

The Anthropocene, Cultural-Technological Life, and the Ecological Turn: Rethinking Nature and Humanity via a Real Relation to the Possible

Philip Rose

Preview

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Introduction

Classifying a geological period or epoch as the Anthropocene marks an important moment in our understanding of the world and our place within it, for it speaks both of the seemingly unprecedented power that we as humans have to modify our environment and of the responsibility that necessarily comes with such power. The level of reflection implied in the idea of the Anthropocene marks a moment of recognition regarding the radical influence that we humans have had upon the planet, a recognition that calls for a better understanding of the conditions underlying such seemingly unusual phenomena. What makes the idea of the Anthropocene seem so strange, I would argue, is that it seems to run contrary to traditional mechanistic ideals of what should be possible within the order of Nature. For the sheer pace and scale of human life seem strangely at odds with the idea of Nature traditionally conceived. To some this may

suggest that humans are somehow separate from Nature, transcending it in some important sense, while to others it indicates that there is something about us that has gone wrong, that our current form of cultural life is a kind of disease or cancerous growth that can only be fixed through therapy or other more radical forms of treatment. I want to propose an alternative view, one that takes our form of cultural-technological life seriously as a natural and relatively normal expression of principles that lie not only within the human condition but within the order of Nature as such. I want to propose a conception of Nature that better accounts for the conditions of contemporary cultural-technological life, not for the purposes of justifying our practices, but to better understand how they could have come to be and what principles may lay at their heart. I suggest that our best hope of getting control over the current situation is not by trying to disavow ourselves from our cultural-technological form of life nor by attempting to explain it away, but by trying to better understand what makes it possible in the first place. Once we begin to better understand the principles that underlie and ground our cultural, technological form of life then we may have a better chance of outlining normative ideals that are better attuned to our actual lived conditions. To this end I will propose an alternative conception of Nature that better accounts for the current conditions of cultural, technological life. From this I will then see if we can discern any clues from within those grounding principles or Ideals that may serve as guides for future action. Please keep in mind that this is an exploratory work. If it seems a little rambling and incoherent at times that's probably because it is.

The Anthropocene and Humanity's Place within the Order of Nature

The very idea of the Anthropocene speaks of a perspective on the world and our place within it that is both terrifying and hopeful. It is terrifying insofar as it reflects the kind of arrogance and hubris often associated with terrible tragedy or a major fall of some kind. We see this in the growing sense, however vague or dim, that our power to act so far exceeds our present levels of knowledge and understanding that we may well be careening blindly down a path of destruction of a scale rarely seen in the history of the earth.¹ We also see it in the commonly heard accusation that

¹ The current fascination in literature, movies, video games, and so on with apocalyptic themes (e.g. the end-of-the-world, zombies, etc.) arises, I would suggest, from the palpable recognition and increasing awareness of the fragility of our current, highly specialized technological society as well as the uncertain, potentially dark horizon that accompanies our power to act.

we should not play God. Implicit in this is the sense that our cultural/technological reach has become so extensive that we have begun to act as if we were outside of and above Nature in some important respect, exercising our cultural/technological will as if it were some divine fiat that was beyond all external constraint or law. But all is not dark, for as noted the Anthropocene also signals a sense of recognition and moral ownership of our transformative power, one that arises from a growing unease that there is something troublesome, something amiss about the current direction of cultural/technological life. Such moral ownership, I would suggest, implies a speculative distance and normative space that sees us as both a part of Nature yet also apart from it in some important sense, e.g. as steward, manager, mediator, or judge. The idea of the Anthropocene calls attention to this seemingly strange and ambiguous sense of place, for it suggests that while we are a part of Nature in some respect, we are also different from other natural beings in some fundamental sense.

Now the idea that human beings are distinct or separate from Nature is not new, for it has a long and persistent history within the western tradition (and other traditions as well). We see it, for example, within various religious traditions where humans may be viewed as set apart from Nature for divinely ordained purposes. We also find the same general idea within the philosophical tradition as well, from Plato, Plotinus and other classical thinkers through to the early modern and enlightenment philosophies of René Descartes, Immanuel Kant, G.W.F. Hegel, and soon, and into the more recent works of Max Scheler, Martin Heidegger, and others. There too it is widely held, often for very persuasive reasons, that while human beings are obviously a part of Nature, we are also distinct from the rest of Nature in some important, fundamental sense. The idea of the Anthropocene, I want to suggest, also expresses this ambiguous sense of place, for it represents the recognition, however dim or vague, that our cultural/technological form of life has now become so extensive, so dramatically at odds with the rest of Nature that it can no longer be ignored. The idea of the Anthropocene calls on us to reflect in a serious, considered manner on our place within the general order of Nature.

Alongside the call to rethink our place within the general order of Nature is, I would suggest, the equally important call to rethink our conception of Nature as such, for the very conditions of cultural/technological life that prompted the idea of the Anthropocene have also begun to disclose to us a side of ourselves and a side of Nature that calls into question our narrowly mechanistic, physicalist models, and this for two reasons. On the one hand we have the direct, concrete

evidence of human-technological life whose rate of evolution and accelerating reach seem at odds with the largely mechanistic notions of determination that have been theoretically dominant since the scientific revolution (at the least). The accelerating reach of human cultural- technological life demands a richer account than a purely mechanistic conception seems able to provide. On the other we have the increasing sense that the world is far more complex than our traditional models and conceptions attest, that it seems to involve more complex kinds of relation and modes of determination than a simple mechanistic approach can handle. For as the reach of our technological/cultural life has increased both across and within the natural world, the intricate relations of interconnectedness and interdependence that run throughout the order of Nature have been and continue to be more readily disclosed and brought to light. As Hans Jonas so insightfully noted, the increasing means of probing Nature has seen it “grow richer in modes of operation, not sparser as classical mechanics had expected.”² This growth in awareness and knowledge has prompted an *ecological turn* in our thinking, one that acknowledges the important role of relational ideas of interconnectedness, interdependence, and so on, as fundamental constituents of the world and our place within it. We can find important traces of this turn throughout the past two centuries or so, but I would suggest that the call for a more ecological understanding has become more pronounced as the reach of our cultural/technological life has increased. We see it perhaps most explicitly in the work of Bruno Latour and others who propose that this ecological turn may inspire new forms of politics, new ways of understanding science, a new metaphysics, and so on, forms of understanding and practice that may be better attuned to the complex webs of relations that are increasingly being disclosed through the accelerating reach of human cultural-technological life.³ Though the call for a general re-thinking of Nature will likely be met with staunch resistance, especially among those who decry what they disparagingly refer to as weird ontologies (i.e. ontologies that depart from ideals of mechanism, materialism and physicalism narrowly conceived and understood), nevertheless there seem to be a growing host of thinkers who are more receptive to a more

² Hans Jonas, “Toward a Philosophy of Technology,” in *Philosophy of Technology: The Technological Condition: An Anthology*, ed. R.C. Scharff and V. Dusek (Oxford, UK: Wiley Blackwell, 2014), 214.

³ Bruno Latour, *An Inquiry into Modes of Existence: An Anthropology of the Moderns*, trans. Catherine Porter (Cambridge, MA: Harvard University Press, 2013), 9-10.

ecological point of view.⁴ Trying to make sense of the Anthropocene, I would suggest, requires that we also take up the task of rethinking Nature in a serious explorative sense.

We will begin by highlighting some of the important features of cultural life as expressed most vividly in the dynamic, self-reinforcing character of technological-cultural evolution. Most important for our present purposes is the increasingly powerful sense that cultural-technological evolution seems to imply that we stand in what is best characterized as a *real relation to the possible* as a constitutive condition of this evolutionary process. The important role of the possible within the dynamic interplay of technological-cultural evolution also calls out for a revised conception of Nature, one that takes the role of the possible seriously as a fundamental ingredient of existence per se. This paper will make a modest attempt to answer this call.

Next I will proceed by taking seriously the long standing idea that humans are at once a part of Nature and separate from it. To this end we will take up Max Scheler's radical idea that human beings are indeed separate from Nature in the sense that we stand in a relation of openness to the world that reaches into the heart of the very ground of Being as such. So important is this relation of world-openness that Scheler connects it to the idea of *deitas* as such, with the recognition of this fact being analogous or even equivalent to an act of self-deification. Of central importance here is not the claim to self-deification per se, but Scheler's call for us to live up to what he calls *the demand of deitas*. I want to take Scheler's idea of human world-openness and the demands it may imply seriously. I want to suggest that the strangeness of Scheler's proposal arises in part from the narrowly materialist, physicalist conception of Nature against which it is developed. This strangeness can be alleviated if we simply adopt a richer, more complex conception of Nature.

This will be followed by a long sketch of an alternative philosophy of Nature that builds upon the work of A.N. Whitehead and C.S. Peirce. By reframing Scheler's idea of world-openness as a *real relation to the possible*—a position I will develop by building upon the rich, multi-layered conception of Nature outlined by Whitehead and Peirce—I hope to show that the special condition of world-openness that Scheler identifies can be recast as an emergent condition of the general order of Nature as such. In the end I hope to show that by incorporating a real relation to the possible into our general conception of Nature, as a constitutive condition

⁴ Examples of prominent thinkers who are explicitly trying to develop and adopt an ecological point of view include Bruno Latour and Isabelle Stengers, but many other examples can be found within the general field of environmental philosophy as well.

of existence per se, we can account for the historically persistent sense that humans are indeed importantly distinct from other natural beings (in the sense Scheler proposes) while at the same time preserving our intimate place within the general order of Nature as such. The relational account of existence outlined here also seems far better attuned to the ecological turn noted above and may serve as a prolegomena or guidepost for developing the kind of rich, dynamic conception of Nature for which the increasing weight of evidence seems to call.

Finally, I will close with a brief discussion of some of the normative principles that we might draw upon as a development from the principles of existence outlined. I will propose that the relational structure of existence outlined is suggestive of the relational logic of love or the idea of a gift, as a relation of unconditional concern. From this I will suggest a few basic principles that we might turn to as possible normative guidelines governing future action, but I end by challenging others to take up the task of developing a more coherent, systematic account of the normative Ideals that should guide us in our current and future endeavors.

The Radical Character of Cultural-Technological Life

The impact of human life on the Earth has been immense, its ethical implications almost overwhelming. Not only have we modified and transformed our environment in unprecedented ways, but the pace and scale of human impact appears to be accelerating. As Hans Jonas and Michel Serres have noted, so great is our collective reach that it extends not only over the whole of the globe, but into the very ground of ontology as such.⁵ We don't merely manipulate the material conditions that we find, we transform them, make them into something radically new and unprecedented within the general history of Nature as we know it. Our power to act and to transform has become so massive and deep that our capacity to understand and know what we are doing simply can't keep pace, a fact that some claim calls for a radical rethinking of our traditional notions of ethics, morality, and politics.⁶ We don't simply modify or transform our environment. We remake it *in our own image* as the material and formal expression of our desires, wants, needs, preferences, and so on. Of course we are not the only organisms to modify our

⁵ Jonas, "Toward a Philosophy of Technology," 216-218; Michel Serres, *The Natural Contract*, trans. Elizabeth MacArthur and William Paulson (Ann Arbor, MI: University of Michigan Press, 1995), 16-20.

⁶ Hans Jonas, "Technology and Responsibility," in *Readings in the Philosophy of Technology*, ed. David M. Kaplan (Plymouth, UK: Rowman & Littlefield, 2009), 177.

environment for other organisms do so as well, but the sheer scale and pace at which we do so is arguably so far beyond what we find in the rest of Nature that it strikes many as strangely anomalous, even ‘unnatural.’ Not only may the pace and scale of cultural-technological evolution far exceed what we find elsewhere in Nature, but it also seems to be accelerating, a fact that some find terrifying, others hopeful. To better understand the issue here we need to provide a brief overview of the dynamic conditions involved in cultural-technological evolution.

It is becoming increasingly clear that technologies do not play a neutral role in human life as many have so long assumed. Rather than sitting around idling neutrally waiting to be used, technologies alter the condition of human life in important sometimes fundamental ways. The idea itself is not new for we see the seeds of it in Karl Marx and others, but close examination of the ways in which technologies shape and direct the conditions of human life is revealing just how important a role they actually play. Latour, Peter-Paul Verbeek, and others, for example, have disclosed the fundamental role that technologies play in mediating our experience both conceptually, in shaping how we perceive the world around us, and practically, in directing how we act.⁷ Building upon the work of Latour and Don Ihde, Verbeek claims that technologies mediate and shape perception by ‘amplifying’ some aspects of perceptual experience (as foreground conditions of perception), while at the same time ‘reducing’ or diminishing the importance of other elements of perceptual experience (as background conditions). Such perceptual amplification and reduction can be so powerful and its effects so ubiquitous that the mode of perception in question often appears as if it were natural and unmediated (e.g. the way that medical imaging technologies serve to amplify or bring into the foreground a medicalized perception of a fetus).⁸ As technologies mediate perception (and conception) through amplification and reduction, they also direct human action by ‘inviting’ or encouraging some courses of action and ‘inhibiting’ or discouraging others (e.g. the way a gun may ‘invite’ or encourage certain forms of violence).⁹

⁷ Bruno Latour, “A Collective of Humans and Nonhumans: Following Daedalus’s Labyrinth,” in *Readings in the Philosophy of Technology*, ed. David M. Kaplan (Plymouth, UK: Rowman & Littlefield, 2009), 156-167; Peter-Paul Verbeek, “Moralizing Technology: On the Morality of Technological Artifacts and Their Design,” in *Readings in the Philosophy of Technology*, ed. David M. Kaplan (Plymouth, UK: Rowman & Littlefield, 2009), 226-235.

⁸ Verbeek, “Moralizing Technology,” 229.

⁹ *Ibid.*, 229-230.

As technologies open up new possibilities (and close off others) they also modify the desires, wants, needs, skills, values, and so on of the individuals whose lives they mediate, often bringing into play a host of novel ways of perceiving, conceiving and acting that are a function of the cultural-technological environments that make them possible. This implies that our very character as individuals (at least in some respects) is relationally dependent upon the environments in which we happen to find ourselves. This relational, context sensitive account of character (or at least some aspects of it) seems perfectly in keeping with an ecological point of view. If we take character to be a set of desires, wants, needs, skills, values, and so on that remain relatively stable throughout a significant portion of an individual's life, then we might expect that as the pace of cultural-technological life increases—where an individual's desires, values, and so on are being continuously modified by the conditions of cultural-technological life—then an individual's character might be expected to move towards a state of continuous disequilibrium (at least relative to the relatively stable life conditions that pre-industrial people may have experienced). Whether the state of 'restlessness' that would result would itself count as a new form of character is an interesting and potentially important question, for one might expect it to promote a desire for continuous innovation and change on a scale that far surpasses what we may have seen in previous generations.¹⁰ If so then we need to find normative principles that will have the best chance of reaching across future generations, ones that are grounded in and attuned to the basic principles that underlie the process of cultural-technological evolution as such, for this seems the best hope of establishing norms that can survive such transformative processes.

What is most interesting about this for our current purposes is the important role that the possible plays in the work of technological mediation, for what these kinds of cases reveal is the vital role that technologies play in opening up and closing off possibilities for

¹⁰ This may be playing itself out in the current generation of youth whose lives have from birth been mediated by a cultural-technological environment whose primary characteristic can only be said to be evolution or change as such. To grow up in a world where the conditions of mediation that dominate one's environment are changing at such a rapid, accelerating pace is unprecedented in the history of human life. The kinds of effects this will have on everything from physical and mental health (and the increasingly asynchronous tension between the pace of cultural-technological evolution and the conditions of the ecologically evolved, e.g. biological life), to the values and norms that individuals raised within this kind of rapidly evolving cultural-technological environment might hold most dear, is a question that we need to take far more seriously than we have to this point.

perception, conception, action, and so on. It is in this vital, determining relation between technology and the possible that the accelerating pace and scale of cultural-technological evolution has its basis and ground. Put simply, the introduction of new technologies alters the field of what is possible both in the short and in the long term. I would venture the same is true of the processes of education and learning in general, each of which alters the possibilities of perception, conception, and action that might be available to an individual (e.g. possibilities of employment or possibilities of self-determination, including possibilities that may be reduced or inhibited by such processes, for instance the impossibility of returning home). When situated within a cultural, environmental context where competition of various sorts is amplified and encouraged, where processes of education and research are systematized and institutionalized, where scientific knowledge and technological production are bound together in a mutually reinforcing feedback relation, and perhaps most importantly, where there is a widespread belief or faith (at the level of *mythos*) in the idea of indefinite progress (where all limits are taken to be relative limits), you end up with the kind of open-ended, accelerating growth that is characteristic of contemporary cultural-technological life.¹¹

It is the complex, accelerating character of cultural-technological evolution that underlies the idea of the Anthropocene, for the pace and scale of our impacts both upon the order of Nature and upon ourselves, has reached such a fevered pitch that it has once again called into question our general place within the order of Nature. The challenge for environmental ethics (and perhaps for ethics in general) lies in determining how we ought to act in the face of these conditions. This is complicated by the systemic momentum displayed by cultural-technological conditions, as well as a tension or clash between conservationist principles or ideals on the one hand and the principles of creative advance expressed in the novel possibilities opened up by the technological character of contemporary life on the other.

Regarding the first point, as Langdon Winner and others have argued, technological life has a systematic character that, once set in motion, soon takes on a momentum and life of its own. Once a particular set of doors have been opened and a determinate path has been forged it is very difficult to diverge from that path in any significant or radical sense,

¹¹ For more on the conditions that contribute to the restlessness of contemporary technological culture see, Jonas, "Toward a Philosophy of Technology," 212-214.

at least in the short term.¹² We see this in the various relations of dependence that we develop to the cultural-technological environment we inhabit and create. Once a form of technology such as the internal combustion engine or the computer becomes embedded within the systematic conditions of our lived environment, we typically find ourselves having to adapt to the very technological environment that we as humans have created. In this respect, the systematic character of our built, technological environment comes to share many of the characteristics of an ecosystem, for our built environment comes to exist as a system of interdependent relations that are mutually-supporting, self-reinforcing, self-maintaining, self-preserving, and self-advancing.¹³ Once such a system reaches a critical point as a constitutive ingredient of our everyday practices, it quickly begins to take on a character and life of its own that is not easily altered without drastically and dramatically altering the life conditions and life values of those entwined within it. Such a system becomes analogous to a kind of hyper-organism that has a good and well-being of its own whose interconnected and interrelated parts work to preserve, maintain, and advance. Once such a cultural-technological system becomes entrenched as part of our built, lived environment, it becomes very difficult to alter morally and politically (at least in the short term). Change in the character of the system must either be brought about gradually in a way that is least disruptive to the integrity and good of its members (whose lives are so intimately interwoven within the system that their very character and well-being are dependent upon the successful functioning of that system), or it can be brought about rapidly by undermining the 'life' conditions of both the system and the integrity and well-being of its members. Each approach has its own moral and political misgivings, offering no easy solution to the tensions and difficulties bound up with each.

Regarding the second point, opposition to the current path of cultural-technological advance tends to rest largely upon conservative principles of one sort or another. Advocates of such conservative standpoints typically assume that environments are marked by limits that are fixed in some absolute or relatively stable sense as an inviolable framework of possibility conditions that constrain what is possible and

¹² Langdon Winner, "Do Artifacts Have Politics?" in *Readings in the Philosophy of Technology*, ed. David M. Kaplan (Plymouth, UK: Rowman & Littlefield, 2009), 255- 256.

¹³ Mary Tiles and Hans Oberdiek, "Conflicting Visions of Technology," in *Philosophy of Technology: The Technological Condition: An Anthology*, ed. R.C. Scharff and V. Dusek (Oxford, UK: Wiley Blackwell, 2014), 255.

sustainable within that environment. But such a radically conservative view runs directly in the face of a growing weight of evidence against the belief that limits are fixed in any absolute sense. For the very process of cultural-technological advance stands as a direct challenge to this conservative stance, with the conditions of cultural-technological evolution supporting the contrary idea that most, if not all limits are relative in nature, with such limits serving as real, constraining conditions for particular kinds or spheres of action, but which though real are also open to being surpassed or overcome (either in the short or the long term) by opening up new spheres or domains of action through the process of cultural-technological advance. Thus, conservative arguments often presume, for example, that there are fixed limits of energy reserves within the Earth and once those reserves are used up there will be no means of replacing them (thereby advocating for a more judicious, rigorous apportioning of energy use). But recent experience seems to suggest that energy may be a relative notion in the sense that the availability of energy may depend on the possibility conditions that happen to be operant within a given historical situation or context. Cultural-technological advance can radically alter a given situation or context in a way that literally opens up novel sources of energy that may be unperceived or even inconceivable within some past or present context. Thus in our early history, for example, the forms of energy open to humans was limited to energies accessible to normal biological functions and the possibilities opened up by relatively simple tools. The process of cultural-technological evolution has, however, opened up new possibilities of action and new sources of energy that were quite literally unavailable or inaccessible to previous generations (e.g. electricity, nuclear power, and so on). This suggests that further advances in cultural-technological life could open up new possibilities of perception, conception and action that are currently unavailable or inaccessible. The belief in the relativity of limits that is presumed and reinforced by the conditions of cultural-technological life is a crucial notion that many in the environmental movement do not seem to fully appreciate, and while it may be easy to overstate the relativity of limits as a means of advancing some narrow set of questionable interests, it is important that we come to better appreciate and accept this condition if we are to move towards a better understanding of the world and our place within it.

The vital role of the possible as an efficacious condition of cultural-technological evolution as outlined above poses a serious challenge to conservative environmental ethics, for it implies not only the relativity of limits in the face of processes of cultural-technological

advance, but also the relativity of perspectives (as historically and environmentally situated). The relative, contextualized nature of these notions (as the expressions of what Isabelle Stengers calls “the truthfulness of the relative”¹⁴) seems to call into question any final or absolute pronouncements as to what we should and should not do. Normative principles that are not attuned to the dynamic principles that underlie the form of cultural-technological life risk being perceived as empty and facile to those whose lives are increasingly dominated by the relativizing power of the possible as an increasingly vivid, constitutive condition of cultural-technological experience. This increasing sense of the possible, as a real, constitutive condition of existence per se also seems vividly at odds with traditional mechanistic ideals of Nature, for such conceptions typically attempt to reduce all forms of determination to simple, mechanistic relations (i.e. relations of a direct, dyadic character). The more complex processes involved in cultural-technological evolution seem to challenge such mechanistic ideals, calling for a new approach that is better attuned to the conditions of concrete, lived experience. If we are to take this sense of the possible seriously, both ontologically and normatively, then we can begin by attempting to rethink our conception of Nature and the ideals of determination and efficaciousness upon which it rests. More specifically, we need to take the vital role of the possible, as a real, constitutive condition of cultural-technological evolution seriously as the expression of analogous processes found within the order of Nature as such (and not as malformed, cancerous deviations from ‘natural,’ i.e. mechanistic conditions), but we also need to do so in a way that preserves the radical sense of world-openness that seems to define the human condition. To do this we first need to get a better sense of what exactly is at stake in the idea of world-openness as a distinct feature of the human form of life.

Scheler: Human World-Openness and Human Self-Deification

For Scheler, human beings are “open to the world” in a way that transcends the more particular and proximate concerns of animal life.¹⁵ While other organisms stand in a relation of concern to their world, such concern seems limited generally to elements within their immediate or proximate environment. Our radical openness to the world, on the other

¹⁴ Isabelle Stengers, *Cosmopolitics I*, trans. Robert Bononno (Minneapolis, MN: University of Minnesota Press, 2010), 24.

¹⁵ Max Scheler, *Man's Place in Nature*, trans. Hans Meyerhoff (New York: Noonday Press, 1961), 37.

hand, involves a concern with questions and conditions that lie well beyond our immediate or proximate environment. Such world-openness stands as a fundamental, constitutive condition of our place as human beings within the general order of Nature, setting us apart from the rest of Nature in a fundamental sense. The key mark of this openness is its apparently indefinite reach, extending to such things as the indefinite future, Nature as a whole, Ideals of action or inquiry, the possible qua possible, Being qua Being, and so on. And while we also stand in a relation of concern to our immediate and proximate environment, it is our relation of concern to these broader, deeper questions that underlies our ambiguous sense of place within Nature. For while we seem to be part of Nature in some respects, our sense of world-openness suggests that we are also set apart from the rest of Nature in some fundamental sense. It is this radical sense of world-openness, for example, that seems to underlie our sense of wonder, reverence, and hope, as well as the more negative conditions of angst, dread, or despair. That human beings stand in this kind of open relation to the world seems difficult to deny and this leaves us with the important task, itself a product of our openness to Being, of trying to account for this unusual fact.¹⁶

There have been many attempts to identify the essential condition that distinguishes humans from other natural beings. Many such as Aristotle, Augustine, Kant and others have pointed to our capacity to reason and to be moved by reasons as that which most distinguishes us, while others have pointed to our capacity to understand, to will, to use language, and soon, and so on. Common to many of these efforts is the sense that whatever

¹⁶ Viewed broadly, the question of humanity's world-openness can be approached in one of two ways: 1) It can be viewed negatively as something to be explained away, or 2) It can be viewed positively as an important feature of the human condition that calls for a positive account or explanation. The negative approach would tend to see the question as a sign of some defect in the human condition (e.g. a psychological or anthropological mechanism for escaping the pressures and vicissitudes of life, idle curiosity, vacuous metaphysics, or some other form of confusion). In general, a negative approach would likely view the question of world-openness, not as a topic of serious philosophical inquiry, but as something that requires deflationary critique, grammatical clarification, or some other form of 'therapeutic' treatment. Conversely, a positive approach takes the question of world-openness seriously as a potentially important aspect of the human condition. It approaches the question in a spirit of openness that extends to the basic conditions of the inquirer as such. I approach the question of world-openness in a positive sense as a serious question of speculative metaphysics. As such the question demands that our framing conditions be as comprehensive as possible, including as wide a range of evidence as we are able to entertain. I suggest that when seriously and carefully considered, the vast majority of phenomenological and historical evidence weighs against the negative approach to this question.

it is that distinguishes us from other natural beings, it almost certainly has to do with our psychic or inner life. Scheler departs from many in this tradition, for he sees all living things as having some kind of inner state or psychic life that takes the form of “being *in and for themselves*.”¹⁷ According to Scheler, the most basic expressions of this inner “psychic life is a vital feeling, drive or impulse (*Gefühlsdrang*) devoid of consciousness, sensation and representation.”¹⁸ This inner sense or inner life is not limited to animal existence, but is even extended to plants, for Scheler suggests that both animals and plants may have an aesthetic dimension whereby “the principle at the unknown roots of life may act in accordance with fanciful play, regulated by an aesthetic order.”¹⁹ Still, while Scheler holds that all living things possess a kind of psychic life he also points to essential differences between various forms of life. Thus, animals are distinguished from plants, for example, in possessing a reflexive capacity to turn their attention back upon themselves. Where plants have an intrinsic orientation toward their outer environment (which Scheler calls an *ecstatic* relation), animal life on the other hand is marked by an additional turning or reporting back towards the animal’s psychic center (as a kind of feedback relation).²⁰

Though all life is marked by psychic drives and impulses, humans are also said to be marked by a further condition that distinguishes us from all other living things, namely, a capacity to extend our attention or concern beyond the proximate conditions of our natural environment and toward other, non-natural interests or concerns. Since this capacity allows us to extend our interests and concerns in a way that transcends the life-oriented conditions found within Nature, then Scheler takes this transcending capacity to be different in kind from anything found within the order of Nature, a non-natural condition that he refers to as *spirit*, a term which includes the concept of reason, but which, in addition to conceptual thought, also includes the intuition of essences and a class of voluntary and emotional acts such as kindness, love, remorse, reverence, wonder, bliss, despair and free decision. The center of action in which spirit appears within a finite mode of being we call “person” in sharp contrast to all functional vital centers which, from an inner perspective, may be called “psychic centers.”²¹

¹⁷ Scheler, 8.

¹⁸ Ibid., 9.

¹⁹ Ibid., 13.

²⁰ Ibid., 11-12.

²¹ Ibid., 36-37.

Where non-humans are completely immersed in the reality of their localized, proximate environments, human persons are able to suspend (temporarily) the compulsions and resistances of their immediate reality or proximate environment through a generalizing process of abstraction and ideation.²² Expressed in slightly different terms, human persons are able to divert their attention away from the realities of daily life and become immersed within the ideational world of pure thought, pure ideas. Thus unlike other living beings, whose lives are bounded by the life-oriented realities of their natural environment, the attention and interests of human persons are not bound to such fixed limits, but stand in a relation of openness that is best characterized as “world-openness,” an openness that includes the possibility of treating Nature itself, Nature as a whole, as an object of thought.²³ As a non-natural condition, spirit transcends what we call “life” in the most general sense. It is not a stage of life, especially not a stage of the particular mode of life called psyche, but a principle opposed to life as such, even to the life of man. Thus it is a genuinely new phenomenon which cannot be derived from the natural evolution of life, but which, if reducible to anything, leads to the ultimate Ground of Being of which “life” is a particular manifestation.²⁴

Since the conditions of human spirit transcend the order of Nature (as here conceived) then it cannot be accounted for by reference to other natural conditions, but suggests instead that spirit expresses a deeper connection to the very ground of Being as such. Such a connection is perhaps most explicitly expressed in our wonder before the very question of Being as such. So radical is our sense of world-openness that it is akin to being thrown “into pure nothingness,” a sense of “anxiety without an object.”²⁵ Put simply, Scheler takes our spiritual world-openness to be the expression of the very ground of Being per se, revealing the ground of Being as a process of self-realization and self-development that is taking place in, with, and through the human condition. “For us the basic relationship between man and the Ground of Being consists in the fact that this Ground comprehends and realizes itself directly in man, who, both as spirit and as life, is but a partial mode of the eternal spirit and drive.”²⁶ As the primary condition through which the ground of Being is revealed and disclosed (as part of a historical process) the recognition of our place within this history becomes, in effect, a process of self-deification.

²² Ibid., 49-51.

²³ Ibid., 38-39, 88-89.

²⁴ Ibid., 36.

²⁵ Ibid., 54, 89-91.

²⁶ Ibid., 92.

The locus of this self-realization, or let us say, self-deification, as it were, for which the Being itself strives and for the sake of which it pays the price of the world as “history”—this locus is man, the human self and the human heart. Here is the only place where the deification is accessible to us—but it is a genuine part of the transcendent process itself. For, although all things emerge in the process of continuous creation from the Ground of Being, from the functional unity of the cooperative interplay between spirit and drive, these two attributes of the Being in itself that are known to us are related to each other solely in man as a living unity. Man is the focus where they intersect.²⁷

The historical development of Being is thus “an unfinished process” whose conditions of self-realization are most vividly and profoundly expressed in our human world-openness, a condition that not only marks our relation to the ground of Being per se, but which also includes the irrevocable responsibilities and demands that accompany that relation. There is something about Scheler’s idea of world-openness that seems importantly true, for the human condition does indeed seem to be marked by a relation of openness of the sort he describes. While Scheler sees such openness as transcending the order of Nature, I suggest that the call for such transcendence is largely a function of the conception of Nature against which it is framed. When reframed against a more relational, evolutionary conception of Nature such as that outlined by Whitehead, the general idea of world-openness can be reconceived as a special development of more basic, open-ended processes and principles that run throughout the general order of Nature. The key to reconceiving such openness, I want to suggest, is to incorporate a real relation to the possible as a constitutive condition of existence per se. We find the basis for such a relation in Whitehead’s idea of an *actual occasion*. By placing greater emphasis on the relation to the possible, as a constitutive condition of all actual occasions, I hope to show how the idea of world-openness can be maintained as an emergent condition of the general order of Nature as such. It is hoped that the account sketched here will not only serve as a promising framework upon which to preserve the general sense of world-openness outlined by Scheler, but the complex framework of interwoven, interdependent relations that are central to this philosophy of Nature may also be better suited to the insights being disclosed through the ecological turn noted above.

²⁷ Ibid., 93.

Whitehead and the Creative Advance of Nature

Whitehead portrays the general order of Nature as a complex, pluralistic field of spatially and temporally related occasions, each of which stands as a self-organizing, self-constructing center of relations. Central to Whitehead's philosophy of Nature is an active, dynamic account of existence. As Whitehead himself emphasizes time and again, actuality or existence in its fullest, most definitive sense should be viewed as active rather than passive, a kind of incessant and irreducible energy or "active process" that is the very ground of existence per se.²⁸ This active or creative process has a threefold structure which Whitehead characterizes in multiple ways, depending on the perspective adopted.²⁹ Sometimes it is expressed as an abstract relation, for example, while other times it is expressed as a phenomenological description. It is also expressed serially as a kind of temporalized relation, and it is expressed in more meronomic terms as a kind of spatialized relation. Viewed as an abstract, serial (or temporalized) relation, for example, the structure of existence takes the form: A) Data, B) Process, C) Issue,³⁰ while viewed from a more phenomenological serial perspective it takes the form: A) Past, B) Present, C) Future.³¹ Again, when viewed as an abstract meronomic (or spatialized) relation, the structure of existence takes the form: A) Totality, B) Externality, C) Internality,³² while viewed from a more phenomenological meronomic perspective it has the form: A) Whole, B) Other, C) Self.³³ Now much work would need to be done to demonstrate the equivalence of these varying perspectives, but for our purposes we will take them as such. Of central concern here is the moment of the structure that is identified with the fundamental condition of existence per se. In the case of the serialized relations it is the middle term that stands as the fundamental ground of existence, namely, the moment of Process or the Present, while

²⁸ A.N. Whitehead, *Adventures of Ideas*, (New York: Macmillan Co., 1933), 355; Lucien Price, *Dialogues of Alfred North Whitehead* (Boston: Little, Brown and Co., 1954), 213. ²⁹ My interpretation of Whitehead's account of existence as a threefold structure departs importantly from James Bradley's work on the role of function in Whitehead's work. Where Bradley claims that Whitehead's metaphysics is fundamentally dyadic in character, I hold that it is triadic in the sense outlined. It has been my good fortune to have discussed this and other related issues with my good friend James many times over the years, and while he was sympathetic to my reading, in the end we simply agreed to disagree.

³⁰ A.N. Whitehead, *Modes of Thought* (New York: Free Press, 1968), 91-96.

³¹ *Ibid.*, 99-100.

³² *Ibid.*, 116.

³³ *Ibid.*, 110.

in the more meronomic relations it is the third or final moment that is identified as the definitive ground of existence, namely, the moment or Internality or Self (e.g. self-consciousness, or self as a center of orientation). Expressed in the more conventional threefold structure of a function the conditions of existence would be: 1) Input, 2) Process, and 3) Output. Unlike traditional mechanistic conceptions which tend to associate the conditions of actuality or reality with the Input or Output of the function (e.g. the antecedent cause on the one hand, or the final product on the other), Whitehead locates the condition of existence or actuality in the Process itself as the synthetic moment of the function. The difference is vital, for where the more mechanistic conceptions tend to take the condition of existence to be fully determinate or pre-determinate, Whitehead takes the synthetic moment of Process, viewed as an activity of determination rather than a pre-determinate condition or end-product, as the ontological or metaphysical ground of existence per se (where the other moments of the relation, e.g. the Input and Output, only exist through, with, and in their relation to the synthetic, creative activity of the Process.³⁴

It is on the basis of this threefold, processional structure that Whitehead develops his account of Nature as a process of *creative advance*. Put simply, every existing entity or occasion is a synthetic, *self-constituting, relational process*.³⁵ It is synthetic and relational insofar as it involves the bringing together of many elements into one active occasion, and it is self-constituting insofar as it stands as a kind of self-subsisting activity that contains the ground of its present existence, as *this* particular

³⁴ Ibid., 119.

³⁵ I use the phrases *self-constituting, self-constructing, self-organizing*, and so on instead of the more traditional notions of self-actualization, self-generation, or self-unfolding that one might find in Aristotle, Leibniz and others for very deliberate reasons. Traditional Aristotelian and Leibnizian notions of self-actualization or self-unfolding tend to identify the fullness of being with the condition of completeness, a condition which, expressed temporally, usually takes the form of the end point or final cause of the process in question. In the evolutionary metaphysics sketched here the fullness of being is not marked by the moment of completeness but by the creative process of self-constitution and self-construction as such. Thus where the traditional language of self-actualization and so on expresses the metaphysics of completeness, the language of self-constitution and self-construction is intended to signal the more evolutionary-styled metaphysics of incompleteness associated with Whitehead, Peirce and others. For more on Whitehead's metaphysics of incompleteness see, Roland Faber, "Immanence and Incompleteness: Whitehead's Late Metaphysics," in *Beyond Metaphysics? Explorations in Alfred North Whitehead's Later Thought*, eds. Roland Faber, et al. (Amsterdam: Editions Rodopi B.V., 2010), 91-104.

entity or occasion in an ontic sense, entirely within itself.³⁶ As one amongst a pluralistic spatiotemporal field of occasions, an actual occasion is both one amongst many, and many amongst one. It is one insofar as it brings together or unifies the multiplicity of conditions that make up its spatiotemporal environment, and it is many among one insofar as it is also part of the general environment of other such occasions. Every occasion is thus a self-constituting, self-constructing whole that is inseparable from the relations it binds together, but which is also more than the mere sum or collection of those relations. Thus every occasion is at once the center of its environment or world and a member or moment in every other occasion's environment or world, a condition that Whitehead characterizes as *mutual immanence*.^{37 38} As already noted, it is the synthetic Process as such that serves as the ground of existence per se as a kind of creative center of relations. It is this creative, self-constituting ground, as a self-constructing center of relations that marks the condition of existence per se, where the synthetic activity of self-constitution stands in for the traditional notion of substance as a kind of self-subsisting ground.³⁹

³⁶ In claiming that a self-constituting occasion contains the ground of its present existence, *haecceity* or *thisness* entirely within itself, I am not claiming that an occasion can be self-subsisting in the sense associated with Whitehead's fallacy of simple location. It is only in the simple condition of being denoted as *this* occasion here and now, as a referential relation to its ontic status as something singular or one, that an occasion can be self-constituting. In all other respects, including how it came to be here and now, an occasion remains inseparable from its environment.

³⁷ Whitehead, *Adventures of Ideas*, 156-158, 187-188; Whitehead, *Modes of Thought*, 110, 115, 163-165.

³⁸ The structure here is very similar to Leibniz's monadic holism where every monad is a world of its own that contains the universe within itself, while at the same time being part of the universe of every other monad. See, G.W. Leibniz, "Discourse on Metaphysics," in *Discourse on Metaphysics and Other Writings: G.W. Leibniz*, ed. Peter Lopton, trans. Robert Latta and George R. Montgomery (Peterborough, ON: Broadview Press, 2012), 66-67. The main difference between Whitehead and Leibniz is that where Leibniz subsumes the temporal order under a metaphysical order that is complete and fundamentally a-temporal (as a kind of perfect, symmetrical system of superpositional monadic relations), Whitehead sees all occasions as part of a *process of creative advance* that is inherently and irreducibly asymmetric and incomplete. Thus, where Leibniz takes the universe to be fundamentally *complete* metaphysically (and incomplete temporally or from the point of view of its creatures), Whitehead (like Scheler) takes the universe to be fundamentally and intrinsically *incomplete* metaphysically.

³⁹ Importantly, while the activity of existence stands in for substance as the fundamental ground of actuality or existence, it does not have the characteristics typically associated with the traditional notion of substance. Thus, active occasions are not metaphysically complete in the sense that is typically associated with the traditional notion of substance (e.g. Aristotle's Prime Mover or Democritus' atoms), nor are they inherently non-relational as most accounts of substances seem to presume. While actual occasions

Nature as a whole is here comprised of a spatiotemporal field of actual occasions. For the purposes of our present discussion we will focus on occasions that stand in a serial or temporal relation to one another as such occasions provide a convenient basis in which to incorporate what I want to propose as a real, constitutive relation to the possible as a fundamental aspect of existence per se. Viewed within a serialized relation, every occasion is part of an asymmetrical process or flow that has a serialized, temporal structure (i.e. Input, Process, Output; Past Present, Future). In this kind of serialized relation, the Input or Past provides the ‘material’ conditions that a Present, self-constructing occasion *inherits* as a relation of determination or obligation (e.g. relations of efficient or mechanical causation). These ‘material’ relations of determination or obligation are then reconstituted by the Present occasion as a discernible, self-organizing pattern of relations where the Present occasion takes up and repeats conditions laid upon it by its Past or antecedent occasions and where the Present occasion also lays similar obligations of determination upon any Future or consequent occasions that follow from it (a process that, if spread sufficiently deep and wide across a range of similar occasions gives rise to the kinds of temporal regularities associated with the laws of Nature). This serially related, vectoral process gives rise to what Whitehead calls *the creative advance of Nature*. Put crudely, the creative advance of Nature takes the form of an active, self-constituting process that is always Present here and now, but which stands in relation to both a set of obligations inherited from the Past (e.g. the Datum or Input) *and* a range of possibilities (or potentialities) that constitute its Future (e.g. the Issue or Output). As already noted, since the condition of *existence* lies in an occasion’s Present, self-constituting activity, then it follows that Past and Future don’t exist ontically in-themselves but only through their relation to the self-constituting Present. Hence the Past exists ontically only as Past-Present, while the future exists only as Future-Present. Nevertheless, while Past and Future only *exist* in relation to the Present, it does not follow that Past and Future are reducible to the Present, for Past and Future form part of the larger conditions of reality as

contain the ground of their existence *here and now* within themselves (in the sense that their existence requires no further justification), they also stand in relation to a broader set of environmental conditions that inform both their character and their place within the general scheme of things. Put simply, all actual occasions are concretely situated within a broader relational framework which serves as the contextual background for the character and situational place of that occasion here and now. Hence, while the self-constituting ‘nature’ of actual occasions is the ground of concrete, actual existence, that same self-constituting activity is also inherently and irreducibly relational in the sense that it is inseparable from the contextual background within which it is situated.

such, conditions that extend beyond what merely exists ontically in relation to the Present. We can see this more clearly if we always keep in mind the relational nature of existence, for just as the Past and Present could not be what they are apart from their relation to the Present, so too the Present could not be what it is apart from its relation to Past and Future. Thus, apart from its relation to Past and Future, the Present would have no character or place of its own, and so would be entirely vacuous.⁴⁰ If we think of the Present as the ground of denotation, then Past and Future are the conditions of connotation so that apart from a relation to the Present, the Past and Future denote nothing, and apart from a relation to Past and Future, the Present connotes nothing or has no sense.⁴¹

Each moment of the triadic relation outlined above should therefore be regarded not only as a fundamental, irreducible, categoreal condition of existence per se, but of *reality as such* (where existence is taken ontically as an aspect of reality). As a relational package, each element should be taken as bound up with or dependent on the other in some irrevocable sense while at the same time being irreducible to one another. Thus, rather than reducing the conditions of Being to a single *arche* or ground, here we have a multiplicity of grounds each of which is taken to be fundamental or categoreal in character. The model being followed here is akin to what we find in Peirce's account of the Categories (Firstness, Secondness, and Thirdness), where each Category is said to stand in a fundamental relation to the others, but is not reducible to another in any ontological or epistemological sense.⁴² Taking this basic,

⁴⁰ Whitehead, *Adventures of Ideas*, 181.

⁴¹ There is much about this brief sketch of actual occasions that I find extremely compelling, but there are a few modifications that I would suggest to make Whitehead's account appear even more compelling than it already is. One thing that I think is missing or at the very least undeveloped in Whitehead's account is the possibility that actual occasions not only stand in a serial relation to one another, but that some might also stand in nested relations as well. Such nested relations might be thought of as actual occasions existing at different temporal scales with the process involved in the self-constitution of some occasions being contained within the self-constituting process of other occasions as a subset, if you will, of the 'larger' occasion. We see something of this in Whitehead's account of God (whose consequential reality transcends that of any and all other occasions as an eternally self-constituting process), but generally speaking Whitehead tends to downplay the idea of nested occasions within the order of being.

⁴² In claiming that Whitehead's triadic relational ground has an elementary or categoreal status I am drawing upon some of C.S. Peirce's claims regarding the irreducibility of his triadic Categories of Firstness, Secondness, and Thirdness, but the question of the overall compatibility between Whitehead's and Peirce's accounts is a matter of future work. For more on this see, Philip Rose, "Another Guess at the Riddle: More Ado About Nothing," *Analecta Hermeneutica* 4 (2012): 8-9.

pluralistic ground as a starting point, I want to propose a slightly modified version of Whitehead's basic scheme that includes an explicit relation to the possible as a real, constitutive condition of existence per se. Put crudely, I want to suggest that we think of the Future as a temporalized expression of a real relation to the possible and that it is in this natural, existential relation that humanity's world-openness has its basis and ground.

World-Openness and the Irreducibility of the Possible

To bring the possible into view, as a real constitutive condition of existence, I must first provide a more complete account of the role of Past and Future in shaping the Present. To aid in this I will try to articulate the important role of each by framing their relation in terms of a generalized notion of efficaciousness. On this account, something is *efficacious* if it makes a difference to an occasion such that the efficacious condition determines or makes the occasion different than it might otherwise be.⁴³ I will suggest, following my outline of Whitehead, that Past and Future are efficacious with respect to the Present, but in importantly different ways. Put simply, the Past is efficacious in determining the present through deterministic *obligations* that it lays upon a Present occasion (conditions which the present occasion, as self-constituting, synthetic activity, *inherits* and to which it must conform in key respects), while the Future is efficacious through the possibilities for self-determination that are *opened up* or made available to a Present occasion (possibilities that may include the Present occasion departing or diverting from its inherited obligations). Expressed in traditional terms, the efficaciousness of the Past would be akin to material or efficient causation, while the efficaciousness of the Future would be akin to ideal or final causation. The former is the ground of our sense of what *must* be, as a kind of mechanical necessity or hard determinism, while the latter grounds our sense of what *might* or *ought* to be, as a relation to what is possible (or, in more complex cases such as ourselves, to what is Ideal). It follows that existence, so characterized, is not only a *relational* notion, but that the Present, self-constituting activity of existence is both *determining*, as a self-constructing, self-determining activity, and *determinable* as a process whose character is shaped both by the material conditions in which it finds itself as well as the possibilities

⁴³ I take this sense of determination from Peirce: "To determine is to make a thing different from what it would have been otherwise, hence that which determines a thing is its *conditio sine qua non*." See, C.S. Peirce, *The Writings of Charles S. Peirce: A Chronological Edition*, Vol. 1 (Bloomington, IN: Indiana University Press, 1982), 217.

that remain open to it. Expressed in temporal terms, existence is a Present, self-constituting activity whose function is inseparable from and shaped by the material conditions that make up its Past as well as the possibilities that are open to its Future. Thus, *reality* on this account will involve the complex triadic relation between an existing, self-constituting, self-constructing Present, a determinate Past that is continuously receding from the Present, and a possible Future towards which the Present is continuously advancing.⁴⁴ As the interplay between an asymmetrically related multiplicity of actual occasions, Nature stands as an unending, metaphysically incomplete process of Present creative advance from the Past towards the Future.⁴⁵

It is this relation to the Future, as a real, constitutive relation to the possible, that I want to suggest underlies our sense of world-openness. Put simply, what Scheler calls world-openness is here being re-characterized as openness to the possible. We see this sense of the possible in Scheler's characterization of world-openness as a relation to "pure nothingness" or a state of "anxiety without an object," for the *possible qua possible* is not a thing or an entity in any ontic sense but is instead a condition of radical indeterminateness, a condition that can reasonably be regarded as nothing or no-thing when viewed with respect to the ontic conditions of existence. Thus a relation to the possible qua possible is a relation to that which might-be-but-is-not, a relation to the indeterminate as such. Expressed as a serial, temporal relation, the relation to the possible will have the form of a *relation to the Future*, for the Future is indeterminate in this sense. I want to suggest that the temporal mode of a *relation to the future* is the primary means by which our relation to the possible is experienced and expressed.⁴⁶ Put succinctly, what we experience as the Future is nothing less than the domain of possibility expressed as a temporal relation to the

⁴⁴ A.N. Whitehead, *Modes of Thought*, 69-70, 83-84, 146, 151-152.

⁴⁵ *Ibid.*, 151-152.

⁴⁶ The position developed here differs from Whitehead's in a number of important respects. Whitehead accounts for the possible by way of a special domain called *eternal objects*, i.e. an indefinite framework of relations that enable thought to range beyond the limits of the actual world. As conditions of possibility, eternal objects are not self-constituting, hence their reality must be grounded in a self-constituting occasion that is itself eternal in character, which Whitehead refers to as God. Thus, the Being of the possible is, for Whitehead, a function or mode of the ontic being of God. On the account presented here, the possible is taken to be a separate dimension or domain of Being that is independent of and prior to the ontic conditions of self-constituting existence (viewed as a relation of evolution). Rather than the possible being grounded in the actual as Whitehead suggests, on the account developed here the actual is derived from the possible, not as a relation of determination (where the possible is taken to be an *active* cause or ground), but as a relation of absolute permissibility.

ontic conditions of the self-constituting Present. It is this relation to the possible, as that which could be, that underlies our sense that things can be made better (or worse) than they are or have been, that things can be different than the Past would otherwise determine them to be. This fundamental relation to the possible thus serves as the basis for the Ideal whether in ethics, aesthetics, logic, or any other standpoint or endeavor, for it serves as the ground not only of what *could be*, but also for what *ought to be*. It is through this real, constitutive relation to the possible that Ideals obtain their efficaciousness as progressive (or regressive) forces within the general order of Nature. As Whitehead himself notes, “The universe is big with every possibility of achievement and tragedy” and this relation to the possible, as a real, constitutive relation, stands as a grounding condition of existence as such.⁴⁷

Possibility and the Under-determination of the Future by the Past

To help make clear the place of the possible as a condition of novelty, freedom, creativity, and world-openness we must first distinguish *possibility* in the sense I’ve been using it here from what Whitehead’s typically refers to as *potentiality*. Recall that present existence is inherently and irreducibly relational in the sense of standing in a constitutive triadic relation both to what was and what might (or would) be. Put succinctly, the Present is always laden with the Past and pregnant with the Future. The relation to what was includes the determinations or obligations laid upon an occasion by its Past, while the relation to what might (or would) be is a relation to that which exists *in posse* as what the Present occasion could or might become. The important point here is not merely that the Present stands in relation to Past and Future, but that *both* Past and Future play a real, formative role in constituting the character of a Present occasion. A Present occasion is determined by its Past through inherited obligations that set *determinate* limits upon a Present occasion’s constitutive activity (as what it must be), while the same occasion is also determined by its Future through the *indeterminate* possibilities of self-constitution that remain open to it. Thus where the Past determines by *binding* the Present to the *determinate* obligations and limits that it lays upon it (as that to which the Present *must* conform in some respect), the Future determines by *opening* the present to the *indeterminate* possibilities that lay before it (as that which the Present *may* bring about). Where the Past determines through its determinacy as a *power of determination*, the

⁴⁷ Whitehead, *Modes of Thought*, 166-167, 171.

Future determines through its indeterminacy as a *power of determinability* (e.g. as a kind of ‘passive power’ in John Locke’s sense of the term). This sense of the future as a power of determinability is in keeping with the original sense of *in posse* as a formative power or ‘force,’ one that plays a real, constitutive role in shaping or forming the Present.⁴⁸

While the Future is a real, constitutive openness to alternative possibilities of self-constitution, the Future is also in some sense determined or limited by the Past. Such limits can operate on many levels, from physiological and psychological limits (e.g. my inherited physiological or biological constitution), to physical and even logical limits (e.g. the laws of nature or the principle of non-contradiction). Thus while there are various possible courses of action that may be open to me as a person at any given time, those possibilities will be circumscribed or limited by the determinations of the Past (e.g. my particular physiological, biological, and other *local* limits, or other more *global* limits such as the lawfulness of nature or the lawfulness of logical thought). The degree of openness available to a given occasion will depend upon a host of factors. If the limits are so severe as to virtually close off all possibilities but one, then the Present occasion will simply follow the path lain down by its Past. This is what we tend to find in most inanimate relations, where things behave in a very regular or lawful manner. If the limits imposed by the Past are less severe, however, then there is a real possibility that the Present occasion could diverge from the path lain down for it, expressing itself either as a *chance* event in the case of more inanimate conditions, or as a *selective* process (e.g. a decision or choice) in the case of more complex organisms. Viewed from the point of view of the Past (e.g. the force of tradition), such divergence stands as an *anarchic* element within the order of being, one that allows a Present occasion to diverge from the otherwise predetermined path lain down for it by its Past.⁴⁹

In much of inanimate Nature the relation to the possible takes the form of what Whitehead calls mere potentiality where Present occasions conform to the past with a predominantly regular, law-like predictability.

⁴⁸ Again the efficaciousness of the possible as outlined here differs importantly from the account of eternal objects developed by Whitehead. For Whitehead, our relation to the possible is in effect a relation to the mind of God who effects the occasion’s relation to the future by implanting the occasion with a *subjective aim*. On the account developed here, since the possible is an aspect of being that is independent of and prior to the emergent conditions of existence, there is no need for what I consider to be the problematic notion of subjective aim, for unlike Whitehead’s account, the relation between an existing occasion and the possible does not depend upon the existence of God (though it is likely compatible with the idea of God).

⁴⁹ Whitehead, *Modes of Thought*, 99.

Within this law-like state, Present occasions are so dominated by their relation to the Past that their relation to the possible is reduced to the absolute minimal state of a relation of *potentiality*, that is, a law-like relation to what will (or would) follow regularly and predictably all things being equal. This kind of law-like conformity to the Past seems to be the dominant condition throughout much of Nature, so much so that it is often mistakenly generalized as the universal, metaphysical condition of reality as such. But this kind of hasty overgeneralization is too one-sided, for it fails to give proper due to the wealth of phenomenological and historical evidence supporting the important role of the possible as a real, constitutive, condition of factual existence. For it is only by taking possibility seriously, as a real, constitutive, anarchic element in the world that a broad swath of phenomenological, historical and other evidence is best accounted for (e.g. from the chance-like events associated with quantum and other phenomena to the freedom and creativity so prominent in human life). Thus in real, lived experience an occasion's relation to the possible will always be limited in some manner or another. Indeed without such limits it is difficult to say how anything could be at all in an ontic sense, for to exist is to be limited in some respect. So while the possible implies a degree of openness within the Present, it does not imply that anything is possible, for the relational character of an occasion (which requires that it always be situated with respect to a Past and a Future) implies that some possibilities will already have been determined (i.e. closed off or opened up) by its Past whatever it happens to be.

This triadic, relational model of existence has important implications for the traditional notion of determinism, implications which Whitehead himself did not appear to be explicitly aware of. For as the mediating condition between Past and Future, the self-constituting, self-constructing Present actually serves to free or decouple the conditions of Future possibilities from the more efficient, mechanistic modes of determination inherited from the Past. This represents a radical and promising challenge to traditional models of determinism, which generally seem to presuppose that the Future (i.e. the possible) stands in some kind of a direct, dyadic relation to conditions of efficient, mechanistic determination. If one takes the Future to be dyadically bound to efficient, mechanistic determinations in this sense, then it follows logically that the otherwise open determinability of the Future will simply repeat or unfold the conditions of determination laid down by the mechanistic determinations to which it is dyadically bound. By framing the relation of determination in this kind of simple, dyadic sense, traditional determinism closes off the Future and undermines the important place and role of the

possible as a real condition or ground of openness within the world. We get a dramatically different picture, however, when we place the self-constituting, self-constructing condition of self-determination (what is here the Present) in between the conditions of mechanistic determination (what is here the Past) and the indeterminate openness of the Future (or the possible). Adding the third, mediating condition of self-construction or self-determination to the complex of relations decouples the openness of the Future or the possible from the more mechanistic conditions of determination, thereby creating a kind of ‘elbow room’ between the two. This mediated decoupling frees the possibilities inherent in the Future from the iron determinations of the Past, and reopens the possible in a way that grants it the kind of efficaciousness it is due. This incorporates the possibility of varying degrees of freedom within the conditions of existence, a condition that is importantly excluded from the more traditional dyadic model of determination. On this more complex, mediated model the Future will always be *underdetermined* by the Past, a condition that I suggest better accords with our general experience. This enables us to make better sense of such things as novelty, growth, and freedom in general, phenomena that seem at odds with more mechanistic forms of determinism. On the model sketched here we are both free and determined as Kant had long ago insisted, but here the principles underlying this dual sense of determination are very different from the highly mechanistic conception of Nature upon which Kant rested his account.

Emergent Evolution and Humanity’s Place within Nature

It is common to present the question of humanity’s place within Nature as a mutually exclusive disjunctive: Either humans are a part of Nature, or they are not. As Étienne Bimbenet points out, however, expressing the issue in this kind of *dogmatic*—you’re either with us or against us—fashion frames the issue in a way that inhibits alternative conceptions. As Bimbenet rightly notes, there does not seem to be anything inherently unreasonable or contradictory in the idea that human beings could be both “extremely original” in the sense of being marked by an essential difference that is “not comparable to the one that differentiates animal species, and be at the same time connected by a continuous evolutionary thread to animal life.”⁵⁰ All that is needed, I suggest, is a coherent account of *evolutionary emergence*. We find hints of this in the evolutionary

⁵⁰ Étienne Bimbenet, “The Fallacy of Human Animality,” *Environmental Philosophy* 1, No. 1 (Spring 2014): 33.

philosophies of Peirce, Whitehead and others, but I suggest that we are still in the very early stages of this important metaphysical work. What is needed is a general scheme that accounts both for the essential immanence of humans within Nature as well as the essential difference (e.g. ‘transcendence’) of human beings from the rest of Nature. This is precisely the kind of position that we see being proposed by Whitehead, who notes that while the difference between humans and animals may indeed be a difference of degree, the degree of difference can still amount to a difference in kind (at least for practical purposes). That we are a part of the general order of Nature seems undeniable, but that we also stand in a special relation to that order seems difficult to deny. The question that remains is how to best account for this complex sense of place.

One of the main problems with most theories of emergence is the prevailing fashion for reducing efficaciousness to the conditions of efficient or mechanical determination. Once the issue of emergence is framed in these simple, mechanistic terms the very idea of emergence comes to appear mysterious, almost magical in character. Such impressions follow, I suggest, from the requirement that emergent conditions be reducible to mechanistic relations. On the account sketched here such a demand amounts to a category mistake for it requires the problematic reduction of the conditions of efficaciousness or determination to the simple, dyadic relations associated with mechanistic causation.⁵¹ I suggest that mechanistic relations are better seen as real (there seems little denying that), but as one of a multiplicity of determining or efficacious conditions that are constitutive of or bound up within the conditions of existence (and reality) as such. If these multiple conditions are taken to be elementary in the sense outlined here (where neither is reducible to the others), then any attempt to reduce one to the other will likely give rise to a category mistake. Put simply, the efficacy of the possible, as a condition of open determinability that is commonly associated with final causation, is different in kind from the mechanistic determinations associated with the Past, and each of these is different in kind from the self-constituting, self-constructing determinations of the Present. Thus, on the relational account of existence sketched here any and all actual occasions are continuous with and inseparable from their Past,

⁵¹ We see this most vividly in the notions of “downward” and “backward” causation that are prominent within the literature on emergence, where emergent processes are portrayed as if they must be some kind of downward or backward mechanism. In each case it is assumed that all power of determination must take the form of a mechanistic relation, with the condition being determined standing as a passive recipient or determinate effect of that relation.

which plays a prominent role in determining the character of any given occasion. But while an occasion is continuous with its Past, no occasion is ever reducible to its Past, for though the character of an occasion may be shaped by the mechanistic relations that make up its Past, the existential ground of a given occasion is always found within its Present, self-constituting power, not in the mechanistic obligations that it inherits. Given this framework of multiple conditions of determination, the mechanistic attempt to reduce either the determinable efficacy of the Future or the self-determining, self-constituting efficacy of the Present to the determinate, mechanistic efficacy of the Past will inevitably give rise to confusions of the sort found within general discussions of emergence. When we frame the question of emergence against the relational account of existence outlined here, however, these kinds of problems no longer arise, for emergent conditions can now be seen to result from the *Present determination of real possibilities* whose properties, qualities, and so on may not be reducible to the mechanistic determinations laid down by the Past. The more radical the departure of the novel outcome from the determinations of the Past, the more radically emergent the outcome in question might be deemed to be.

With this in mind we can now begin to make better sense of how we might be both a part of Nature and yet also sufficiently distinct from the rest of the natural order of things as to be regarded as ‘transcending’ it in some respect. We see the seeds of this in Whitehead’s own account of the transition or leap from inanimate forms of process to the more complex, open-ended conditions that accompany the evolution of life. While the existential condition of world-openness outlined here implies that the process of creative advance runs throughout all of Nature (including those aspects of Nature that appear to be predominantly governed by the rule of law), it is in a living occasion’s capacity to diverge from the iron rule of tradition and set its own path that we see our relation to the possible, as a real, constitutive ingredient of existence, most vividly expressed. To be alive in Whitehead’s sense is to be a self-constructing center of valuation, a perspective on the world that is constituted by “an activity of concern.”⁵² To stand in a relation of concern is to differentiate the environment in a way that matters to the entity or organism in question. The activity of concern is thus a *valuative* process, for it involves the discrimination of environmental conditions according to their significance or importance for the entity in question.⁵³ This differentiation

⁵² Whitehead, *Modes of Thought*, 167.

⁵³ *Ibid.*, 31, 116, 166-168.

of the environment into matters of concern serves as the basis for an organism's choice among alternative courses of action. Unlike inanimate occasions, where deviations or departures from the law-like transmission of inherited obligations are best classified as random or chance events, at the scale of living occasions the relation to the possible is best characterized as an abstract, *valuative* process of environmental differentiation or signification that gives rise to a closely associated activity of selective response. Living occasions don't merely diverge from the law-like transmission of inherited obligations in an apparently random manner. Instead, they are able to select from future possibilities as a condition for determining present response, sometimes in a way that not only may run contrary to established expectations, but that may work to explicitly and deliberately frustrate the established order.⁵⁴ Of course such surprising events are still always bound by certain inherited limits. Some things, for example, that might have been possible in the Past may have since become impossible in the Present or may yet become impossible in the Future (e.g. if I eat that dessert it may be impossible for me to avoid the added calories), but on the account given here these kinds of antecedent determinations are but part of the overall determinative structure of a given occasion. While the occasion is determined by the limits laid upon it by the Past, it may also determine itself based on the future possibilities that remain open to it (e.g. I may still have some say in how those extra calories are going to affect me by choosing to do more exercise, less exercise, no exercise, and so on).

On this account, abstraction (or representation) turns out to be a fundamental condition of life itself, with the forms of high abstraction exemplified in human self-consciousness being but a more complex expression of this basic, *valuative* condition.⁵⁵ It is through this kind of abstract, *valuative* activity that the environment is rendered clearer and more distinct, with the degree of clarity attained through the processes of abstraction being relative to the complexity of the occasion in question.⁵⁶ The most obvious example of this in human life would be the abstractions associated with sense perception, where the environment is discriminated in ways that are expressive of human interests.⁵⁷ So prominent are the abstractions of sense perception in human life that they can lead us to mistakenly overlook the inherent vitality of existence as such, making the world appear as if it were a lifeless, valueless, mere mechanistic collection

⁵⁴ Ibid., 87-88.

⁵⁵ Ibid., 72-75, 123, 167-168.

⁵⁶ Ibid., 109-110, 113.

⁵⁷ Whitehead, *Adventures of Ideas*, 180-181.

of radically distinct, atomistic individuals.⁵⁸ In fact, Whitehead claims that the task of restoring the connection between our abstractions and the concrete, valuatively rich reality from which they originate is one of the primary functions of rationality.⁵⁹

In human life the valuative relation to the possible is raised to another level, one that opens us to questions that reach far beyond the mere consideration of alternative courses of action. So complex is the level of abstraction we can attain and so rich our relation to the possible that our concerns may extend to questions about possible entities, possible Ideals, possible worlds, and even the *possible qua possible*. It is in this existential relation to the possible, as a source of novelty in the world, that we discern what Whitehead calls the “primary function of Reason,” namely, “the promotion of the art of life,” for rationality is itself a mediating power of determination that binds together the limiting determinations of the Past and the possibilities open in the Future.⁶⁰

Expressed in the form of a general, quasi-mythical narrative, at some point in history human evolution must have taken what amounts to a radical leap in the development of certain capacities, a developmental phase which we can loosely classify as the birth of our cultural- technological form of life (a condition that Charles Lumsden and Ed Wilson have called “euculture” to distinguish it from other forms of animal culture).⁶¹ The emergent processes that gave rise to euculture likely involved the novel addition of a “selective environment” whose possibility conditions are responsive to the determining effects of cultural production and cultural selection. Within the selective environment of human culture (which J. Baird Callicott claims is marked by a shift from Darwinian- styled mechanisms of evolution through random mutation and natural selection to a Lamarckian- styled evolutionary process of cultural production and cultural selection), humans entered into a radically new relation to the possible that enabled an accelerated growth in the depth and breadth of the possibilities that were opened up to the forces of cultural selection. Once sufficiently established, this emergent domain of cultural evolution turned out to be so different from other natural processes that it

⁵⁸ Whitehead, *Modes of Thought*, 72-74, 132-133, 148-150.

⁵⁹ *Ibid.*, 124.

⁶⁰ A.N. Whitehead, *The Function of Reason*, (Princeton, NJ: Princeton University Press, 1929), 4, 8.

⁶¹ J. Baird Callicott, “Lamarck Reduc: Temporal Scale as the Key to the Boundary Between the Human and Natural Worlds,” in *Nature's Edge: Boundary Explorations in Ecological Theory and Practice*, eds. Charles S. Brown and Ted Toadvine (Albany, NY: State University Press of New York, 2007), 32-34.

can be regarded as different in kind. The increasing levels of abstraction enabled by the conditions of cultural-technological life began to operate at such a radically different pace and scale from other evolutionary processes (e.g. Darwinian evolution through natural, i.e. mechanistic selection) that it can be regarded as the emergence of a radically new form of life, one that is importantly distinct from and irreducible to the Darwinian and other conditions from which it emerged. Callicott presents us with a lovely narrative about how the newly emergent condition of human euculture or cultural-technological life might have evolved:

In sum: *Homo sapiens* is an anthropoid ape, evolved, as any other species, by the general neo-Darwinian process of random genetic mutation and natural selection. Human culture also evolved by the general neo-Darwinian process of random genetic mutation and natural selection, but itself became part of the selective environment in which *Homo* evolved. That is, both human beings and human culture are a part of and product of nature. But because the temporal scale of cultural evolution, vis-à-vis biological evolution, is so disparate, euculture has propelled *Homo sapiens* out of nature. The disparity, moreover, between the human and natural worlds is increasing precisely because the rate of cultural evolution is increasing. In other words, cultural evolution occurs at a faster temporal scale than biological evolution; but not only that, while the rate of biological evolution remains constant, the rate of cultural evolution increases dramatically. Perhaps that's one reason why we tend to think that premodern iterations of *Homo sapiens* are closer to nature than the modern and now postmodern ones.⁶²

Callicott himself doesn't characterize the process outlined as an emergent one, but his account seems perfectly compatible with the framework outlined above. As Callicott notes, this kind of story does seem to account for our otherwise ambiguous sense of both being a part of Nature while also being apart from it in some fundamental sense.⁶³ Framing Callicott's account against the conditions of emergent evolution outlined above helps to make even more sense of this narrative, for not only does it provide the grounds for the emergence of the general conditions associated with euculture, it also helps to account for the dynamic interplay between the conditions of techno-scientific production and the dynamic, ever-changing

⁶² Ibid., 35.

⁶³ Ibid., 35.

possibility conditions that are so much a part of our cultural-technological form of life.⁶⁴

From what has been said it follows that we human beings are immanently and inherently bound to the order of Nature from which we have evolved or emerged, but it also follows that we are not reducible to the antecedent, 'natural' processes of determination that make up our Past. To the best of our knowledge, we seem to stand in a relation to the possible that is importantly different from what we see in other natural beings. On most traditional, mechanistic accounts of Nature this level of openness would imply that there is something about humans that is non-natural, that transcends the order of Nature in some important sense, for there is nothing in a purely mechanistic model that could account for the kind of world-openness that seems to mark us as human beings. But on the more complex, evolutionary account of Nature outlined here, our human world-openness can be maintained and preserved without denying our fundamental immanence within and continuity with the rest of Nature, for the basic conditions of existence that mark human life are also present throughout the whole of Nature in varying degrees. Here the difference between ourselves and others may still be a matter of degree in some respect, but the degree of difference here amounts to a difference in kind.

Human Openness and the Demand of *Deitas*

This brings us back to the question of whether there are sufficient grounds for justifying the claim advanced by Scheler and others that we humans stand in a special self-deifying or godlike relation to Being. If all actual occasions stand in a fundamental relation of openness to the Future (as an openness to the possible), then what could possibly set us so far apart from the rest of nature as to be deserving of the mark of divinity? The answer, I suggest, lies in the degree of openness that seems to characterize the human condition. Our openness to the possible as expressed both in the indefinite extent of our concerns as well as our accelerating capacity to modify and transform ourselves and our environment seems so far beyond anything else that we find within the general order of Nature that it leaves us facing the real possibility that the human condition does indeed express something important about the ground of Being. While this must, of course, always remain an open question, we are nevertheless obliged, I would urge, to take our radical openness to Being seriously and attempt to

⁶⁴ For more on the ways in which contemporary cultural-technological life involves the continuous amplification of what is possible, see Jonas, "Toward a Philosophy of Technology"; Verbeek, "Moralizing Technology."

understand all that it might imply and entail. As Scheler puts it, “We need but transform this thought, previously presented too intellectualistically, so that man’s knowledge of being so grounded is the result of the active commitment of our own being to the ideal demand of *deitas* and the attempt to fulfill this demand.”⁶⁵ If we are to take our special place within Nature and the world-openness that it implies seriously, then we need to take up Scheler’s call and ask ourselves what exactly it would mean to take the *ideal demand of deitas* seriously. This, I suggest, is the task that now lies before us.

To get to the heart of the demand of *deitas* we might begin by reaching into the very ground of Being as such, for it is in the ground of Being that we may have the best chance of finding principles and ideals that will resonate within the concrete, dynamic conditions of cultural- technological life. Returning briefly to our discussion above we find that the ground of Being is a process of creative advance comprised of multiple elements. For Whitehead these elements comprise what he calls “The Category of the Ultimate.” Put simply, the grounding elements are *one*, *many*, and a third synthetic principle that Whitehead calls *creativity*.

The ultimate metaphysical principle is the advance from disjunction to conjunction creating a novel entity other than the entities given in disjunction. The novel entity is at once the togetherness of the ‘many’ which it finds, and also it is one among the disjunctive ‘many’ which it leaves; it is a novel entity, disjunctively among the many entities which it synthesizes. The many become one, and are increased by one.⁶⁶

The ground of Being is thus a relational process whereby the many become one through the mediating power of creativity, *and* where the newly emergent one itself becomes part of the many within which it is situated. What we have here is a whole/part relation that is itself mediated by some third, integrating element. The integrating element helps to bring together the whole and part but in a way that preserves the integrity of each (so that the parts are not absorbed by the whole nor the whole dissolved into its parts). It is a complex relation where: 1) something is given; 2) that which is given is also received, and; 3) the receiver also

⁶⁵ Scheler, 93.

⁶⁶ Alfred North Whitehead, *Process and Reality*, ed. by David Ray Griffin and Donald W. Sherburne (New York, NY: The Free Press, 1978), 21.

gives of itself to another yet again. This is not a mere relation of reciprocity or exchange, for the relation of giving and receiving is asymmetrical rather than reciprocal. I suggest that this relation bears a strong resemblance to the logical form of a gift in Peirce's sense of the term, for it stands as "triple relation, and as such cannot possibly be resolved into any combination of dual relations."⁶⁷ It also bears a strong resemblance to an agapastic relation or what we might generally refer to as the *logic of love*, for it is a relation of giving and receiving that leaves each with the freedom to determine itself as an autonomous whole that has its own intrinsic goodness in and for itself alongside the intrinsic goodness of others.⁶⁸

While serious reflection on this question would require far more time and space than this paper (already too long) can hope to propose, I will offer a few comments and suggestions in passing. First, it is likely, or at the very least we can take it as a guiding principle that whatever the demand of *deitas* will be it will almost certainly involve the classical triumvirate of Beauty, Goodness and Truth. While there will no doubt be disagreement and dispute about what those ideals might represent or mean, their relational convertibility implies a certain affinity with the relational account of existence and reality outlined above. Second, if there is one thing that stands out as an exemplary feature of *deitas* more perhaps than any other, it is the association of *deitas* with the agapastic idea of love (expressed generally as an unconditional concern for the well-being of others). Given the resemblance between the relational account given here and the general structure or logic of love, there may be great promise to be realized in further exploring this idea. Certainly there is much that we can learn from the literature on *agape* and other variants of the idea of love, a topic to which philosophers have devoted surprisingly little attention. Perhaps it's a matter of embarrassment, perhaps it strikes too close to home, but whatever the reason it is a topic that deserves far more attention than it has so far received. If there is a lesson here it is to always keep the ideals of Beauty, Goodness and Truth in view, and to do so in a way that exemplifies the logic of love. Expressed generally this would likely require that we take seriously our place within the world as but one among many. This requires that we recognize and acknowledge that all natural beings, whatever their character or place, exist for their own sake

⁶⁷ C.S. Peirce, "A Guess at the Riddle," in *The Essential Peirce: Selected Philosophical Writings* Vol.1, eds. Nathan Houser and Christian Kloesel (Bloomington, IN: Indiana University Press, 1992), 251-252.

⁶⁸ For more on the idea of *agape*, see, Jean-Luc Marion, *God Without Being*, trans. Thomas A Carlson (Chicago: University of Chicago Press, 1991), 47-48.

as matters of concern and ends in-themselves. We may certainly affirm Whitehead's own dictum to live, to live well, and to live better, but we should try to do so in a way that leaves others the opportunity to do the same.

Are there any ethical principles that we can adopt to help guide us? I believe there are, but they too would need to be worked out far more carefully than I can do here. We find the first in Leibniz's call to maximize the overall goodness in the world by advancing your own well-being in manner that leaves maximum space (or opportunity) for others to do the same. "Of all the beings, those who are the most perfect and occupy the least possible space, that is to say those who interfere with one another the least, are the spirits whose perfections are virtues."⁶⁹ The second, also inspired by Leibniz, is to act in manner that would be worthy of the love of others; "and it seems that the greatest satisfaction which a soul, satisfied in other respects, can have is to see itself loved by others."⁷⁰ If Leibniz's anthropocentric leanings are too hard for the reader to take, then perhaps a quote from Whitehead would be a good place to end. This isn't in itself a moral principle, but it may contain the seeds of one. "In the greatest examples of any form of art, a miraculous balance is achieved. The whole displays its component parts, each with its own value enhanced; and the parts lead up to the whole, which is beyond themselves, and yet not destructive of themselves."⁷¹

⁶⁹ Leibniz, "Discourse on Metaphysics," 63.

⁷⁰ Ibid., 98.

⁷¹ Whitehead, *Modes of Thought*, 62.