describes the traumatic impact of the mathematico–scientific apparatus's ability to access the nonhuman. Nobus already noted this trauma in his essay on the later Lacan work, which interprets this rupture as being one of the powers of the literary, that 'challenges the integrity of the Symbolic order.'[51]

This fundamental rupture seems to be another nice lens through which to read Ray Brassier's work (itself not an immediately fertile-looking ground for Lacanians, to be sure); he has been quite vocal in his argument that the very concepts of 'narrative' and 'meaning' have been thoroughly destabilized by the mathematical and theoretical sciences' use of the antisignifer of the letter. Narrative itself, far from providing some kind of great and comprehensive aesthetic whole, always has a hole in it somewhere, as Lacan knew so well.

In an interview with Marcin Rychter of *Kronos*, Brassier highlights the same history we have been discussing through Lacan's work:

> The emergence of modern mathematized natural science around the 16th [c]entury marks the point at which this way of making sense of ourselves and our world begins to unravel. …Over the course of a few centuries, the longstanding assumption that everything exists for a reason, that things are intrinsically purposeful and have been designed in accordance with a divine plan, is slowly but systematically dismantled. …Curved space-time, the periodic table, natural selection: *none of these are comprehensible in narrative terms.* Galaxies, molecules, and organisms are not *for* anything. Try as we might, it becomes increasingly difficult to construct a rationally plausible narrative about the world that satisfies our psychological need for stories that unfold from beginning, through crisis, to ultimate resolution.[52]

Brassier's argument, which again shows great similarity to Lacan's, that there is something strange that has happened with this rise of modern mathematized natural sciences—namely, that there has been a rupture between what he terms 'intelligibility' and 'meaning.' With post-Galilean science, 'conceptual rationality weans itself from the narrative structures that continue to prevail in theology and theologically inflected metaphysics.'

This occurrence, for Brassier—and for numerous others as well—'marks a decisive step forward in the slow process through which human rationality has gradually abandoned mythology, which is basically the interpretation of reality in narrative terms.' As he puts it, again holding nothing back: 'The world has no author and there is no story enciphered in the structure of reality. No narrative is unfolding in nature. …'[53] To argue otherwise is itself to try to thoroughly heal the wounding caused by scientific and mathematical knowledge itself—not to mention the ways in which this knowledge affects one's inability to (within the Lacanian register of the Imaginary) 'construct a rationally plausible narrative about the world that satisfies our psychological need for stories. …'

We are certainly creatures of the Imaginary and the Symbolic; however, at the same time, we are also creatures that are traversed and cut by apparatuses that touch the Real. This, of course, also means that we can come to some awareness of how some of our constructed stories attempt to avoid the traumatic nature of scientific knowledge's inhuman access to the nonhuman Real. Steven Shaviro is no doubt correct that ecological thinking requires us to 'stop telling ourselves the same old anthropocentric stories.'[54] Lacanian psychoanalysis cannot be easily included within such an anthology of nighttime stories. Lacan's thought is a kind of precondition not only for understanding the nightmares that plague everyone in the wake of these bedtime stories, but also a healthy antidote for hopefully grasping our current coordinates within the Anthropocene.

Notes

1. 'The Question Concerning Nature,' in *The Emerging Field of Environmental Hermeneutics*, ed. Forest Clingerman, et al. (New York: Fordham University Press, 2014), p. 224.
2. Ibid.
3. Adrian Johnston, *Prolegomena to Any Future Materialism, Volume 1: The Outcome of Contemporary French Philosophy* (Evanston: Northwestern University Press, 2013), p. 69.
4. Timothy Morton, *The Ecological Thought* (Cambridge: Harvard University Press, 2010), p. 32.

5. See Timothy Clark, *The Cambridge Introduction to Literature and the Environment* (New York: Cambridge University Press, 2011), for more on this splitting.
6. In *Writings*, ed. Andreas Ströhl (Minneapolis: University of Minnesota Press, 2002), p. 160.
7. Flusser (2002, p. 161).
8. Ibid.
9. Ibid., p. 164.
10. Ibid., pp. 163–164.
11. Carl Sagan, *Billions and Billions: Thoughts on Life and Death at the Brink of the Millennium* (New York: Ballantine, 1997), p. 11.
12. Flusser (2002), p. 161.
13. Jacques Lacan, 'Science and Truth,' in *Écrits: The First Complete Edition in English*, trans. Bruce Fink (New York: W.W. Norton, 2006), p. 728.
14. Hannah Arendt, *The Human Condition* (Chicago: University of Chicago Press, 1998), pp. 3, 4.
15. 'In 'Memory of Ernest Jones: On His Theory of Symbolism,' in *Écrits,* p. 596.
16. Jacques Lacan, *The Seminar of Jacques Lacan—Book XX: Encore On Feminine Sexuality, 1972–1973*, ed. J.-A. Miller, trans. Bruce Fink (New York: W. W. Norton, 1998), p. 43.
17. Jean-Claude Milner, 'The Doctrine of Science,' *Umbr(a): A Journal of the Unconscious, Science, and Truth* 1: 33–63, 50, 2000.
18. Tom Eyers, in *Cosmos and History: The Journal of Natural and Social Philosophy* 7(1): 155–166, 2011.
19. Ibid., p. 165.
20. Lacan, in *Ecrits*, trans. Bruce Funk (New York: W. W. Norton, 2006), p. 413.
21. Eyers (2011), p. 163.
22. Ibid., p. 162.
23. Dany Nobus, 'Illiterature,' in *Re-Inventing the Symptom: Essays on the Final Lacan* (New York: Other Press, 2002), pp. 19–43.
24. Ibid., p. 29.
25. Ibid.
26. Lacan, Seminar XIV: The Logic of Phantasy, January 18, 1967, trans. Cormac Gallagher, from unedited and unpublished French manuscripts. See also the session of May 10, 1967: 'There is only a single domain, it seems—and I am not sure about it—which has no relation with the

sexual act in so far as it concerns the truth; it is mathematics, at its point of confluence with logic. But I believe that this is what allowed Russell to say that one never knows whether what one is putting forward is true.'

27. See Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham: Duke University Press, 2007), p. 132: 'Language has been granted too much power.'
28. This is made most clear in Chapter 9 of Horowitz's *Divine Name Verification* (Brooklyn: Punctum Books, 2013), 'Philosophical Excursus: A Critique of "Object-Oriented Ontology,"' p. 98, especially.
29. Noah Horowitz, *Reality in the Name of God, or Divine Insistence: An Essay on Creation, Infinity, and the Ontological Implications of Kabbalah* (Brooklyn: Punctum Books, 2012).
30. Ibid., p. 89.
31. Ibid., p. 90. Weiss's article quoted by Horowitz is 'On the Matter of Language: The Creation of the World from Letters and Lacan's Perception of Letters as Real,' *The Journal of Jewish Thought and Philosophy* 17(1): 101–115, 2009.
32. Ibid.
33. Ibid.
34. Lacan (1998), p. 59. The previously cited session of Wednesday May 10, 1967 in Seminar XIV also supports this connection between mathematics, the (lack of) sexual relation, and the impossible.
35. Cary Wolfe, *What Is Posthumanism?* (Minneapolis: University of Minnesota Press, 2010), p xxvi.
36. Wolfe (2010), p. 6; emphasis mine.
37. See Wolfe's *Prolegomena to Any Future Materialism* for more on this critique.
38. Mackenzie Wark, *Molecular Red: Theory for the Anthropocene* (New York: Verso Books, 2015), p. 208.
39. Wark, 'The Capitolocene,' *Public Seminar*, October 15, 2015. http://www.publicseminar.org/2015/10/the-capitalocene/#.WAfPjKOZPBI. Accessed 14 Jun 2016.
40. Slavoj Žižek, 'Ecology Against Mother Nature. In Žižek on *Molecular Red.* http://www.versobooks.com/blogs/2007-ecology-against-mother-nature-slavoj-zizek-on-molecular-red. Accessed 26 May 2015.
41. Wark (2015a), p. 164.
42. Pierre Kerszberg, 'Natural Science and the Experience of Nature,' *Angelaki* 10(1): 189, 2005.

43. Ibid.
44. Levi Bryant, *The Democracy of Objects* (Ann Arbor: Open Humanities Press, 2011), p. 44.
45. Ian Bogost, *Alien Phenomenology, or What It's Like to Be a Thing* (Minneapolis: University of Minnesota Press, 2012), p. 133.
46. Ray Brassier, *Nihil Unbound: Enlightenment and Extinction* (New York: Palgrave Macmillan, 2007), pp. 49–50.
47. Jean-François Lyotard, *The Inhuman: Reflections on Time*, trans. Geoffrey Bennington and Rachel Bowlby (Stanford: Stanford University Press, 1993), pp. 11–12.
48. Bogost (2012), p. 8.
49. Slavoj Žižek, 'Nature and its Discontents,' *SubStance* 37(3): 56, 2008.
50. Ann Fisher-Wirth and Laura-Gray Street, *The Ecopoetry Anthology* (San Antonio: Trinity University Press, 2013), p. xxix.
51. Nobus (2002), p. 30.
52. Ray Brassier, 'I Am a Nihilist Because I Still Believe in Truth,' March 4, 2011. http://www.kronos.org.pl/index.php?23151,896. Accessed 14 Jul 2016; emphasis mine.
53. Ibid.
54. Quoted in Barad (2007), p. 132.

Bibliography

Arendt, Hannah. 1998. *The Human Condition*. Chicago: University of Chicago Press.

Barad, Karen. 2007. *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Durham: Duke University Press.

Bogost, Ian. 2012. *Alien Phenomenology, or What It's Like to Be a Thing*. Minneapolis: University of Minnesota Press.

Brassier, Ray. 2007. *Nihil Unbound: Enlightenment and Extinction*. New York: Palgrave Macmillan.

———. 2011. I Am a Nihilist Because I Still Believe in Truth, March 4. http://www.kronos.org.pl/index.php?23151,896. Accessed 14 Jul 2016.

Bryant, Levi. 2011. *The Democracy of Objects*. Ann Arbor: Open Humanities Press.

Clark, Timothy. 2011. *The Cambridge Introduction to Literature and the Environment*. New York: Cambridge University Press.

Eyers, Tom. 2011. Lacanian Materialism and the Question of the Real. *Cosmos and History* 7 (1): 155–166.

Fisher-Wirth, Ann, and Laura-Gray Street. 2013. *The Ecopoetry Anthology*. San Antonio: Trinity University Press.

Flusser, Vilém. 2002. Orders of Magnitude and Humanism. In *Writings*, ed. Andreas Ströhl, 160–164. Minneapolis: University of Minnesota Press.

Horowitz, Noah. 2012. *Reality in the Name of God, or Divine Insistence: An Essay on Creation, Infinity, and the Ontological Implications of Kabbalah*. Brooklyn: Punctum Books.

———. 2013. *Divine Name Verification*. Brooklyn: Punctum Books.

Johnston, Adrian. 2013. *Prolegomena to Any Future Materialism, Volume 1: The Outcome of Contemporary French Philosophy*. Evanston: Northwestern University Press.

Kerszberg, Pierre. 2005. Natural Science and the Experience of Nature. *Angelaki* 10 (1): 187–199.

Lacan, Jacques. 1967. Seminar XIV: The Logic of Phantasy. Trans. Cormac Gallagher. From unedited and unpublished French manuscript.

———. 1998. *The Seminar of Jacques Lacan, Book XX: Encore On Feminine Sexuality, 1972–1973*. ed. J.-A. Miller and trans. Bruce Fink. New York: W. W. Norton.

———. 2006. *Écrits: The First Complete Edition in English*. Trans. Bruce Fink. New York: W. W. Norton.

Lyotard, Jean-Francois. 1993. *The Inhuman: Reflections on Time*. Trans. G. Bennington and R. Bowlby. Stanford: Stanford University Press.

McGrath, Sean. 2014. The Question Concerning Nature. In *The Emerging Field of Environmental Hermeneutics*, ed. Forest Clingerman et al. New York: Fordham University Press.

Milner, Jean-Claude. 2000. The Doctrine of Science. *Umbr(a): Science and Truth*, No. 1 (2000): 33–63.

Morton, Timothy. 2010. *The Ecological Thought*. Cambridge: Harvard University Press.

Nobus, Dany. 2002. Illiterature. In *Re-inventing the Symptom: Essays on the Final Lacan*, 19–43. New York: Other Press.

Sagan, Carl. 1997. *Billions and Billions: Thoughts on Life and Death at the Brink of the Millennium*. New York: Ballantine.

Wark, Mackenzie. 2015a. *Molecular Red: Theory for the Anthropocene*. New York: Verso Books.

———. 2015b. The Capitolocene. *Public Seminar.* http://www.publicseminar.org/2015/10/the-capitalocene/#.WAfPjKOZPBI. Accessed XX Mon 20XX.

Weiss, Tzahi. 2009. On the Matter of Language: The Creation of the World from Letters and Lacan's Perception of Letters as Real. *The Journal of Jewish Thought and Philosophy* 17 (1): 101–115.

Wolfe, Cary. 2010. *What Is Posthumanism?* Minneapolis: University of Minnesota Press.

Žižek, Slavoj. 2008. Nature and Its Discontents. *SubStance* 37 (3): 37–72.

———. 2015. Ecology Against Mother Nature. In Slavoj Žižek *Molecular Red.* New York: Verso Books. http://www.versobooks.com/blogs/2007-ecology-against-mother-nature-slavoj-zizek-on-molecular-red. Accessed XX Mon 20XX.