

Graham Harman: You begin your book *New Ecological Realisms* by discussing a widely observed turn in recent continental theory, from the preoccupations with language found in structuralism and poststructuralism to a renewed interest in the non-human world. Why do you think this turn happened, and what is it that triggered your own conversion, if there was one.

Monika Kaup: As any cultural or historical phenomenon, the revival of interest in the real in general and in the other-than-human world in particular cannot be attributed to a single cause. It is rather the result of multiple interacting factors. That said, there is no doubt that one principal force is the growing popular awareness of climate change. As the harmful effects of climate change are becoming ever more apparent, the postmodern sensibility of debunking social and linguistic constructions has come to seem out of touch. As has been cleverly noted, “it’s not language that has a hole in its ozone layer.” But postmodern constructivism has not just lost its sense of urgency. Outright alarm has resulted from the weaponization of postmodernism by the political extreme right (“climate change is a hoax invented by China”). The rise of post-fact and Alt-Truth regimes have demonstrated that critiquing normative concepts of facts, objectivity, and reality as manifestations of power/knowledge is not the province of left-liberal iconoclasts; it has become a dangerous tool of disinformation. (Most recent developments of Alt-Truth are threatening the very basis of democracy in the U.S. Habermas’s concerns about postmodernism as disguised neo-conservatism were thus proven right.) This point was also made by Bruno Latour in his influential 2004 essay, “Why Has Critique Run Out of Steam?,” which diagnosed the exhaustion of the Foucauldian politicized variety of constructivism.

As I see it, the other major force prompting the revival of interest in reality beyond language and thought have been dramatic advances in the neurosciences since the 1990s. New brain imaging techniques have yielded unprecedented insights into neuronal activity correlated with specific states of mind. Although the goal of “naturalizing consciousness” remains out of reach—it remains unknown how and why neuronal events in the brain transform into non-material conscious experience—advances in the study of the neurobiology of the brain, similar to climate change, have contributed to the revival of realism and materialism. It is no accident that several intellectuals associated with speculative realism and new materialisms are also drawing on neuroscience (for example, Catherine Malabou and William Connolly). My book engages with two Chilean neurophenomenologists, Humberto Maturana and Francisco Varela, whose work straddles the mind/brain dichotomy. Neuroscientists as well as phenomenologists, Maturana and Varela have developed a new ontology of knowledge that draws on both brain physiology as well as phenomenology, the branch of modern continental philosophy dedicated to the study of consciousness. Maturana and Varela propose a revolutionary ontological theory of mind: knowledge is embodied action. Every act of knowing brings forth—or enacts—a world.

Finally, my own arrival in the new realist fold is related to my position as literary scholar working in an English department. As is well-known, English departments (as well as Comparative Literature departments) have been a home for the study of continental philosophy since the 1960s, when the arrival of “theory” opened up methods of literary criticism to structuralism and post-structuralism, various kinds of Marxisms and psychoanalysis, feminist, postcolonial and queer theory, to name just a few of the most influential movements. For several decades, the goals of literary criticism and critical theory meshed very well, and successive waves of theoretical innovation led to deeper and richer understandings of canonical literary

works, as well as to the creation of alternative literary canons. Yet this symbiosis has recently broken down due to the hardening of dogmatic varieties of the “hermeneutics of suspicion.” As has been stated by scholars like Rita Felski, the postmodern excesses of self-reflexivity have turned critique into ritualized invocations of the depredations of power/knowledge that substitute for fresh insight. From the purview of literary studies, then, the turn to ontological questions breaks the monopoly the hermeneutics of suspicion has achieved in literary and cultural studies, especially in English departments, and especially the U.S., it stands to reinvigorate the stimulating diversity of critical inquiry that drew so many literary scholars to the study of theory decades ago.

Graham Harman: Your book itself centers on points of intersection between four pairings of philosophers and literary figures. In the Introduction, pages 4-5, you note that your focus is on “a new realism of complex and embedded wholes, actor-networks and ecologies, rather than a realism of isolated parts and things.” In your eyes, what is the virtue of steering away from individual things and towards wholes or assemblies of things?

Monika Kaup: My premise is the fundamental heterogeneity of reality, which is due to vast scalar differences between the very small (such as the microcosm or, further down the scale of existence, the atomic and subatomic levels) and the very large (for example, our solar system and the universe beyond). The reality that humans inhabit is located somewhere mid-way between these two extremes, in the macrocosm of discernable things and organisms. Reality at different scales is radically different. Humans are natives of the macrocosm, where reality is organized around distinct individual things: chairs, dining tables, bodies, seeds, cars and rocks, or, to choose non-material examples, poems, mathematical numbers, or dreams. Things define the furniture of the universe that humans inhabit—indeed, the very term inscribes the object-centered outlook on reality. Humans are thus predisposed to conceptualizing reality as thing-oriented. But scientific developments in the 20th century showed that the mechanistic view of reality, which posits discrete things as ontological base units, fails to explain reality at other scales of complexity, such as in subatomic world, as well as in ecosystems at any scale, large and small. Quantum physics demolished the notion of solid individual objects, which do not exist at the subatomic scale, while the new science of ecology established that individual organisms and species cannot be understood in isolation, but must be grasped through their interaction with others in larger multi-species systems in which they are embedded. The ecological view of reality that inspires my study is thus inherently contextual and holistic.

Ecocritics like to point out that climate change poses the challenge of the “unthinkable”: humans have changed reality at scales of existence that lie outside the limited world of individual things that are phenomenologically accessible to humans through their senses. The problem is that the discrete things that seem self-evidently given to our understanding appear as such only because they are embedded in an unstated larger context—the macrocosmic world that is our native habitat. In Heidegger’s view, world is what is easily overlooked because it is too familiar. The defining feature of scalar differences in reality is emergence, a term that refers to the appearance of novel properties at higher levels of complexity. For example, the human body, just like a car or a block of wood, is composed of atoms and subatomic particles. But these macrocosmic unities are more than the sum of their atomic and subatomic constituent parts; they possess

properties that do not exist at the lower levels, and that only emerge at higher scales (consciousness, for one). Other familiar examples of emergence are temperature and taste (which do not exist at the levels of individual component atoms), as well as, of course, life itself (the atoms an organism is composed of aren't alive, but the organism is). Of course, sometimes it turns out that realities at different scales can be synthesized, as when Newton established that the laws of falling bodies in the human world (studied by Galileo) and the laws of planetary motion (studied by Kepler) are actually two different manifestations of the same underlying force (gravity). But the 20th-century scientific developments just mentioned have uncovered realities so alien to the macrocosmic thing-centered world available to humans that a different approach to the real is needed.

My argument for a new realism of complex and embedded wholes rather than of isolated things, then, responds to the scientific discovery of emergence and scalar embeddedness, the recognition that the world is not a collection of objects, but that it is organized through systems nesting within other systems at various scales. The contextual view of reality I defend posits that context is primary because what counts as real is field-dependent (in terms of Markus Gabriel's fields of sense ontology). Are we speaking as subatomic physicists? As weekenders relaxing in our living rooms? Or as ecologists studying the food webs of endangered species? Once the domain or scale of existence has been established, there is a clear answer as to what counts as "real." And because this answer varies (at our human scale things are primary, at other scales things dissolve into webs of relationships) context is the common denominator, even as the nature of that context varies. (In Gabriel's argument, "the" world as a unified totality does not exist.)

Speculative realism seems to be drawn to objects in order to escape correlationism, which Meillassoux defines as the doctrine according to which "we never grasp an object 'in itself,' in isolation from its relation to the subject." My own interest in new realism is less motivated by the specter of correlationism than by another specter, materialist reductivism. In more positive terms, I endorse the Latourian principle of irreduction that would establish the singularity of reality at all scales of existence, especially aesthetic artifacts such as literature.

Graham Harman: Much of the contemporary discussion of the material turn focuses on a group sometimes called the New Materialist Feminists, some of whose appeal is no doubt linked to the fact that it is an innovative philosophical school led by female thinkers. You seem quite familiar with the work of at least two of them, Karen Barad and Jane Bennett. Yet they are not among the six philosophers featured in your book, all of which are men (though you do give ample space to Margaret Atwood and Octavia Butler on the fiction side). Are you less interested in the theories of Barad and Bennett than the others, or was it simply harder to pair them up with specific fiction writers in your schema?

Monika Kaup: I am writing as a humanist of a particular type, a scholar of literature whose interest in philosophy in general and in the revival of realism after postmodernism is motivated by the larger concern of defending the unique kind of knowledge produced by the humanities in general and literary studies in particular. What defines the singularity of humanistic objects of study? What makes humanistic objects irreducible to other types of objects, such as scientific objects? My investment in philosophical realism derives from this larger interest. In the revival

of realism after postmodernism, it is vital to establish that not everything that exists is in nature, as Markus Gabriel puts it. One need not be a materialist to be a realist. On this point, my position is in agreement with OOO, which similarly posits the reality of non-material objects such as art (as you show in your chapter on aesthetics in *Object-Oriented Ontology: A New Theory of Everything*). Humanistic objects of study are not—or at least not primarily—material objects, like the objects of science, but a peculiar hybrid type of object that could be described as objectified subjectivity.

Although I have learned much from new materialisms (an important subgroup within the larger new ontological movement to which both Jane Bennett and Karen Barad belong) I endorse new realism rather than new materialisms. Unlike materialism, realism is not committed to the exclusion of mind-dependent objects, such as the imaginary characters and worlds of post-apocalyptic fiction. In response to your questions about gender, I would counter with another question: in addition to feminist materialisms, why are there no feminist realisms? These are the kind of female realist thinkers I would certainly have counted among the central philosophers featured in my book.

As I argue, post-apocalyptic fiction shows that something can be imaginary and still lay claim to a higher kind of realism. Thus, the imaginary scenarios of near-future post-apocalyptic fiction extrapolate the disastrous consequences seeded by present developments. Because the probable consequences (for example, rising sea levels) of present causes (such as CO₂ and methane levels in the atmosphere) won't actualize for decades to come, a narrowly defined materialist realism will miss the mark. Situations like climate change, whose full reality is as-yet-unknown and slow to manifest, call for alternative varieties of realism that include imagination, in the form of risk-based speculation, as an essential element. Post-apocalyptic fiction thus resorts to speculative realism for similar reasons as does its philosophical sibling SR (with which it should not be confused, however): tackling a problem inaccessible with the methods of conventional realism.

Graham Harman: Let's move now through the philosophers covered in your book, though of course you are free to bring up their fiction-writing partners in your responses as well. (Since the Speculative Realism series is a philosophy series, my questions are simply emphasizing the philosophy side of your work.) The first is Bruno Latour, who obviously has a wide following in multiple fields, though his influence in philosophy itself is still relatively minimal. What is most important to you about Latour's work?

Monika Kaup: Latour's philosophy is, as you yourself have observed, a realism of relations. For Latour, what makes things real is not their autonomy or their pre-given existence, but their embedding as actants in larger organized wholes, webs of interaction that he calls actor-networks. Latour comes first in my book for several reasons. For one, his actor-network theory enacts the paradigmatic shift that Fritjof Capra, in his account of the rise of systems thinking—a term that designates one variety of contextual realism represented by Maturana and Varela, but which I also use as to characterize the overall paradigm—has succinctly described as a figure/ground shift from objects to relationships. In the mechanistic view, isolated objects are primary and the relationships in which they are embedded, secondary. In the systems view, organized wholes are primary, and the objects they embed, secondary. These two views are

complementary rather than mutually exclusive; their value is relative to specific situations (fields in Gabriel's parlance) and kinds of existents.

Further, as the name of Latour's variety of organized wholes—actor-networks—suggests, relationships are no less real than the objects they connect. In Latour's model, it is the interactions between individual objects (actants) that generate the whole (the network). Latour's model of contextual realism is thus premised on immanence and emergence. The actor-network is created by its multiple participants rather than preexisting them, or if it does, it is continuously transformed by their activity. For example, if you introduce an alien species into an ecosystem that is not its native habitat, this species will change the overall dynamics of its food web. If, as was the case with Asian carp introduced into the Mississippi River decades ago, the new species encounters few or no natural predators, it will become an invasive species that will radically transform or even destroy the ecosystem. Asian carp are such powerful actants that governments of states bordering the Great Lakes are paying billions of dollars to keep them out of the Great Lakes marine ecosystem. The same transformations have occurred naturally over billions of years in the evolution of life. It might be argued that the case is different in the human social realm. Organisms are alive, but social and mental objects are not. And isn't it absurd to deny that the genre of the novel preexists the publication of specific works in multiple ways—as a canon of masterpieces, for example, or at least as an expectation in the minds of readers? Of course it is. Yet far from being static, this literary system undergoes constant transformation resulting from new publications (the novel genre was not the same after the 1922 publication of *Ulysses* or, later, Gabriel García Márquez's *One Hundred Years of Solitude*).

This in turn illuminates another key premise of Latour's theory—the principle of irreduction. Irreduction establishes that in any complex whole, especially social ensembles, there are no privileged forces (such as genes or capitalism, and so on) that function as hidden causes generating a multitude of manifest effects (such as organisms, art or religion). Actor-networks have flat ontologies. Nothing is reducible to anything else. As the term actant suggests, agency is distributed rather than following linear cause-effect pathways; it flows in all directions. Actants are neither subjects nor objects, neither active nor passive, but both—acted upon and effecting something else in their turn. The principle of irreduction is another reason Latour comes first in my book, for it breaks the hierarchy of objects (some taken to be “real,” others “constructed” by objects accepted as real) underpinning the modern tradition of critique, to which the linguistic turn and postmodern constructivism belong. Like Gabriel (adapting Schelling's example), Latour can be thought of as formulating both a negative and a positive ontology. Latour's negative ontology is the irreductionist critique of modernity in general, and of the modern epistemology of critique in particular. One specific instance I have found particularly helpful is the concept of the “factish,” a neologism Latour coins to dismantle the hierarchy of facts (things assumed to be real) and fabrications (things assumed to be constructed and debunked as fictitious). The term factish designates the same principle as does the concept of actants, the idea that things can both be human artifacts as well as having transformative effects on other things. In her *MaddAddam* trilogy, Atwood shows that this is the case for artificial species bioengineered by humans. Having escaped their cages and gone feral in the post-apocalyptic world after the annihilation of most humans, the artifacts of human bioengineering develop autonomous agency that wasn't intended by their geneticist creators. Organisms are not determined by their genes. Genes are not the overmastering reality of life that the developing organism reproduces passively.

To move on to Latour's positive ontology: the positive counterpart of irreduction is the imperative Latour calls composition. Composition is about making rather than unmaking, going beyond the critique of critique to recompose the world in according to nonmodern organizational principles. The third volume of the *MaddAddam* trilogy offers a particularly good illustration of what this means. *MaddAddam* moves beyond the retrospective account of the events leading up to the apocalypse central to the first two volumes, *Oryx and Crake* and *The Year of the Flood*, and turns towards the future, tracing the beginnings of a genuinely post-apocalyptic history. In *Maddaddam*, the handful of surviving humans join forces with two artificial species, the humanoid Crakers and the transgenic pigeons, to form a multi-species ecological collective. Unlike societies, which are collectives of a single species, ecologies are collectives of multiple species. The events of *MaddAddam* evoke Latour's well-known call of arms, "after nature, it is society that has to go." In Atwood's trilogy, nature as such is dead because nature has been fundamentally altered by humans, and so is human "society" (too few humans survive the bioterrorist annihilation of humans immediately preceding the narrated events). In Latour's parlance, humans, Crakers and pigeons become actants in a new post-apocalyptic actor-network that is formed on the ruins of the defunct modern civilization. *Maddaddam* traces the beginnings of a spontaneous multi-species evolution of humans and non-humans.

Apocalyptic narrative comes in two varieties, apocalyptic narrative proper and post-apocalyptic narrative. While apocalyptic narratives are fictions of world-destruction, post-apocalyptic narratives are fictions of world-remaking after the end. Narratives of survival, post-apocalyptic fiction is about crawling out of the ruins and reassembling the world on the post-collapse wasteland on which they have been shipwrecked. Latour's compositionism captures the oddly hopeful tone of post-apocalyptic fiction, which contrasts with the doom characteristic of apocalyptic narrative proper. Like post-apocalypse, compositionism is about starting from scratch, and like Latour, Atwood follows the actants and traces the network—an ecological collection of humans and trans-genic non-humans.

Graham Harman: In Chapter Two your focus shifts toward the Chilean immunologists and autopoiesis theorists Humberto Maturana and Francisco Varela. I found myself wondering if you also had Niklas Luhmann on your mind a bit, given his substantial shared interest with the two Chileans. But of even greater interest to me was that Maturana and Varela appear in your book directly after your chapter on Latour, and it seems to me that in an important respect they are polar opposites. Latour is all about everything linking together almost promiscuously in networks, while autopoiesis theory is all about closure and the difficulty of a cell or a society being changed by what surrounds it. Indeed, I've never heard Latour say a kind word about Luhmann, and there's an old anecdote in circulation about Luhmann scolding the young Latour in public. Anyway, what is the nature of your interest in Maturana and Varela, and do you think they are as different from Latour as I have suggested, or do you see more compatibility?

Monika Kaup: Maturana and Varela don't claim that autopoietic systems are closed; they claim that they are *organizationally* closed, a vital qualification that also induces them to add, in every instance they discuss organizational closure, a second claim: autopoietic systems are systems that are both closed (organizationally) and open (structurally). In other words, autopoietic systems are

not monads hermetically sealed from the environment. The boundary that surrounds them and that defines them as autonomous units—a boundary of their own making, such as a cell making its own membrane—is porous. Cells—like all autopoietic systems among which they rank as the simplest—absorb nutrients and energy from the outside and expel waste. Cut off these ongoing interactions with the environment, afforded by what Maturana and Varela refer to as the autopoietic unit’s structural *openness*, and the organism dies. Another way of making the same point is in the language of thermodynamics. Autopoietic systems belong to the larger family of open or dissipative structures operating far from equilibrium. In classical thermodynamics (closed systems) dissipation is associated with waste: entropy. The discoverer of self-organization, the physicist Ilya Prigogine, showed that paradoxically, in open systems, which receive their energy from the outside, dissipation becomes the source of order spontaneously emerging out of disorder. At critical points of instability, due to positive feedback loops, the system jumps to a new form of organization. This is the process of self (“auto”)-making (“poiesis”) that forms the basic element of Maturana and Varela’s theory. The same process also brought about the transition from nonliving to living matter at the dawn of evolution.

Maturana and Varela’s use of the term closure has thus given rise to much misunderstanding along the lines of your objection. Rather than closure, their meaning is better captured by the term “organizational stability.” For Maturana and Varela, autopoiesis is the characteristic of life. All living organisms (non-humans and humans, from bacteria to the visible life forms of the macrocosmos) are defined as self-organizing in the sense that they are systems that come into being spontaneously, as a result of dynamic interactions of constituent parts that self-assemble into a higher and more complex unit, defining its own organization and making its own boundary. Put another way, autopoietic systems are emergent phenomena. Further, in addition to being self-organizing (like hurricanes or vortices in a draining sink, which are not alive), autopoietic systems are also self-*maintaining*, which means that they can achieve homeostasis and maintain stability in the face of (a certain bandwidth of) external disturbances (temperature variations, etc.).

Autopoietic systems are thus paradoxical, at once autonomous and dependent, at once determined and free. They are organizationally non-determined (because their operation is governed by internal rules and cannot be directed by outside forces) and at the same time existentially dependent on reciprocal interactions with the environment that Maturana and Varela call structural coupling. There is no organism without the environment. In the language of OOO, autopoietic units do not qualify as autonomous objects because they physically do not exist outside of their relations (“structural couplings” in Maturana and Varela’s parlance). As Varela puts it in the afterword to *The Tree of Knowledge*, organism and environment are “two sides of the same coin.” Maturana and Varela’s emphasis on “circularity,” what they describe as the reciprocal co-constitution of organism and environment, mind and world, in the act of knowing (“mind and world arise together in enaction”) also shows affinities with Latour’s actor-network theory. In addition to nonlinearity (Latour’s actants, like Maturana and Varela’s autopoietic systems, are both subjects and objects), parallels extend to a shared emphasis on “doing,” in particular on world-making (poiesis for Maturana and Varela, compositionism for Latour).

Autopoietic theory and its successor, enactivism, straddle the realms of biology, neuroscience, and the humanities, thus offering important support for contextual realisms from the science side

of the two cultures, often assumed to be the domain of reductive materialism. For its part, enactivism, developed by Varela, Evan Thompson and Eleanor Rosch, concentrates on cognition (knowledge), the third party in the triumvirate of living beings encompassing the autopoietic system, the environment, and cognition. For Maturana and Varela, cognition refers to the cognitive sensorium through which the living system interacts with the environment, and it is the centerpiece of their revolutionary theory of mind: cognition is embodied action. The core insight of the so-called Santiago theory, as Maturana and Varela's work is sometimes referred to, is that "all knowing is doing." Knowledge neither mirrors a pre-existing external reality nor does it construct reality through alien filters. Instead, cognition is a mode through which organisms bring forth—or enact—a world. This process takes place through the history of structural coupling with the environment and with other organisms in the course of which these also bring forth themselves. This point is best made by quoting a key passage from Varela et al.'s *The Embodied Mind*:

We propose as a name the term *enactive* to emphasize the growing conviction that cognition is not the representation of a pre-given world by a pre-given mind but is rather the enactment of a world and a mind on the basis of a history of the variety of actions that a being in the world performs. The enactive approach takes seriously, then, the philosophical critique of the idea that the mind is a mirror of nature but goes further by addressing this issue from within the heartland of science.

In other words, by suggesting that knowledge is primarily about worlds, and world-making, enactivism (and by extension, autopoiesis) pry knowledge loose from the vise of epistemology. Knowledge, Maturana and Varela contend, must be appreciated through the lens of ontology. Like Markus Gabriel's ontology of fields of sense, autopoiesis and enactivism offers an ontology of knowledge. The difference is that their theory describes a historical process related to the development of living systems, as just described, whereas Gabriel does not.

I pair Maturana and Varela with José Saramago's post-apocalyptic novel *Blindness* because of a congruence in their respective approach to knowledge as embodied action that is uncanny. In *Blindness*, a pandemic of a strange white blindness brings about the apocalyptic collapse of modern civilization. Deprived of vision, and reduced to four of the cardinal five senses, the newly white-blind have to remake their entire lifeworld from scratch. Saramago's novel shows that blind perception is immersed in its embodiment. As the newly white-blind tap-tap their way around in space, disoriented about the proximity of things that hearing and smell cannot locate precisely, they are thrown back on the sensorimotor apparatus of their bodies. Vision is the royal road to Cartesian disembodied perception; in its absence, the dualistic representationalist paradigm of pre-existing observers "parachuted into" a pre-existing external world collapses. In depicting the struggle of the white-blind to regain their humanity, *Blindness* highlights the intrinsic creativity of world-making. Cut off from their familiar sighted lifeworld, the newly white-blind are reborn as new cognitive agents who must embark on an entirely new process of ontogeny, connecting with an unfamiliar environment and interacting with other humans in new ways. Saramago's post-apocalyptic novel also illustrates the possibilities and limits of social autopoiesis: on this subject, Saramago implicitly concurs with Maturana, who strongly rejected Luhmann's claims that autopoiesis can be extended beyond biology to large social systems such as law, economy, art, etc. (Varela's position was more ambivalent). Saramago's white-blind

protagonists show that post-apocalyptic survival is dependent on what Maturana and Varela call social coupling between individuals. But this social coupling is strictly limited to small, face-to-face self-organizing collectives, ruling out autonomous social systems (all large modern social systems, including the state and capitalism, are defunct as a result of the plague). It is as a symbiotic collective of a handful of people that the white-blind protagonists of *Blindness* regain their humanity.

Graham Harman: Next on your list is a philosopher we both know personally, Markus Gabriel. He's one of those people who knows both the continental and analytic traditions in philosophy very well, as is easy to see from the breadth of references in his books. But given your interest in what you call "complex and embedded wholes," and Gabriel's famous rejection of that whole of wholes that we call "the world," where do you find your point of agreement with him? Is it in his notion of "fields," or something else?

Monika Kaup: In the genesis of this book project, Markus Gabriel's fields of sense ontology plays a special role as a catalyst of sorts. It was my encounter with it that helped all the pieces of the project come together and form a coherent whole. The common denominator shared by all new realisms featured in my book was to be an endorsement of organized wholes, rather than isolated objects, as the defining characteristic of the real. In my view, Gabriel does more than model a particular variety of contextual realism (centered on what he calls fields); he also describes a larger paradigm that can be recognized in different manifestations. As my book argues, these extend beyond philosophy, coming from a large variety of academic disciplines, including systems thinking in the sciences, the disciplinary home of neurophenomenologists Maturana and Varela.

The principles of fields of sense ontology are clear and can be deduced from a simple thought experiment that Gabriel likes to rehearse in various forms. Assume that you are looking a table covered with various objects, and ask yourself: How many objects are on the table? The answer seems obvious: the finite number of pens, books, plates, cups or whatever else is found there. Yet this same setting can also be examined by a nuclear physicist. In the place of a finite number of macrocosmic objects, she would perceive an infinite number of subatomic particles. Change contexts again, assuming the table is located in an art museum. The answer here might be that there is only one object, because the table and its contents are part of the same installation by Joseph Beuys. As this rendering Gabriel's thought experiment shows, what counts as an object depends on the field in which it appears—the everyday lifeworld, the atomic world at the smallest scale of existence, or the field of art. There are no pre-given objects outside of contexts. However, as noted earlier, once the nature of the field has been established, it is clear what counts as real. Thus, according to Gabriel, fields are real, not objects. Objects don't ground fields, fields ground objects. Gabriel defends a radical ontological pluralism: there is an infinite number of fields, and none is more fundamental than another in the sense that it is reducible to it. Gabriel's irreductionism (to use the Latourian phrase) in part derives from the phenomenon of emergence discussed earlier. Subatomic articles are not the "deeper reality" behind tables; although tables are composed of them, they are not reducible to them (because the emergent properties of tables cannot be deduced from the properties of their subatomic parts). Similarly, for Gabriel, reality is not limited to physical and spatiotemporal objects (tables, particles, etc.). In

the present example, what counts as art is a human construct, yet the table in the art museum is “really” a different table than the one in the dining room—even though Beuys may have used his own dining table to create the artwork. That is because Beuys’s artworks can fetch tens—even hundreds—of thousands of euros at an auction.

While Gabriel’s use of the concept of appearance derives from a phenomenological genealogy (Heidegger and Husserl), Gabriel’s rejection of totality anchored in the concept of world (“*the* world as a unified totality does not exist”) seems to have a multiple ancestry, which combines Heidegger, Wittgenstein, and set theory (at the very least). The world is the totality of immaterial facts as well as of spatiotemporal things (Wittgenstein). The world is the domain of domains (Heidegger) in which all fields of sense appear. But this overarching totality or field of all fields of sense does not exist (set theory’s infinite regress: there is no all-encompassing set of all sets because the set of all possible subsets is larger than the original set).

Fields of sense ontology modeled the larger paradigm of contextual realism for me, for more than one reason. For one, it accounts for a plurality of fields, both material (physical things) and immaterial (facts, or linguistic and social artifacts). It thus offers a strong defense of the reality of mental and social artifacts (such as literature) without denying their human fabrication. Put another way, it presents a strong realist theory that is not confined to materialism or naturalism. Scientific reductionism, on Gabriel’s argument, is wrong because the scientific universe in which scientific objects such as genes or atoms appear is merely an “ontological province” of the world. A close contender as a paradigm-setting theory of contextual realism—for my purposes—is systems theory. This is thanks to its formulation of the defining shift from objects to the interrelationships in which objects are embedded, as well as to the systems theoretical concept of emergence that accounts for reality at multiple scales of existence. As for its drawbacks, most of its examples are taken from science. Conversely, the concept of fields makes a strong statement of ontological pluralism, leveling the ontological playing field and making space to assert the singular ontology of humanistic objects, including literature.

Graham Harman: Finally we come to the somewhat unorthodox pairing of your fifth chapter: Jean-Luc Marion and Alphonso Lingis. Granted, both authors are deeply indebted to phenomenology. But in Marion we have a deeply religious figure who is interested in the uppermost level of phenomenology: the very givenness of a world, which immediately raises the question of something elsewhere and divine. The phenomenology of Lingis is focused in almost the opposite direction: what Levinas called “the hither side” of being, which Lingis takes in the direction of carnal exoticism, foreign customs, the shadings of light in the forest or on the glistening bodies of samba dancers in Brazil. It is almost like the difference of Christian versus pagan phenomenology. What made you bring those two together?

Monika Kaup: What a great question! If the goal of phenomenology is to distill the invariant structures of first-person experience, Marion and Lingis both chart new paths in the recovery of the “first-person singular” (Lingis) after poststructuralism. I agree that their paths are distinct (albeit compatible, even complementary, in my view), so I will discuss them separately.

Reconstituting self after the “death of the subject” proclaimed by linguistic determinism, Marion’s phenomenology of givenness models a post-individual and de-centered self that arises in response to an overpowering event (“givenness”). Marion contends that the successor to the Cartesian autonomous subject is a reduced self he names “the gifted,” a term that identifies the figure that arises from its response to the world to which it is given over (givenness). The new self that emerges as a result of this experience is a non-autonomous self, a recipient first—“a me *to whom*” the given is gifted—and an agent second. Depending on the response by the recipient, phenomena will arise, eventually resulting in the rise of a new self whose nature is defined by this dynamic (the gifted). Marion pictures a call and response structure whose circular organization expresses the holistic outlook of Marion’s phenomenology. Givenness has primacy, but it is manifest only in the response it is met with. On the other hand, the response that phenomenalizes the call is secondary. In other words, the organized ensemble of givenness is the ontological base unit of call and response, not the individual self. Unlike Althusser, who contends that the realm of first-personal experience is the domain of ideology, for Marion, the gifted’s response is intrinsically free, in that it cannot be determined by outside forces but is governed by rules internal to the receiver. S/he may even opt to reject the call, as does the boy’s mother in Cormac McCarthy’s *The Road*, who commits suicide rather than accept the horrific burden of post-apocalyptic parenting.

It is helpful to think Marion’s phenomenology together with Gabriel’s fields of sense ontology to highlight its context-orientation. For Gabriel, larger fields ground individual objects that appear in them. In parallel ways, for Marion, the larger field of givenness, and its reciprocal structure of call and response, ground the self that emerges from this dynamic. To put it another way, by using the language of autopoiesis and enactivism, Marion’s self remains marked by the “structural coupling” to a constitutive Otherness whose encounter makes its emergence possible. As for your point about Marion as a religious figure, in his work, the divine is only one among several possible manifestations of givenness, an entity that is defined in universal terms, as a “saturated” phenomenon that stands out due to its shocking excess, such as being unforeseeable, unbearable, and beyond compare. In addition to encounters with the divine, Marion’s other instances of givenness are catastrophic events (such as revolutions or wars), or powerful works of art. Marion’s notion of “being gifted” also has a deeper and darker dimension of “what befalls me,” which is why post-apocalyptic fiction is an excellent match for Marion’s phenomenology. The post-apocalyptic script of surviving after the world-end calls for new models of selfhood that can account for radical breaks and transformations. The unnamed protagonist of *The Road* has been given a terrible responsibility, to raise his son, born shortly after an unspecified cataclysm that has destroyed almost all life on earth, with the exception of some scattered humans. A similar burden falls on the protagonist of Atwood’s *Oryx and Crake*, Jimmy, who has been spared death to mentor the Crakers as they settle in the post-apocalyptic world. Jimmy renames himself “Snowman” to mark the irreversible discontinuity between his lost former life and his existence as the last human alive. The drama of both novels revolves around the demoted, non-autonomous post-apocalyptic selves both Jimmy and the father develop as a creative response to catastrophe.

To turn to Lingis: like Marion, Lingis charts a first-personal experience that emphasizes ethical commitment, but unlike Marion, he emphasizes affect. According to Lingis, the sense of self arises from, and peaks in, impassioned states. Emotions, marginalized in rationalist modern

philosophy founded on the *cogito*, need to be acknowledged as the source of self. As Lingis states, “The I is an *I enjoy, I endure, I suffer.*” Passionate identification gives special force to the word “I,” the first person singular. At the same time, however, such emotional identification is also a form of ethical commitment. On Lingis’s account, “To say ‘I am a mother’ is to commit my body to set free the child, and the adolescent and adult it bore, or to care for the genetically defective child it gave birth to until its death.” For Lingis, the “I am” of passionate identification and commitment are “oracular words” that open up an imaginary counter-reality to the status quo, which is precisely the function of instances of such language in *The Road*. In McCarthy’s novel, the man and the boy intone mantras such as “We are the good guys” and “We are carrying the fire.” Such watchphrases affirm the principles of life and humanity against the entropic wasteland of the post-apocalypse.

You have elsewhere described Lingis as a “carnal phenomenologist,” which I think is a very accurate characterization of his work. But the meeting between Marion and Lingis—at least the one staged in the chapter in which they both appear—is not so much an encounter of heaven and hell, but of different dimensions of a search for the reconstruction of self outside of the Cartesian lineage of self-sufficient rationalism.

Graham Harman: And then, in what struck me as one of the biggest surprises of the book (though I was already surprised by Latour’s pairing with Atwood) you match up the already very different Marion and Lingis with Cormac McCarthy, an author who specializes in –among other things– senseless random violence. Please help us out by describing the point or points of union between these three authors?

Monika Kaup: Unlike Atwood, who explores Latourian territory in imagining the rise of a multispecies ecology of humans and non-humans, McCarthy’s *The Road* places humans at the center of its postapocalyptic scenario. The only species still alive on a dying planet without renewable food sources about a decade after a conflagration of unspecified origin covered the world in ash blotting out the sun, the remaining human survivors face the ethical challenge of choosing between starvation or survival at the cost of sacrificing their humanity by preying on each other (cannibalism). This humanist orientation of *The Road* is well-matched to Marion’s and Lingis’s phenomenology, for their parallel focus on human experience. *The Road* is about what befalls humans and how humans respond to the shock of the saturated phenomenon—the apocalyptic destruction of almost all life and the seemingly inevitable prospect of human extinction--the terrain of Marion’s phenomenology of the given. As discussed above, the characteristic of Marion’s self is its paradoxical constitution as at once non-autonomous and unpredictable.

Marion models the human self as a being whose nature arises from its response to a confrontation with an overwhelming force, which can take different forms (catastrophe, divinity, etc.). I argue that *The Road* is organized around a similar idea. At an abstract level, this could be said of all post-apocalyptic novels, which are narratives of survival about remaking self and world after the world-end, and which thus call for new models of discontinuous selfhood. Marion’s phenomenology of givenness, as well as Lingis’s phenomenology of passionate identification formulate a model of selfhood as unstable stability, a self punctuated by sudden

changes and reversals. Because *The Road* is perhaps the darkest of all post-apocalyptic novels where destruction is most complete, the dynamic of subjection (confrontation with catastrophe) and the recipient's subject-making response (behavior that is non-determined and unpredictable) are thrown into greater relief.

I argue that this response takes place at two distinct levels of *The Road*, the intradiegetic level of the fictional plot on the one hand, and at the higher-order level of narrative style on the other.

To begin with the intradiegetic level of the fictional characters and events: stranded on a corpse-strewn wasteland (described as "cauterized terrain") and facing the daily threat of starvation, freezing to death, and murder by human predators, McCarthy's protagonists suffer a dramatic loss of self. Father and son lead a nomadic life, crossing the country on abandoned roads pushing a shopping cart with their few possessions, in search of warmer climate in the south. The most moving instance of this dispossession comes at a moment when the father finally disposes of his wallet, because its contents (credit card, driver's license, a picture of his dead wife) have become useless. Symbols of his lost pre-apocalyptic social identity, they are discarded. He spends a moment looking at the picture of his wife, and then places it on the road also. This is an excellent example of the radical transformations of selfhood characteristic of post-apocalyptic fiction. But the shock of dispossession (in Marion's terms, becoming a demoted self, an "unto whom") is followed by a positive response that leads to renewed self-fashioning, the emergence of a new self (the gifted). The father receives the call (in Marion's language) of parenting after the cataclysm. Giving himself over to the task of raising a child in the post-apocalyptic world, the man becomes "the gifted," in other words, a father. The man's passionate commitment to fatherhood is as extreme as the circumstances: he views it as a religious mission ("My job is to take care of you. I was appointed to do that by God.") He also drives his body to the point of collapse to carry his son to safety. Marion illustrates the core dynamics of his phenomenology of givenness (the call of givenness, the response of the receiver, which manifests the phenomenon of the gift, followed by emergence of a new self, the "gifted") through an ekphrastic reading of Caravaggio's *The Calling of St. Matthew*, a choice that indicates what you describe as the religious undercurrent of Marion's phenomenology. As the passage just quoted indicates, there is a corresponding thread of religious rhetoric in *The Road*. Somewhat like the dual face of sublime givenness in Marion (God, and death), its analogue in *The Road*, the apocalypse, is at once death-dealing and divine. The redemptive dimension (which is of course also a key element of ancient religious apocalypses such as *The Book of Revelation*) often appears in the man's reflections: "he knew only that the child was his warrant. He said: If he is not the word of God God never spoke." To continue with the connection to Lingis: the father's passionate affirmations also confirm Lingis's claim that sense of self peaks in passionate commitment and passionate identification. The affirmations of faith in which the father brings forth his parental identity are, in Lingis's terms, "oracular words." Elsewhere, father and son cement their bond by reciting their shared beliefs like a mantra: "Because we're the good guys. Yes. And we're carrying the fire."

These intradiegetic intersections between Marion, Lingis, and *The Road* are complemented by additional connections that unfold at the higher-order diegetic level of McCarthy's narrative style. Passages depicting post-apocalyptic ruin in *The Road* employ a distinctive narrative style, the baroque. A rhetoric of excess, the literary baroque's hallmarks include digressive and lofty

rhetoric, labyrinthine, hypotactical sentences, arresting, far-fetched metaphors and a vocabulary of rare and obscure words. Paradoxically, however, baroque excess is a symptom of its opposite, loss and uncertainty, as suggested by the baroque byword, “horror of the void.” Since its emergence in the 17th century, the baroque has been associated with melancholic reflections on transience, ruin and mortality. It is no surprise that McCarthy should employ baroque style to memorialize the apocalyptic holocaust in *The Road*.

Interspersed through *The Road* are baroque epiphanies on annihilation and destruction. Grasping the baroque as a rhetoric of loss (for which stylistic excess is a compensation) explains the baroque’s affinity with Marion’s phenomenology of givenness. The parallels are deep structural. According to Marion, “saturated” phenomena “set forth a surplus that the concept cannot organize.” They “exceed and decenter” every intention. The baroque rhetoric of abundance in *The Road*—words to fill the painful void—is an artistic coping strategy that incorporates the challenge (disruption) into the fabric of its response (the new aesthetic order). This is exactly how Marion pictures phenomena—“the gift”—as co-constituted by givenness and response. The unsayable is brought into the said. McCarthy’s baroque rhetoric phenomenalizes the unspeakable horror of the post-apocalyptic destruction in *The Road*. Baroque irregular forms were typically maligned as imperfections and deformations of proper classical style. For example, the quintessentially baroque ellipse is viewed a deformation of the circle, classical symbol of perfection. At the higher-order level of narrative strategy, thus, McCarthy’s baroque narrative form thus manifests a stylistic deformation that mirrors that which marks the post-apocalyptic de-centered self, an “I” “demoted” to an “unto whom.”

Graham Harman: You certainly made interesting choices in your book, of both philosophers and literary authors. Can you tell us if there were any surprising “near misses,” in the sense of authors who almost made the cut for this book but were finally excluded for length or other reasons?

Monika Kaup: For several years, I have been interested in indigenous versions of environmental apocalypticism. As is often pointed out, indigenous peoples are ahead of Westerners in having a deep familiarity with apocalypse, because they have been experiencing it for 500-plus years. Native American contributions to this genre (such as by Leslie Marmon Silko and Louise Erdrich) have been receiving critical attention, but there is another peerless Brazilian-French collaborative work that needs to be introduced to contemporary environmentalist and new realist debates. I am currently preparing an article on this work that takes the discussion in *New Ecological Realisms* into a new direction.

Davi Kopenawa and Bruce Albert’s 2013 collaborative work, *The Falling Sky: Words of a Yanomami Shaman*, centers on a prophetic warning of impending apocalyptic collapse due to anthropogenic environmental destruction. Co-authored by a Brazilian indigenous leader and a French anthropologist and co-founder of a NGO defending Yanomami land rights, *The Falling Sky* is a first-person account of the life story of a Brazilian shaman, activist and spokesperson for the Yanomami of the Brazilian Amazon. It offers an exposé of the environmental, demographic and cultural catastrophe that Western resource exploitation has inflicted on the rainforest and its indigenous peoples.

The centerpiece of the environmental imagination in *The Falling Sky* is Amerindian apocalyptic thinking, the eponymous Yanomami myth of the falling sky, an Amazonian myth of the end of the world. As Albert explains, “the falling sky” refers to a myth explaining the cataclysmic end of a first humanity, which the Yanomami think prefigures the fate of our world, invaded by the deadly smoke of metals and fuels. Kopenawa’s prophecy of the falling sky updates the ancient Yanomami myth of prehistoric apocalyptic world destruction to respond to contemporary Amazonian environmental destruction. Religion is a difficult subject in the modern West, and contemporary environmentalism for the most part sticks to secularism. *The Falling Sky* unsettles this view through an unfamiliar constellation of reason and unreason, where shamanic prophecy appears more rational than modern resource exploitation, and capitalist development more irrational than Yanomami ecological supernaturalism.

Kopenawa and Albert’s *The Falling Sky* presents an indigenous contribution to the contemporary search for a new social order organized around the principle of ecology. Its critique of Amazonian environmental destruction due to illegal goldmining (“the smoke of gold”) and rapacious capitalism (“the people of merchandise”) dismantles modern reductive anthropocentrism to describe how humans and nonhumans are bound into a larger functional whole. *The Falling Sky* engages one of the key concepts of ecology, the network concept of life, which states that all organisms—including humans—are interconnected with other species and the non-organic environment through mutual relationships. Kopenawa/Albert characterize the Yanomami Amazon as an ecosystem: “We are inhabitants of the forest. We were born in the middle of the ‘ecology’ and we grew up in it.” Reflecting on differences between Western notions of “nature” and “ecology” (from the Greek *oikos* “household”) they stress that—better than “nature”—the concept of ecology—new in the West—captures a time-honored Yanomami understanding of reciprocal relations between humans and the world.

In an illuminating discussion of *The Falling Sky* in their recent study on the contemporary burst in apocalyptic writing, *The Ends of the World*, Deborah Danowski and Viveiros de Castro consider *The Falling Sky* in connection to speculative realism, exploring the ontological implications of this work, and its rich contributions to the current search for new ontologies. Unlike the Western universe founded on the dichotomy between nature and culture, according to Danowski and de Castro, the Yanomami cosmos is best described as a “relational multiverse.” The living forest is home to societies of many species including humans, but humans are not the only human species—everything was human at some time. Rather than conceiving humans as descending from animal origins, the Yanomami conceive of animals as metamorphosed humans, or ex-humans. Kopenawa and Albert offer an Amerindian version of what Latour terms “political ecology,” a society of humans and non-humans, and in the new work I will explore *The Falling Sky*’s contribution to the challenge of constructing an ecological social imaginary.