

AN ECOLOGICAL PHILOSOPHY OF SELF AND WORLD

AN ECOLOGICAL PHILOSOPHY OF SELF AND WORLD:  
WHAT ECOCENTRIC MORALITY DEMANDS OF THE UNIVERSE

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## ABSTRACT

When environmental philosophy began as a political movement, one of its original goals was to transform people's lifestyles. This required appeals to everyday intuitions and emotional writing evoking the intrinsic value of nature. This style exists in institutional environmental philosophy today, but sits uneasy with academic pressure toward rigor and careful analysis. The first half of my thesis criticizes various problems in environmental philosophy regarding these issues and arguments for other moral principles that displace intrinsic value. I attempt to return the concept of intrinsic value to a prominent place in environmental philosophy, not as a popular intuition, but as an answer to one central philosophical question: the point of human existence. Engaging with particular topics in ecology, biology, phenomenology, ethology, complexity theory, and the assemblage theory of Deleuze and Guattari, the second half of my thesis builds a concept of selfhood that I hope is adequate to answer that question of why humanity should bother ensuring its survival, using a new conception of the concept of intrinsic value.

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## DECLARATION OF ACADEMIC ACHIEVEMENT

I hope to have made a critical and a constructive achievement with this project. The critical achievement is that I have contributed to the debate in contemporary environmental moral philosophy on whether a stark separation of nature from humanity or culture helps or hinders environmentalist moral goals. I believe I have given a multifaceted case that the separation hinders environmentalist goals from both an ontological and a democratic perspective. I have also articulated a critique of the reliance on intuition alone in the environmental ethics community of philosophers to prove the value of nature. The central constructive achievement of this project is to demonstrate the various ways in which engagement with ecological and biological sciences, and the ontological ideas of Gilles Deleuze and Félix Guattari can be adapted to a comprehensive environmentalist moral philosophy that is not vulnerable to the criticisms described above.

## INTRODUCTION

“Interesting philosophy is rarely an examination of the pros and cons of a thesis. Usually it is, implicitly or explicitly, a contest between an entrenched vocabulary which has become a nuisance and a half-formed new vocabulary which promises great things.”<sup>1</sup> Environmental ethics, at its best, has developed over the last century into one of the most promising new vocabularies that philosophy offers today. These brief words of Richard Rorty effectively capture the method of my critical approach to contemporary environmental philosophy. An important place where I depart from Rorty’s vision of philosophy is in his relaxed approach to these contests of vocabularies. Where he is content to be a detached observer of an exchange of medals from one champion to another, I prefer not to think of philosophy as a contest with winners and losers, the right and the wrong, but instead as the creation of entirely new games to play, new concepts to understand and use: one is not a player, but a designer. “What is the best way to follow the great philosophers? Is it to repeat what they said, or to do what they did, that is, create concepts for problems that necessarily change?”<sup>2</sup> At stake in a struggle of vocabularies, which Rorty’s sedate language ignores, are the world-views constitutive of personalities, societies, institutions, and civilizations. To play with the concepts which make up these worldviews is to constitute the “great things” of which Rorty speaks. Irony such as his is inadequate to understand processes of thought that change what it means to be human.

This project attempts to explain a version of what I take to be the most transformative concept of contemporary environmental philosophy: the interdependence and integration of everything in existence. As the science of ecology was taken up into philosophy, becoming an object of philosophical study and a source of conceptual innovation and inspiration, integration and interdependence were the concepts that distinguished ecologically-influenced thinking from the larger philosophical tradition. The concept of interdependence as integration can be articulated ontologically and ethically, each perspective on the concept having implications for the other perspective. The purpose of my project is to show that a moral philosophy based on interdependence requires an ontology in which all bodies are integrated while maintaining a singular identity, each body being unique in at least some small way, and this singularity being the reason for their value. This requires reference to a variety of topics, but what may appear disparate in this introduction will have a clear path of inquiry throughout my work.

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<sup>1</sup> Richard Rorty, *Contingency Irony and Solidarity* (New York: Cambridge University Press, 1989), 9.

<sup>2</sup> Gilles Deleuze, and Félix Guattari, *What Is Philosophy?* trans. Hugh Tomlinson and Graham Burchell (New York: Columbia University Press, 1994), 28.



The principle of the intrinsic value of each body in the universe is a moral concept at the heart of the previous decades of environmental philosophy. This concept can provide an imperative to care for a body, to consider a body morally relevant, with no regard for its commonality with a thinker. However, the way environmental philosophy has articulated the concept of intrinsic value is problematic as a normative principle. It is often understood as the norm that the interests of all beings, whether considered as individuals or collections, are to be respected. Arne Næss was a major progenitor of this interpretation in Western philosophy, using a method that attempted to unite the argumentative rigor of philosophy with the inspiration and eye for compromise of political action. The multifaceted nature of Næss' thinking leads to my frequent returns to various aspects of his thought throughout this project to understand different perspectives in environmental philosophy. But the interests of all beings are incompatible. My own interest in my survival is incompatible with the interest of the necrotizing fasciitis bacteria eating my legs. The interests of the fish in their survival and flourishing are incompatible with that of the bear which must eat the fish for food. Treating the intrinsic value of each organism as an absolute in morality gives one the impossible task of building a peaceful parliament of all creatures, whatever their nature. This is the ultimate result of taking a *biocentric* morality, where every individual organism has equal moral standing, to its logical conclusion. From this Edenic perspective, one must make vegans out of wolves.

Beyond that, the intrinsic value principle leads one into intuitively strange territory when it is applied to all bodies, even ecosystems. One must ask whether forests, river valleys, undersea reefs, volcanic vents, Earth as a whole are to be granted rights on the same level and of the same nature as humans in our legal systems. There is influential argument in American law for just this, even though nonhuman bodies are not capable of representing themselves in legal systems, or taking part in democratic society as humans do.<sup>3</sup> In an *ecocentric* morality, an ecosystem or planetary biosphere as a whole is the unit that must be preserved above all else, individual interests being subservient to those of the entirety. If the human population of a territory is too large or its industrial habits too destructive to maintain the integrity of the whole ecosystem, then the humans will have to go. If the territory in question is Earth, then the humans will have to go. On the face of it, it seems paradoxical that humans could hold a morality, like the strongest possible version of ecocentrism, which leads them to conclude the morally correct path to be their own annihilation. Ecocentrism is a moral continuum in which human concerns are unworthy of

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<sup>3</sup> Christopher D. Stone, "Should Trees Have Standing? Toward Legal Rights for Natural Objects," *Southern California Law Review* 45 (Spring 1972): 450-501.

consideration in the face of an ecosystem and a planet.<sup>4</sup> The principle of the intrinsic value of all bodies, informing a utilitarian ecocentrism in which the good of the many or the whole outweighs the good of the few or the part, is a core principle of such a morality.

Given these problems, one may reasonably assume it best to abandon the principle of the intrinsic value of all bodies if one is to develop a coherent environmental morality. My aim is not to solve these problems, but to make them disappear. The first three chapters of this project analyze contemporary environmental philosophy discourse to display the presuppositions about human interest, agency, self-consciousness, intuitive truth, and the generation of bodies that make a problem of the intrinsic value principle. There are some writers in the environmental philosophy community who challenge those presuppositions, but their work has not yet dislodged those ideas from the mainstream. I think many defences of the intrinsic value principle are not fully persuasive because debates in environmental philosophy usually discuss normative principles, systems of morality, and occasionally norms of legal systems. Rarely is attention called to the ontological principles underlying these topics. For example, one can only make sense of a moral or legal norm about interests in the context of a set of ontological principles about what kinds of bodies can have interests, what agency actually is, and what kinds of bodies are capable of agency. If one develops a moral philosophy that diverges from mainstream ontological presuppositions, but does not address those presuppositions, then one's moral philosophy will be strange, unintuitive, contradicting what everyone already knows to be true about the way things are. One cannot destabilize and critique a system of ethics and morality without also critiquing and destabilizing the entire philosophical framework in which those principles are elements. Connecting ontological to ethical and moral principles, I aim to show that a principle of intrinsic value can work in an ecocentric philosophy that avoids misanthropy.

The first three chapters discuss what I take to be the most productive concepts in environmental philosophy to extend moral considerability to an ecocentric range. In the first chapter, I critique some ideas and accept the intrinsic value of nature, and an ontology of integration. The following two chapters defend the ideas I favour against powerful critiques that have arisen against them. Having developed and defended my principles in moral philosophy, the domain in which they are most often discussed, I introduce the ontological element that I think makes the moral concept of intrinsic value a basis for a genuinely comprehensive ecocentric philosophy: the concept of the constitutive relation. Having laid out the ontology, I return to the political question of how a subject is to act out her ecocentric morality. The next two chapters

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<sup>4</sup>Roderick Frazier Nash, *The Rights of Nature: A History of Environmental Ethics* (Madison: University of Wisconsin Press, 1989), 103-104.

build an ontology of subjectivity by means of the constitutive relation, first through describing what kind of body can perceive, then how such a body is integrated with its environment, then how that body can become aware of itself and its environmental integration. The final chapter develops the concepts to put this body into political practice in everyday life.

The first chapter briefly introduces several major currents of environmental moral philosophy and their limitations in expanding the range of moral considerability to a genuinely ecocentric scope. I conclude that only an intrinsic value principle works for ecocentrism. Different thinkers take different aspects of a particular body as sufficient to justify valuing it. The capacity to feel pleasure and pain, the capacity to move under its own power, and its capacity to flourish are all aspects I consider, but that are inadequate to use for an intrinsic value principle. These ideas reduce what is valuable to a property of the body in question, not the body itself. The attitude of awe for nature can also make sense of intrinsic value, but such appeals to feelings of awe are ultimately unconnected with the bodies one considers, and are instead rooted in one's attitude toward those bodies. This argument for the validity of an intrinsic value property has a simple vulnerability: believing that a body is intrinsically valuable is not enough to make it so.

This chapter ends with an argument against a philosophical technique perennially used in environmental philosophy, and the discipline more broadly: the appeal to intuition for the starting premises of one's case. That nature is intrinsically valuable is often justified by appeal to intuition in one's experience of nature of its value. However, drawing on research by Jonathan Weinberg and related works in experimental philosophy, I conclude that intuition does not reveal some special truth of existence, but is merely the contemplation of what the intuiter already finds obvious. A philosophical intuition is a gut feeling expressed in emotionally evocative language. Given that I cannot use appeal to my own intuitions to begin an argument or justify the truth of any of my ideas, I would appear stuck. Instead, I justify my philosophical inquiry through grounding it in an existential dilemma: one asks why one should continue existing, and what kind of person one should be if one deserved to continue existing. Ultimately, environmentalist activities need no more than the precautionary principle to justify themselves. Given the state of contemporary industry, human well-being and survival requires taking great care with our technology. But the precautionary principle alone passes over why humanity deserves well-being and survival at all. To answer this question requires an account of existence in general, and the place of oneself — a subject — in the order of existence. My project is an attempt to supply such a kind of answer, and I will refer to this question at various times throughout my inquiry to check on my progress.

The second chapter discusses a powerful critique of biocentric or ecocentric philosophical

systems involving the intrinsic value of nature: that they imply anti-democratic values. An ecologically sustainable society cannot be built while also allowing humans to create and pursue their life goals freely: an environmentalist morality is inherently ecofascist. Environmentalism in its radical forms is a reaction to a contemporary industry that causes ecological transformation at scales and speeds that differ from and resemble past transformations of Earth's ecologies. This chapter is, in part, an investigation into what makes contemporary enormous industry, my specific term for contemporary industrial use of fossil and nuclear fuel along with all the industries that depend on such fuel for their existence, different from industrial technology of the past. Its enormity characterizes the threshold of size and intensity it has passed. My goal is to remove the sense of exceptionalism from the image of humanity in environmental philosophy.

But the technological nature of humanity does not mean humans are some radical departure from some unified natural order. Understanding humanity as such a radical departure results in two possible conclusions. One is that this concept of humanity reinforces the Edenic tendencies of biocentrism. Another conclusion is that humanity, unlike a supposedly harmonious and self-sustaining Nature, is inherently destructive. So the only way to prevent humanity's destruction of nature would be the end of humanity. This is a naively harmonious ecocentrism, in which humanity is cast as a villain by its essential nature. Philosophers such as Luc Ferry see this violence toward humanity implicit in Edenic talk about nature, and so take all environmentalist politics as tending to ecofascism. I hold that such absolutisms get one nowhere philosophically, and that humanity is best understood as a natural species with peculiar abilities that may likely result in its theatrical self-destruction. The goal of environmental ethics becomes a simple question: How may humans live, that we may continue to live?

But I do not think environmental values clash inevitably with democratic. Most specifically, not all ecocentric moral philosophies need accept this dichotomy and its attendant valuations. My own project is an example of such a non-dichotomous environmentalist philosophy, and thinking according to the dichotomy ignores the variety of all that is not human, even while professing its value. Environmental moralities cannot succeed by forcing people to give up the ecologically destructive aspects of contemporary industry. Governance by force only encourages resistance and rebellion. A political revolution achieves its most visible success with a regime change of political and economic institutions. But the most profound success of a political revolution is when each individual in a society chooses to live differently than she has before. A society's social and political institutions may change, but leave its people still thinking according to old ways. Genuine revolution of a society begins with revolution in the realm of individual thought. This is a matter of conversation and self-critique, a process that is essential to democratic

morals.

Chapter three addresses two problems in environmental philosophy that arise from its legacy as a political movement, which also has important implications for philosophy as a whole as it is institutionalized in universities. The first problem is that a major recurring element of philosophical environmental writing is the urgency of political activism against enormous industry, which continues even though academic environmental philosophy has grown distant from actual political activity. The political movement has long surpassed environmental philosophers, but they have yet to notice. The second problem is that the form of philosophy, rigorously argued and increasingly precise conceptual analysis, is itself ill-suited to political activity. Indeed, philosophy as an institution has had a hard time demonstrating its general public relevance. Næss appears again here as an important figure in both expressing and finding a way out of this problem, using an idea that has fallen out of fashion among institutionalized philosophy, the philosophical worldview.

In the North American philosophical community, broadly understood, one does philosophy by engaging with some particular problem or set of problems. Speaking of creating a comprehensive philosophical worldview tends to associate one with the grandiose metaphysical system builders of the nineteenth century, or with the naive conception of philosophy as informing a general outlook on life. The former is a rejected model of how to do philosophy, and the latter is an unprofessional way of doing philosophy, better suited to self-help books than serious philosophical work. But if environmental philosophy is an academic discipline whose goal is a transformative political movement, then it must articulate itself in a manner such that it can inform the outlook of everyday people, so that changes in the lifestyles of enough people can add up to a transformation of society. Næss conceives of philosophy as the technical means of constructing and changing general outlooks on life.<sup>5</sup> Philosophy, in this simplified form, is how an academic discipline can inform and shape a political movement beyond the walls of university offices and classrooms. It connects the abstract principles of theory with the material reality of a subject's daily life.

A purely moral and ethical discussion may arrive at principles that make sense within that restricted context, but putting them into practice when one's ontological principles do not match them creates a dissonance in thinking that can result in the dismissal of those moral principles. To deal with this dissonance, chapter four details an ontological concept that I call the constitutive relation, and the conceptual tools required to build an ontological system based on this concept.

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<sup>5</sup> Arne Næss, "Reflections About Total Views," *Philosophy and Phenomenological Research* 25, no 1 (September 1964): 28-29.

The words ‘constitutive relation’ first occur in the literature relevant to my project in Deleuze’s work on Spinoza, where he defines a body’s “constitutive relation” as a relation among the parts of a body that functions to preserve the assembly of that body.<sup>6</sup> I examine this concept under the principle that one can regard any physical assemblage where there are relations of mutual causality among parts as a single body. In Deleuze’s words, “a body can be anything,”<sup>7</sup> in my case, anything that comes to be through the convergence of various processes. The concept of the convergence of heterogeneous processes articulates in morality the ontological principle of the integration and interdependence of all bodies.

Because my argument that ecological philosophy works best when the singularity of bodies is the reason for their being valued is grounded in an existential quandary, my argument must provide a comprehensive answer to the question of what kind of person I understand myself to be. The second half of this project explores an answer to that question in terms of an ontology of subjectivity. When the self is understood according to an ontology of integrative processes, it requires combining several concepts for understanding selfhood and subjectivity from four disparate areas of philosophy. An ecological philosophy should have an account of how the subject comes to be as a basic matter of comprehensiveness: one cannot claim one’s philosophy to be comprehensive if there is no place in it for the subject, the creator of philosophies. But most important is that the existential matter of what kind of person I am, because one can answer this question in greater detail, and receive greater practical guidance from that answer if it involves a broad and multifaceted account.

There are several ideas in philosophy and science that are appropriate to help describe how constitutive relations build an ontology of self. Chapter five begins with an analysis of the physical process which constitutes bodies capable of perception. This process is called autopoiesis, in which a metabolic chemical activity constitutes a protective border around itself that also serves as a means of physically enclosing fuel for the metabolic activity. Autopoiesis has been understood, by the developers of the concept in biology, as the minimal condition of subjectivity or selfhood. Selfhood is understood in terms of affectivity, the collision of bodies in motion to constitute new processes from their assembly. My account of autopoiesis and its relevance for my project departs from its three more conventional treatments in philosophical literature as a theory of mind, as a definition of life itself, and as a solipsistic system turning away from any relations with its environment other than a mute affectation empty of content. Communication among autopoietic bodies is conceived as impossible because such bodies interact only through affects. I

<sup>6</sup> Gilles Deleuze, *Spinoza: Practical Philosophy*, trans. Robert Hurley (San Francisco: City Lights Books, 1988), 32.

<sup>7</sup> Gilles Deleuze, *Spinoza: Practical Philosophy*, 127.

instead use autopoiesis as the starting point for an account of self as reflective self-consciousness: a body that can ask why it deserves to exist. The autopoietic understanding of self is as a continuing process of feedback loops which constitute, in one case among a vast number and diversity, human subjectivity itself. Contrary to a general consensus in affect and autopoiesis theory, I believe that affect is not without content, but generates content. My account makes sense when one understands affect in terms of constitutive relations.

Following my account of autopoiesis, I use the concept to flesh out a conception of self that Næss gave a prominent place in his environmental philosophy: self as the unity of all the interests of the component members of an ecosystem into a single subject that, as the mindful perceiver of its place, is also the place itself. As a theory of the subject for environmental philosophy, this concept of self-as-place is a mess, ultimately contravening the admonitions of environmental philosophers against taking the human as an exclusive model for understanding the world. As Næss describes the concept of self-as-place, it seems as if the nonhuman aspects of a place are subsumed and disappear under the dominance of the thinking and perceptual processes of a human subject. But if one can resolve these anthropomorphism problems, self-as-place conceives of self as integrated and interdependent with all fields constitutive of its environment. This concept of self converges perfectly with what I took in chapter one to be the key ontological underpinnings of ecocentric moralities. A self generates processes that integrate with each other as they play various roles in constituting a place, all these roles interdependent on each other for their persistence. At the same time, one can use this concept of self to understand those processes through mindful investigation.

Chapter six develops this account of subjectivity and place further, understanding how the subject becomes aware of integration with its environment. For this purpose, I use concepts from Maurice Merleau-Ponty's philosophy, particularly his uptake of the concept of gestalt in the study of perception, and Jakob von Uexküll's study of how an organism's perceptual apparatus conditions its interaction with its environment. Not only the human subject is a matter of inquiry here, but also the perceptual apparatus of any kind of organism, any kind of autopoietic body. Perception is understood as how a body detects what affects it and how it detects its own affects, situating itself in a field of affectivity, whose own actions change its structure. By this means, I arrive at an ontology of subjectivity that is also an ontology of place and of the means by which a place is perceived and understood. Phenomenological philosophy gives further evidence that communication, as well as perception and thought more generally, are matters of affectivity, and affectivity can achieve far more than the reductive concept of affect in the work of many systems theorists. As a result, phenomenology can show us the richness of the world of

affectivity among bodies.

In chapter seven all the component concepts of subjectivity that I developed in the previous chapters — autopoiesis, place, and mutual affectivity — are unified into a profile of an ecologically aware subject. That awareness is awareness of fields of affects, the many heterogeneous processes that collide and interfere with each other to constitute a body capable of awareness. I call this kind of body a subjectivity. A human subject is a special case of a subjectivity, capable of indefinite cycles of reflective thinking. This power of reflective thinking constitutes our ability to plan, to invent, to organize our societies according to complex customs and codifications, and to construct systems of thought. Humans, as far as we currently know, are the only organisms with these powers. A subjectivity is a special case of a body constituted through the intersections and collisions of complex fields of affects. In this chapter, I take concepts Deleuze and Guattari developed about how subjectivities can transform themselves and inspire equally singular transformations of others. This dynamic of transformation and inspiration is the means by which an ecocentric social revolution can be made democratically: individuals acting as guides for new kinds of lifestyles.

Ethically and morally speaking, the most important concept of my project remains the principle of intrinsic value, although it is no longer the value of nature, but of all bodies. While the principle of intrinsic value as I understand it was developed in environmental philosophy, particularly Næss' work, but in dialogue with the existential dilemma of why humanity deserves to continue existing, it comes to help justify a positive answer. A body develops contingently as a singularity: an assemblage, constituted through affective processes, that is at least slightly different from every other body that has ever existed. Each new body, in some small way, is a break from precedence. The absolute value of a singularity is a power that any body has to evoke in self-conscious beings an emotional response to the preciousness and precarity of its identity, that such a body as exists now has never existed before and will never exist again. But with careful attention to all the ways in which bodies can vary, one can map the qualities and the degrees of intensity with which one body differs from another, and work out the various ways in which a body can affect another. With this knowledge, the bodies that one's activity constitutes (for example, the organism one is, a society, a political association, an electrical grid, a transportation infrastructure, a food web) can be so constituted as to exist in a more mutually beneficial fashion with surrounding bodies.

But one should also know why one should bother existing in this way, or at all. The singular identity of a body is constituted from contingent processes of affects that are more specific than any of the general concepts of philosophical language one can use in an account of



that body. A self is one kind of these contingent, singular bodies. Jean-Paul Sartre, in his novel *La Nausée*, describes this contingency and the inability of general propositions to give a complete account of a singularity, as the excess of an existent over any definition.<sup>8</sup> The narrator Roquentin is disturbed by this contingency, and by this inability of general statements to describe a singularity. He is disturbed because the necessity of a comprehensively true explanation or account acts as an anchor, a certainty, a ground for one's thinking and life. An entirely contingent world is one without certainty, where the work of understanding can never be complete. Even what appears at first glance to be a successful completion can be overcome by the continuing generation of novelty. So philosophical understanding becomes no longer a matter of complete accounts of what is necessary for existence. We must instead live in constant vigilance for the generation of new problems that our familiar concepts and habits of thought are unable to handle. One can fear these new problems as they unsettle the presumptions that once comforted us, or one can accept them as an invitation to wonder at the complexity of a diverse universe. I intend my project to provide ontological and ethical resources for ecocentric moralities that ultimately begin from a sense of wonder.

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Before continuing, I should introduce some required terminology for understanding the method of my philosophical investigation into this concept. The following terms are, for the most part, the mainstream labels for widely accepted categories of philosophy. *Ontology* investigates exclusively into what is, and the necessary or contingent properties and possibilities of being. *Ethics* inquires how bodies capable of self-conscious control can articulate their lives, how one's understanding of self generates an individual and social identity. Ethical thinking has an ontological component, but a tighter focus, discussing what a person is, the nature of a person's identity, how it physically comes to be, or how a person understands her personality.<sup>9</sup> A *morality* is a system of rules or principles of actions and responsibilities, a conception including political philosophy in the domain of morality as well. A philosopher inquires about moral matters when comparing particular principles to guide behaviour and responsibilities to judge whether they can be combined into a single internally consistent system. Here is how I distinguish the two: an ethical inquiry, insofar as it is related to morality, investigates how to generate some particular moralities, while a moral inquiry focusses on the particular principles within some

<sup>8</sup> Jean-Paul Sartre, *Nausea*, trans. Lloyd Alexander (New York: New Directions Publishing, 1964), 126-135.

<sup>9</sup> Kwame Anthony Appiah, *Experiments in Ethics* (Cambridge: Harvard University Press, 2008), 175-177. This conception of ethics has its source in the work of Spinoza, and is further elaborated at various places in the corpus of Deleuze. Appiah considers Aristotle's virtue ethics his precedent for distinguishing ethics as the philosophy of self from morality as the philosophy of the self's relations with others.

morality or moralities. I understand problems of *epistemology* as inquiries into the methods and accuracy of understanding experience and information. The metaphysical aspect of my project is the convergence of concepts from these different areas of philosophical investigation. For example, when a concept of interdependence is first articulated in an ethical context, and is then understood in a different context that leads one to ontological conclusions, the philosophical investigation has become metaphysical. As I use the term in this project, a *metaphysics* is a world-view that extends common concepts across many different domains of inquiry.

Other than the typical philosophical terms identifying its sub-disciplines, I use two other words frequently throughout my analyses. Their occurrence may suggest a needless repetition of diction, but I intend to use them in a specifically technical sense each time they appear, as they are conceptual keystones to my entire project. The verb I use to describe the movement of a process is to *articulate*. I use this word implying all its nuances in the English language. The word implies the active character of what is articulating, that at least to some extent it is the motor for its own motion, or at least for the continuation or transformation of that motion. Articulation also implies a body's complex structure, which is constructed or changed in the course of its motion. Like one synonym, explication, the word can include linguistic structures, but explication too much implies a language-like structure to whatever it is applied. And I consider language one of the rarest peculiarities in the universe. So it would be inappropriate to apply a uniquely human capacity to all processes. I could also use the word unfolding. But this term implies that the entire development of a process over time was somehow contained within its origin, and that the process simply unfolded its hidden aspects over time. One of the key ideas of process I develop is its contingency: that the past or origin of a process does not completely determine its future. Saying a process articulates itself over time implies its activity, complexity, and contingency. I also use the word in another context, saying that a thinker articulates concepts and philosophies, but the basic meaning of the word is the same whether applied to ideas or processes. All thinking and discourse is a process, elements of the processes constitutive of subjectivities. As Gilles Deleuze and Félix Guattari write in *What Is Philosophy?*, a concept can open an entirely novel way of thinking and living for an individual and a society, completely transforming what has gone before. The details of this transformation will be explained over the course of the entire project, but my intended meaning of the word 'articulate' in ontological and meta-philosophical contexts is the same.

What a process achieves as it articulates itself is to *constitute* itself. Before a process starts, it does not exist. A process becomes through the collision or dissolution of other processes. I call this generation constitutive, again, because of the particular nuances of the English word. The

word ‘constitute’ and its variations strikes a near-perfect balance among many similarly defined words on matters of activity, intentionality, and directedness. If I say, in contrast, that a process composes itself, this implies that a process is an intentional agent, like the composer of a song, that assembles itself from a position outside itself. This word falls too deeply into paradoxes of self-production, which I will discuss in detail later, but I avoid the word ‘compose’ to prevent a reader from concluding too easily that my ideas suffer from this paradox. As well, the word ‘compose’ implies that a process is too much like a human agent, self-consciously directing its development. I also avoid the term ‘construct’ because it implies the passivity of the parts of a whole process. If a whole is constructed from parts, then the parts are only active insofar as they are integrated in the whole. To say of some bodies that they are elements from which a process is made, instead of elements constitutive of a process, similarly implies too much passivity for parts of a process than I desire. I take motion to be active at all levels of analysis. The word ‘constitution’ implies part-whole relations, but allows for all parts to be processes themselves, and so active, while avoiding anthropomorphic imagery of intentionality and self-conscious direction in the generation and development of processes.

## 1. THE PLACE OF INTRINSIC VALUE IN ENVIRONMENTAL PHILOSOPHY

The main body of this chapter proceeds through two inquiries. First, I examine various attempts to extend moral considerability outside the sphere of humans and human concerns. Having run through several notable examples of common features of bodies taken as the lynchpin of moral consideration, I conclude that none of them can achieve the maximum range that a genuinely ecocentric moral philosophy requires. The only principle that can achieve this maximal applicability is the concept of the intrinsic value of nature. However, the second inquiry of this chapter describes several epistemic and moral problems that most traditional accounts of the intrinsic value principle in environmental philosophy encounter. Ultimately, the route I choose to get the intrinsic value principle out of this quandary is to make it no longer about the value of nature, per se, as the category is itself problematic. I reconceive the concept of intrinsic value as the valuation of every body, the valuation of singular existence itself. The final part of this chapter offers an argument for why the principle of intrinsic value of all bodies can still operate in a moral philosophy informed by environmentalist ideas. The intrinsic value of singularity offers an answer to the existential dilemma of why a person, and humanity more generally, should favour its own practical survival at all, and the survival of the diverse world in which we live.

The first extension of moral considerability I consider is animal rights and animal liberation philosophy. In its most superficial aspects, this philosophy is a radical morality. It extends the moral rights of humans, including bodily inviolability and the alleviation of suffering, to animals. I deal with this approach to environmental philosophy first and most quickly because it is the most conservative of the major projects in this field, and presents itself as such, despite its politically radical platform. Nothing about widely accepted systems of rights or morals themselves are challenged. On offer is extending the moral considerations typically applied among humans to a wider set of creatures. Peter Singer, the paradigm and progenitor of animal liberation, writes, “The shift from a point of view that is disinterested between individuals within a group, but not between groups, to a point of view that is fully universal, is a tremendous change. . . . It is the direction in which moral thought has been going since ancient times.”<sup>10</sup> The change is tremendous because it has been a major trend of social development. But because he frames the expansion of moral standing as the arc of humanity’s moral development itself, he situates it as a conservative process, the continuation of what human civilization has been doing for a long time.

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<sup>10</sup> Peter Singer, *The Expanding Circle: Ethics and Sociobiology* (New York: Farrar, Straus, and Giroux, 1981), 113.

Singer tells a story about human history in which the scope of application for moral principles grows as contact with foreign groups becomes more frequent, and people with different ways of life interact more and more frequently. In a highly isolated, tribally-organized society, only members of one's own tribe are worthy of moral consideration. Foreigners are outside the range of consideration. As people become more interconnected, they become more used to foreigners. Habituation to different peoples mean the differences that used to set a person beyond moral consideration cease to matter. Moral principles are adjusted accordingly in their application: instead of Athenians, they refer to Greeks; instead of French, they refer to Europeans; instead of whites, they refer to humanity. Singer's own moral and political project, outlined in *Animal Liberation*, is a further expansion of who is morally considerable. Instead of humanity, moral principles refer to all sentient creatures. The imperatives of moral principles themselves do not change. The set of bodies to which those moral principles are applied widens.

Some may consider the simplicity of the concept of moral extension as a point in its favour. Such a simple concept makes for a political project that can be understood and enacted according to a clear program. A major change to the habits of human society is offered. People will no longer eat meat, exploitation of animals in laboratory experiments and industrial production will cease, and every aspect of humans' relationships with animals will be evaluated on the same terms as relationships with other humans. All that is required is the expansion of those to whom moral consideration refers. But the ground of that expansion is the ability to suffer, which only organisms having a particular kind of neuro-physiological architecture can do. The liberation that comes with this moral extension cannot proceed to those creatures that do not feel, do not suffer.<sup>11</sup> It is absurd to ascribe suffering to a tree, fungus, or mountain when those objects do not have the neural architecture required to experience pain, to feel in the same way that humans do. These objects remain morally external, alienated from moral consideration, outside the moral consideration afforded to those creatures who suffer in the same way as us.

So the animal liberation project has made progress at least insofar as membership in the human species is no longer the limit point for moral consideration. The argument for animal liberation from suffering is a noble enterprise, motivated from a simple principle that one should act to avoid and prevent harm.<sup>12</sup> I do not intend to refute it. The animal liberation project includes different species within legitimate moral considerations, but does so by means of a principle that remains limited, recognition of the capacity for suffering. Those creatures which are physiologically different enough from humans that they do not experience similar sensations of

<sup>11</sup> Singer, *The Expanding Circle*, 123-4.

<sup>12</sup> Renzo Llorente, "The Moral Framework of Peter Singer's *Animal Liberation*: An Alternative to Utilitarianism," *Ethical Perspectives* 16, no. 1 (2009): 62-63.

pain still warrant no moral consideration. Animal liberation pivots on an attribute, the ability to suffer, by which we can say that some creatures are the same as humans.

In addition, limits to human perceptual abilities are a factor contributing to limitations of human political imagination on matters of moral consideration. Humanity has already built moral systems and legal institutions where people can advocate for recognition of their rights. Building a moral relationship with a body different from those who consider it may be a matter of imagining a way to fit the different body into existing institutions. The phenomenology of such a body may differ from our own so radically that it is impossibly difficult to imagine what the existence of such a body would be from that body's own perspective of experience. This is the problem Thomas Nagel identified as 'what-it-is-like-ness,' the limitation of human thought and language to describe an utterly alien body without anthropomorphizing metaphor.<sup>13</sup> Political regimes centering on rights were developed for humans, using language best fitted for humans. But there has been precedent for decades that legal and political inclusion of the radically different can be accomplished within existing institutions of rights.

Christopher Stone in the early 1970s argued before the United States Supreme Court in defense of the Mineral King Valley outside San Francisco, that the ecosystem constituted by the inhabitants of the valley itself held legal rights, which obligated people and their courts to recognize them.<sup>14</sup> But the following decade of philosophical response to this idea tended to conclude that advocacy for valleys was beyond the capacity of human language and understanding. People would pretend that they knew what a valley, a sequoia, a cetacean, a minnow wanted or demanded, and extrapolate likely desires from the behaviours of at least some of the bodies in question. But without the possibility of accurate, detailed communication, one could deal only with guesses of various and sometimes dubious quality. Humans cannot understand any interests of bodies well enough to become their advocates in a legal system, unless those bodies can have communicated complex concepts with humans.<sup>15</sup> Detailed communication in human language may not be required to understand the interests of nonhumans in a political context. This model of environmentalist politics asks even more than animal liberation. Animal liberation philosophy calls on one to sympathize with the pain of another organism, but the inclusion of all organic bodies and ecosystems in a legal system requires detailed advocacy for such creatures, using the language of needs and desires. According

<sup>13</sup> Thomas Nagel, "What Is It Like to Be a Bat?" in *Philosophy of Mind: A Guide and Anthology*, ed. John Heil (Oxford: Oxford University Press, 2004), 531.

<sup>14</sup> Christopher D. Stone, "Should Trees Have Standing? Toward Legal Rights for Natural Objects," *Southern California Law Review* 45 (Spring 1972), 450-501.

<sup>15</sup> Roderick Frazier Nash, *The Rights of Nature: A History of Environmental Ethics* (Madison, University of Wisconsin Press, 1989), 134-135.

to such thinking, action alone is enough to articulate a political statement because observing its activity is all one can do to understand such a different kind of body. Detailed observation lets one consider a body in its possible actions, that range of action being understood as the interests a body has in its free acts. A tree grows here, and its presence affects what actions can be taken in the surrounding territory.<sup>16</sup>

These bodies do not have the physical capacity for self-consciousness or language composition to express their actions as interests. Language is not required for this expression, however, because one can come to understand the movements of many creatures as expressing desire and interest. For example, an attentive person's long experience with animals in various social contexts lets that person learn the behaviours and vocalizations by which those animals express their desires and moods. Yet although animals may have desires, a desire is not the same as an interest. An interest requires an actor's consciousness of its own actions, and the ability to understand its actions as the continuing development of a personality. Animals can be harmed and traumatized, but it remains uncertain whether they can understand themselves as being traumatized.<sup>17</sup> Lacking that level of complexity in self-consciousness is a difference that may prevent genuine expansion of human rights to become the rights of all animals. They are unable to understand the narrative of their own trauma's formation. It may be valid for animals to have rights, but these would derive from their ability to feel pain coupled with a human aversion to cruelty. Animals lacking the power to think self-consciously cannot formulate interests to defend in a court that was first designed for self-conscious organisms. It is up to humans to extrapolate their behaviour into an avatar of a human with interests, desires, and language. It is doubtful whether pretending a forest is a human can adequately represent that forest as a forest.

Concepts of intrinsic value have the greatest potential to achieve this adequate representation within moral relations. However, there are two ways to understand this term 'intrinsic value,' and care must be taken not to confuse them. One may understand intrinsic value as generated through a human act of valuation, or as a discoverable property of individual bodies.<sup>18</sup> Throughout this work, I discuss bodies, their properties, structure, processes of generation and dissolution, interrelation, and integration. It may occur to the reader to ask just what a body is anyway. And as I said in my introduction, everything is a body. Any physical assembly, any field of force, any process no matter how quickly it is constituted and dissipates, is a body. One

<sup>16</sup> Bruno Latour, *The Politics of Nature: How to Bring the Sciences into Democracy*, trans. Catherine Porter (Cambridge: Harvard University Press, 2004), 83.

<sup>17</sup> Ellert R. S. Nijenhuis, Johan Vanderlinden, and Philip Spinhoven, "Animal Defensive Reactions as a Model for Trauma-Induced Dissociative Reactions," *Journal of Traumatic Stress* 11, no. 2 (1998): 247-249.

<sup>18</sup> Jason Scott Robert, "Wild Ontology: Elaborating Environmental Pragmatism," *Ethics and the Environment* 5, no. 2 (2000): 193.

way of understanding intrinsic value is typified by the phrase ‘I value this body intrinsically.’ I understand its many features, how it operates, is structured, is related to bodies around it. I understand this body in its singularity, that there is no other body exactly identical to it. I value this body in its singularity and for its singularity. Each body is singular, so there cannot be a body that is not singular.

But this need not make singularity a meaningless property, not worth remarking upon because of its ubiquity. At first hearing, it sounds paradoxical “to utter in the same breath, like Balthasar, ‘Everything is ordinary!’ and ‘Everything is unique!’”<sup>19</sup> Some bodies are more different than others, and I will describe in detail those processes through which bodies increase their relative degree of difference later. But the most important idea for the current discussion is that each body is uniquely different, at least in some small way, and that this unique difference is itself valuable. This is a concept of intrinsic value that embraces difference. At no point in this understanding of the intrinsic value of a body is that valuation grounded in any feature common to the valued body and the valuer. A body is valued for its singular identity, valued because it is an individual in the strongest possible sense: insofar as no other body can be identical to any other body, each body is different from every other body, and each body’s identity is a singularity.<sup>20</sup> The central moral hypothesis of this work is that a body’s singularity is the reason why I value it. I approach the various interconnected inquiries of the rest of this project with the aim to build a comprehensive argument for why and how singularity can be worthy of valuation. But no matter what the reason, a moral relationship with a body only comes to be when a self-conscious body like myself declares it valuable. A moral system where value is generated from an act of valuation, may be understood as the *valuation understanding* of intrinsic value.

Several influential figures in environmental philosophy have discussed flaws in the valuation understanding of a body’s intrinsic value. They introduce the following assumption: that the intrinsic value of a body is a property of that body, and the task of the environmental philosopher is to discover that property in each body, whether through some intuition or other form of investigation. Writing in Norwegian, Arne Næss named this property *egenverdi*, which translates as a body’s *own value*, a simple value property that a body itself has.<sup>21</sup> The value of a body is not constituted through a human subject’s evaluating that body or its relations, which would make its supposedly intrinsic value a matter of human thought. To say that value rests with

<sup>19</sup> Gilles Deleuze, *The Fold: Leibniz and the Baroque*, Tom Conley, trans. (Minneapolis: University of Minnesota Press, 1993), 91. Deleuze paraphrases the writer Anatole France.

<sup>20</sup> One can think of this concept of intrinsic value as a moral corollary of Leibniz’s Law, when we understand Leibniz’s Law of the identity of indiscernibles as an ontological principle.

<sup>21</sup> David Rothenberg, introduction to Arne Næss, *Ecology, Community, and Lifestyle*, trans. David Rothenberg (New York, Cambridge University Press, 1989), 11.



the human bestowal of value restricts the reasons for valuation to the domain of human will. The central imperative of environmental moral philosophy is to allow nonhumans to speak for themselves.<sup>22</sup> Whether we value a body for its singular identity or for its usefulness for manufacturing cardigans for chihuahuas, humanity remains the sole decider of value. With this critique in mind, an alternative concept was developed, which I call the *property understanding* of intrinsic value. The intrinsic value of a body is an objective property of that body which we can discover through some kind of observation, usually of a special case.<sup>23</sup>

I should clarify that when I discuss the property understanding of intrinsic value, I do not mean that there exists some property which is intrinsically *valuable* possessed by a body, or that there is some property of a body which is valuable as an end in itself. For example, one can understand Singer-influenced animal liberation morality this way. Bodies possess a property, the capacity to suffer, which includes the neural architecture required to articulate this capacity, and the capacity to suffer is intrinsically considerable in moral reasoning. For another illustration, being able to move oneself, conativity, is on some accounts, for example Charles Cockell's, considered the intrinsically considerable property for value. On this ground, he advocates that micro-organisms are worthy of moral consideration, and has laid out a framework for such a philosophical system.<sup>24</sup> J. Baird Callicott proposes that ecosystems themselves are the proper objects of moral consideration, and those bodies whose activities constitute relations helpful to the maintenance of an ecosystem's harmonious stability are intrinsically valuable.<sup>25</sup>

Holmes Rolston III argues that if any one part of the universe is valuable, then the relationships of interdependence between that body and all other bodies in the universe makes all of nature valuable as a whole. Rolston understands these interdependence relationships to be the possibility conditions for the existence of humanity, or anything that a human could value.<sup>26</sup> The existence of one valuable body depends on some other body, to which a person may be indifferent if considering that other body alone. This indifference would be a mistake if one understands the relationship of interdependence. So if all bodies exist interdependently, as in a system where each body conditions the existence of each other body, then all bodies are valuable

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<sup>22</sup> Jim Cheney, "Universal Consideration: An Epistemological Map of the Terrain," *Environmental Ethics* 20, no. 3 (1998): 265-277.

<sup>23</sup> Arne Næss, "Identification as a Source of Deep Ecological Attitudes," *Deep Ecology*, ed. Michael Tobias (San Marcos, Calif.: Avant Books, 1984), 268.

<sup>24</sup> Charles S. Cockell, "The Value of Microorganisms," *Environmental Ethics* 27, no. 4. (Winter 2005): 375-390.

<sup>25</sup> J. Baird Callicott, *In Defence of the Land Ethic: Essays in Environmental Philosophy* (Albany: State University of New York Press, 1989), 88-90.

<sup>26</sup> Holmes Rolston III, *Conserving Natural Value* (New York: Columbia University Press, 1994). Despite criticizing Rolston's approach to the nature of value, interdependence relations will be important in later stages of my project.

insofar as they are a condition for the existence of a body, to which they are related, valued by a person.<sup>27</sup> One might even value a body for broadly instrumental, or even selfish, reasons, while its interdependence with everything else in the universe would result in valuing the whole of nature intrinsically.<sup>28</sup> Næss often wrote that the intrinsically valuable property of a body was its capacity for what he called self-realization, the capacity “to live and blossom.”<sup>29</sup>

In the property understanding of intrinsic value, the value of a body is itself a property of that body, be it a capacity to suffer, conativity, some stabilizing role in an ecosystem, a capacity for self-realization, or some other property. Not every occurrence of the term ‘intrinsic value’ in an environmentalist moral philosophy is a sign that such a morality is based on the property understanding. One may read Rolston as preserving a concept of intrinsic value in his moral philosophy, but he articulates a version of the valuation understanding instead, where intrinsic value of all of nature is extrapolated from an aggregate of related acts of instrumental value. I believe there are important connections between intrinsic and instrumental value, but these connections only make sense in the context of a distinction of ethical and moral domains of philosophy, which I explain at the end of this chapter, and which Rolston does not adopt. To choose for intrinsic value some property of a body that is not itself the value of that body makes the determination of value rest with the person constructing the moral system. The value of a body is reduced to having a property that is not itself the value of the body. That property is a feature common to all valuable bodies which determines whether a body is of value. In order to be valuable, the bodies considered so are in some manner the same.

One can understand why the concept of intrinsic value was developed and how it became influential by examining the history of ecocentric philosophy, a reorientation of moral thinking to make nature, not humanity alone, the central figure of concern.<sup>30</sup> I said at the beginning of this chapter that the greatest potential for environmental philosophy is in creating a way of thinking that can easily understand difference, and clearly spell out how that ontological concept operates morally and politically. But this understanding departs from the reasons why environmental moral philosophy was created in the first place. It was a philosophical reaction to

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<sup>27</sup> Philip J. Ivanhoe, “Of Geese and Eggs: In What Sense Should We Value Nature as a System?” *Environmental Ethics* 32, no. 1 (Spring 2010): 67-78.

<sup>28</sup> Robert Elliot, “Instrumental Value in Nature as a Basis for the Intrinsic Value of Nature as a Whole,” *Environmental Ethics* 27, no 1 (Spring 2005): 43-56.

<sup>29</sup> Arne Næss, “The Shallow and the Deep, Long-Range Ecology Movement: A Summary,” in *The Selected Works of Arne Næss*, ed. Alan Drengson (Dordrecht: Springer, 2005), 8. This articulation of the concept of intrinsic value differs from *egenverdi*, which I take as the paradigm of the property understanding of intrinsic value that I describe below. However, this will not be the only inconsistency in Næss’ philosophy I shall examine, and they are some very productive inconsistencies indeed.

<sup>30</sup> Callicott, *In Defence of the Land Ethic*, 3-4.

what was perceived to be a crisis. Humanity had developed technology that did immense environmental harm, and had long used this technology with impunity and short-sightedness with respect to its destructive effects. When ecocentric philosophers such as Næss, Callicott, Bill Devall, and George Sessions were writing the field's foundational works in the 1970s and 1980s, they often took technology to be inherently malevolent and exploitive of nonhumans.<sup>31</sup> Nonhuman bodies had, according to these writers, long been valued only instrumentally for how they could benefit humans, as if only humans and human goals were valuable in themselves.

The remedy was to advocate that nonhuman bodies, often referred to en masse as simply 'nature,' had intrinsic value, and the existence of such value did not depend on the decisions of humanity. Humans could notice this intrinsic value, or not; if not, it was a matter of human shortsightedness. If one considers intrinsic value to be a discoverable property of a body, the generation of a body's value need have nothing to do with human activity. If humans never play a role in the creation of a body's value, then it must be a mistake to reduce a body's value to some instrumental role in human needs and desires. A human may believe, thanks to anthropocentric attitudes developed over long inculcation of technological habits, that a body's value depends only how humans can use it. But, according to the property understanding of intrinsic value, that is wrong. Ecocentric morality condemns any reduction of an intrinsically valuable body to an instrumentally valuable body. This moral error is also an epistemic and ontological error, because the error is in failing to come to know a property of the body in question. In the rest of this chapter, and the chapter following, I will show the strengths and limitations of the property understanding of intrinsic value with reference to this major goal of environmental ethics: taking the nonhuman, the different, into account.

For an ecocentric morality, the way to understand what the best action is requires attention to perspectives different from one's own, and the consequences of one's actions in the context of those perspectives. In this context, a great human moral failure is shortsightedness. Shortsightedness is sometimes willful ignorance, but more often merely obliviousness, which is nonetheless morally blameworthy. For example, Terry Tempest Williams, in *Refuge: An Unnatural History of Family and Place*, describes a hydroelectric project that caused the Great Salt Lake to flood the Great Bear River Migratory Bird Refuge. The humans who planned and built the hydroelectric project think only of human desires for power generation, believing a summary of these desires to be a complete account of the situation. There are no rivals among nonhumans with the ability to communicate a competing account of the situation because only humans speak

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<sup>31</sup> Bill Devall and George Sessions, *Deep Ecology: Living as If Nature Mattered* (Salt Lake City: Gibbs M. Smith, 1985), 5-6.

language. Williams describes the developers as oblivious to the activities and needs of the multifarious birds, plants, fungi, which could have built a more complete account of the entire Great Salt Lake ecosystem. The developers even ignore other human residents of the area who are opposed to the hydroelectric development.<sup>32</sup> Each of these bodies — whether bird, plant, fungus, anti-development human — have intrinsic value: a property that those responsible for the flooding have not even attempted to uncover. According to the property understanding of intrinsic value, the developers pay no attention to these values because they are oblivious to the existence of value properties. Having presumed that such properties do not exist, they do not bother seeking them out.

Living according to an ecocentric morality is extremely difficult. To adhere successfully to ecocentric norms requires humans to understand not only accounts of their own perspectives, but to build accounts for all other constituents of an ecosystem. This requires careful observation of all these bodies to build complex concepts based on their needs and biographies as well as one's own. An account of a situation is a tool for understanding that situation, and one strives for one's account to be as accurate and complete as possible. Dealing with other humans in a situation, my account can be quite accurate, because humans can engage in complex conversations with each other, and synthesize the accounts given into a more comprehensive account. But humans cannot engage in complex conversations with egrets, fire ants, or mildew, for example. In her analysis of the Great Bear River Refuge's destruction, Williams describes the developers as oblivious to the accounts of the nonhuman inhabitants of the refuge. But the reason for their lack of knowledge was that they learned about the situation only by looking for accounts that were already linguistic, passing over any other method of investigating the ecosystem. Even this collection was very selective, listening only to those humans who already agreed with them. If the developers had instead sought out the value property of the individual bodies in the refuge, using their observational and linguistic abilities to build accounts of those bodies, the destructive conclusion could have been avoided.

Mindful of the concerns environmental philosophy raises, one may attempt an account of those nonhumans constitutive of a situation. Perhaps one could carefully inspect the actions of the nonhumans in question and infer from that enough information to build an account which the nonhumans themselves have no powers to create. But even though one's account is about the actions of a nonhuman, a human is still creating and interpreting the account *as if* the nonhuman in question could give an account of itself in language. Yet an important feature of

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<sup>32</sup> Cited in Neil W. Browne, *The World in Which We Occur: John Dewey, Pragmatist Ecology, and American Ecological Writing in the Twentieth Century* (Tuscaloosa: University of Alabama Press, 2007), 172-181.

that nonhuman's existence is its inability to give such an account. The activity of a human in creating the account distorts one's understanding of the body for which the account is given. In discussing the interests and desires of a valley or a grove, one makes the valley or grove into a kind of person. Trying to speak for a body that cannot use language prevents one from genuinely understanding it. Personifying distortion arises in how an investigator of an ecosystem understands his activity. If he approaches his task as describing the processes that maintain the stability of an ecosystem or a population and how best to preserve that stability, there is no problem. But this strictly scientific approach is considered dangerous because of its rationality. Scientific attitudes, according to Jim Cheney, impose human systems of understanding on nature, while true knowledge accounts for the expression of nature in its activity.<sup>33</sup> The language of science abstracts from attitudes of love and care, which are essential means to recognize a body's property of intrinsic value. Scientific investigation carries a great danger of understanding nature as having no value of its own; it is a system to be measured.<sup>34</sup>

But an exhortation to narrative and emotional elements of nature indicates a limitation of the property understanding. If the value of nature is an aspect of nature itself, it must still be of a different kind than those properties that scientific investigation can describe. The exhortation to give an account for those creatures who cannot speak, to conceive oneself as an advocate for animals, plants, and ecosystems which have been disenfranchised until now, is a recurring rhetorical image to motivate people morally and ethically. Outside of what one can learn of an ecosystem's non-speaking aspects, a narrative element of the ecosystem is required. But narrative is a construction only of self-conscious creatures, because narrative is constituted as a response to the question of 'What happened?'<sup>35</sup> Bodies incapable of asking this question are, therefore, incapable of genuinely having narrative aspects of their existence, unless a relationship with self-conscious bodies like humans generate them.

The inability to craft a narrative of its own existence is a way in which bodies which are not self-conscious differ from those which are. To treat the narrative as an essential element of understanding ecosystems themselves, and not ecosystems in relation with self-conscious bodies, imposes a sameness of a human and an ecosystem with which a human may or may not interact. This imposition prevents a successful understanding of a body in its singularity. Those features of the body that are central to its identity are smoothed away by the imaginative act required to create the account. 'If the Great Bear River Refuge could speak, it would say the following,' some

<sup>33</sup> Jim Cheney, "Truth, Knowledge, and the Wild World," *Ethics and the Environment* 10, no. 2 (2005), 109.

<sup>34</sup> Cheney, "Truth, Knowledge, and the Wild World," 105-106.

<sup>35</sup> Gilles Deleuze, and Félix Guattari, *A Thousand Plateaus*, trans. Brian Massumi (Minneapolis: Minnesota University Press, 1987), 193-194.

representative account may begin. But the Refuge cannot speak, and for a human to speak as if it could distorts its singularity which we are trying to understand. If any action a human takes to understand a nonhuman body is a distortion of that body, then the only first step to a solution appears to be that the human understander must be completely passive before the nonhuman body he seeks to understand.

Knowing understood as a passive process is central to the property understanding of intrinsic value. I see two ways of understanding passive knowing in environmental philosophy: observation and intuition. I will examine observation first, because this conception of passive knowing has garnered the least attention in the literature. The works of Aldo Leopold offer the paradigm of observational knowledge. If we are looking for some property of a body, whether that body is a single animal or an entire ecosystem considered as a unity, we will find it through detailed and meticulous observation of that body. Take for example his account of the lagoons at the Colorado River delta, which he explored with his brother in 1922:

The still waters were of a deep emerald hue, colored by algae, I suppose, but no less green for all that. A verdant wall of mesquite and willow separated the channel from the thorny desert beyond. At each bend we saw egrets standing in the pools ahead, each white statue matched by its white reflection. Fleets of cormorants drove their black prows in quest of skittering mullets; avocets, willets, and yellow-legs dozed one-legged on the bars; mallards, widgeons, and teal sprang skyward in alarm. . . . Often we came upon a bobcat, flattened to some half-immersed driftwood log, paw poised for mullet. Families of raccoons waded the shallows, munching water beetles. Coyotes watched us from inland knolls, waiting to resume their breakfast of mesquite beans, varied, I suppose, by an occasional crippled shore bird, duck, or quail. At every shallow ford were tracks of burro deer.<sup>36</sup>

In this and other passages of *A Sand County Almanac*, Leopold displays a keen eye for large and small details of an ecosystem, all significant. A more urban person might observe green waters, a variety of birds and plants, unable to identify their species, and likely not notice the stealthy animals like raccoons or lynx, the insects and deer tracks escaping their attention altogether. In describing the coyotes and their food sources, Leopold also observes relations among the individual bodies of the ecosystem, in this case relations transforming some plants and animals into food. Observation with attention to as much detail as possible about the bodies observed and the relations among them exemplifies an attitude that I will call mindfulness. Mindful observation discovers the singularity of that which is observed. A morality operating through mindfulness produces decisions on what must be done in this unique situation, preserving in one's thinking the difference of this situation from all others.<sup>37</sup>

<sup>36</sup> Aldo Leopold, *A Sand County Almanac* (New York: Ballantine Books, 1970), 151.

<sup>37</sup> Mick Smith, *An Ethics of Place: Radical Ecology, Postmodernity, and Social Theory* (Albany: State University of New York Press, 2001), 15-16.

Yet one can observe without understanding the value of what one has observed, without perceiving the value property. This passage and many others from *A Sand County Almanac* are physical descriptions of some phenomena in the wilderness. Only in the poetic invocations of the language itself is there any communication of the value of this wilderness, of the intrinsic value of nature. Whether one observes some ecosystem with the same attention to detail and scientific background knowledge as someone like Leopold is irrelevant to the intuition. The property of nature's value must impress itself upon you. Leopold himself often needlessly killed wolves when he was a younger naturalist.<sup>38</sup> Though he would regret his actions later in life, at the time, he did not perceive the value property of the wolves he killed, despite his detailed observational skills. Perceiving a body's intrinsic value depends not only on observation, but on an intuition that arises within an experience of nature, however widely each person's particular experiences may vary. However, descriptions of the intuitive experience tend to focus on the feeling the intuition produces in the intuiter, and the change in attitude toward nature that the feeling causes, instead of the property of value itself.

The property understanding of intrinsic value faces a problem in the perennial lack of focus given to the property that changes one's feelings about nature. The effect, a change of attitude toward nature, is analyzed, but the cause, the value-property of the body in question, remains mysterious. Roman Briggs describes a simple realization as he remembers an adolescence working on the family farm, "coming to recognize the complexity and elegance which inheres within the land." He comes to love the land through this realization, which he considers a signpost of moral maturity.<sup>39</sup> The experience of Holmes Rolston III's everyday life in a rural community in the Rocky Mountains can be enough for this property to impress itself upon one in growing used to its rhythms and vistas.<sup>40</sup> Rolston also offers the experience of hunting as revealing the value of the wild nature that a hunting human helps to constitute.<sup>41</sup> Jim Cheney describes how "a backpacking friend came upon a huge granite rock that expressed the more-than-human nature of the world in a particularly concentrated way that he could only refer to — with a certain awe — as 'sacred.'"<sup>42</sup>

Each of these examples are quite different from each other, though they can all be considered, after the cliché, cases of people in touch with nature: farming as a boy, everyday rural

<sup>38</sup> Leopold, *A Sand County Almanac*, 138.

<sup>39</sup> Roman Briggs, "The Greening of Heart and Mind: A Love Story," *Environmental Ethics* 31, no. 2 (2009): 168.

<sup>40</sup> Holmes Rolston III, "Mountain Majesties Above Fruited Plains: Culture Nature, and Rocky Mountain Aesthetics," *Environmental Ethics* 30, no. 1 (2008): 5-20.

<sup>41</sup> Val Plumwood, "Integrating Ethical Frameworks for Animals, Humans, and Nature: A Critical Feminist Eco-Socialist Analysis," *Ethics and the Environment* 5, no. 2 (2000): 312.

<sup>42</sup> Cheney, "Universal Consideration," 276.

life, the intensity of hunting, hiking through rarely travelled wilderness. Through their experiences, each writer comes to understand nature as more than a mere resource, or a place to live, or an annoying summer job. These experiences of nature provoke a reverential, respectful, loving attitude. Descriptions of the intuitive experience focus on the details of that experience, and the change in attitude it provokes. The intuitive experience is a rupture that forces one to perceive the intrinsic value of bodies. The narrative of one's life is irrevocably changed, and cannot continue as it had. But not everyone who experiences nature experiences this rupture breaking from their less enlightened lifestyle. It is a recurring theme of environmental philosophy to disparage those who treat nature instrumentally, as a mere resource, something to be used or cleared away for the useful. One can "recognize the complexity and elegance" of nature, but find its complexity a repugnant chaos, and think a carefully manicured classical garden would be even more elegant. Two people may experience the same bodies, but without being properly receptive of the impress of the value property. Those who have developed such an attitude are open to this impression, the proof of their openness being the development of the attitude.

Perhaps one can understand what a body's intrinsic value property is by analyzing the attitudes that the experience of recognizing intrinsic value generates. These attitudes can be grouped into two categories: awe of the alien, and sympathy engendering care. I will discuss awe of the alien, or a reverential attitude, first. Cheney's story of the enormous granite rock is one of these, and environmental philosophers who look to religious traditions for their philosophical inspiration also fit into this category. Although not all analysts of religion consider intuitions, they share with intuitionist environmental philosophers a focus on reverential attitudes to nature and to existence generally. Specific references are often made to Asian and Aboriginal religions. These religions are supposed to encourage an attitude of worshipfulness toward nature, understanding nature as sacred, and understanding humanity as part of nature. This is in contrast to the monotheistic traditions, whose creation myths supposedly condition its human constituents to think of nature as that over which they have dominion.<sup>43</sup>

The reverential attitude towards what is different is articulated in religions as a transcendent god or a divine nature. As an example, Erazim Kohák writes of the lived experience of nature, "the presence of God is so utterly basic, the one theme never absent from all the many configurations of life's rhythm. The most basic trait of the world that confronts a dweller in the radical brackets of the forest clearing is that it is God's world, not 'man's,' and that here God is

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<sup>43</sup> Robin Attfield, "Social History, Religion, and Technology: An Interdisciplinary Investigation into Lynn White Jr.'s 'Roots,'" *Environmental Ethics* 31, no. 1 (Spring 2009): 31-50.



never far.”<sup>44</sup> Kim Sung-Hae describes lessons on living in the most passive way possible in the *Xiang'er Commentary on the Daodejing*. The commentary describes how to strive for a literal stasis of action, the value of nature being understood as that which must not be disrupted.<sup>45</sup> The thinking of ancient Korea's Indramang community is said to lead to an intuition of nature as that which must be revered.<sup>46</sup> Even ancient Chinese sex rituals have been advocated as a way of intuiting nature's value in a religious context.<sup>47</sup> One problem with appropriating religious traditions for a political and philosophical environmentalism is that it often over-simplifies a complex ideological situation. There is a danger that the descriptions of these religious worldviews and their holistic ethical philosophies tend to romanticize and essentialize a complex culture. Appeal is often made to religions because these are ideologies that already have a large number of devout and casual adherents around the world. Environmental philosophy's practical goal is to provoke a mass movement for conserving nature, and where a mainstream religion can be used to inspire lifestyles of environmental stewardship or reverence, such inspiration is welcome if it can move people toward the practical goal.

But the question remains of what one can learn about an object of reverence from that reverential attitude. Reverence is understood as an attitude that acknowledges the intrinsic value of natural bodies. Mountains are often the subjects of reverence in environmental philosophy, and Leopold's poetic injunction to think like a mountain means to take a point of view that more widely encompasses spaces, places, times, and possibilities of life and co-habitation than the perspective of a self-centred human.<sup>48</sup> Leopold, Rolston, Cheney, and Næss all take inspiration from their mountaineering experiences. Næss includes in his accounts of mountaineering his hermit-like vacations at his hut on Tvergastein Mountain. Reverence is an attitude constituted from an experience of sublimity, when words fail us in the attempt to describe the immensity of mountains compared to humanity. Næss can only say, with some irony, that a mountain can best be described in language as “big, very big.”<sup>49</sup> Rolston describes the problem of the epistemic gulf between us and what we revere directly, though he does not consider that gulf a problem. For Rolston, mountaineering is an experience of discovering facts in the world that are massively

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<sup>44</sup> Erazim Kohák, *The Embers and the Stars: A Philosophical Inquiry into the Moral Sense of Nature* (Chicago: University of Chicago Press, 1984), 182.

<sup>45</sup> Kim Sung-Hae, “The Immoral World: The Telos of Daoist Environmental Ethics,” *Environmental Ethics* 30, no. 2 (Summer 2008): 139-143.

<sup>46</sup> Lee So-Young, “Korean Environmental Thought and Practice: A Case Study of the Indramang Community,” *Environmental Ethics* 30, no. 2 (Summer 2008): 115-134.

<sup>47</sup> Dolores LaChappelle, “Sacred Land, Sacred Sex,” in *Deep Ecology*, 102-121.

<sup>48</sup> Leopold, *A Sand County Almanac*, 137-140.

<sup>49</sup> Arne Næss, “Modesty and the Conquest of Mountains,” *Selected Works*, 365.

larger than humanity's scale of action could possibly be. On his account, the truths of nature need not even fit the usual demands of logical consistency and coherence. Claiming that he follows Hilary Putnam's pragmatist account of knowledge, Rolston dismisses demands for consistency and coherence as long-ingrained habits of human psychology to which the structures of the universe beyond a human skull need have no allegiance.<sup>50</sup> This incommensurability with ordinary human thought is the power of bodies like mountains having nothing in common with humanity when these bodies exist in a manner that inspires reverence. Human understanding faces a task beyond its capacity.

My examination of the second category of respectful attitude toward nonhuman being is the subject of the following chapter. Sympathy and care for nature is a topic that is best dealt with outside the context of my discussion of the property understanding of intrinsic value. Care is purely a matter of attitude toward experienced bodies, not about what those bodies impress on the experiencer. My investigation of how to understand intrinsic value as a property of bodies ends here. Wherever I have looked in environmental philosophy for accounts of value as a property, I find discussions of the attitudes in people that this property allegedly inspires. I have not been able to discover a positive account of what this property actually is. Even Næss, an uncompromising advocate for the property understanding of intrinsic value, admits to having never given such a positive account. He writes, "I myself trust the intensively meaningful and spontaneous experience of the value of life in a free nature."<sup>51</sup> What matters is not a body's property of value, but the attitude of reverence and love that the experience of "life in a free nature" engenders.

In the context of environmental philosophy, there remains much suspicion of processes called anthropogenic, processes that begin with a human act or thought.<sup>52</sup> The suspicion is that if any evaluation begins restricted to human thinking, then it inevitably reduces to a dependence on human interests, to the exclusion of nonhumans. Because the valuation understanding of intrinsic value would make human thinking the generator of nature's value, it cannot escape the charge of anthropogenesis some would levy against it. To value a body without danger of accidental reduction to instrumentalism, the reason for valuation must not rest on human decision. So a body must possess a property of value that could impress itself on a completely passive human observer as the foundation of that observer's act of valuation. Yet any attempt to

<sup>50</sup> Holmes Rolston III, "F/Actual Knowing: Putting Facts and Values in Place," *Ethics and the Environment* 10, no. 2 (2005): 137-174.

<sup>51</sup> Arne Næss, "Expert Views on the Inherent Value of Nature," *Selected Works*, 157-158.

<sup>52</sup> Writers such as Bryan Norton, Ben Minteer, and Andrew Light, who identify as environmental pragmatists have no problem with the origin of valuation being human thought, but the debate between the two sides has come down to an impasse over the last decades.

discover such a property always falls back on human experience: one comes to value a body, but one cannot say why.<sup>53</sup> That one must revere nature becomes an unjustified and unjustifiable dogma of the environmental philosopher. If one does not experience this feeling of reverential awe before nature, then one is not perceiving properly, sick with confused anthropocentric Western attitudes of hubris.<sup>54</sup>

An example that best illustrates how an environmental morality that can easily slip from a positive, if anthropogenic, starting point to a hubristic attitude is the idea of the steward. The image of humanity as an environmental steward is sometimes justified in the context of Christian theology, another example of how religion can be pressed into service for environmentalist moral philosophy.<sup>55</sup> Stewardship morality, however, need not rely on Christianity for its moral justification. Rachel Carson best articulates the moral concept of environmental stewardship. Stewards are people who, for example, practice agriculture for the needs of their community. But they also practice ecological and biological science to understand how their entire ecosystem functions, and use this knowledge to practice their agriculture in harmony with all the elements of a mutually constitutive complex ecosystem. Most importantly, in the role of the steward, humans have dominion over Earth.<sup>56</sup> It is not the dominion of a dictator, but that of a proud custodian, one who believes that the harmony his work maintains would fall to pieces without him.

Environmental stewardship programs, in practice, construct public moralities which can be highly effective in preserving ecosystems vulnerable to the destructive activities of human communities. Such moral attitudes and principles encourage mindfulness and care for nonhuman assemblages in two ways. Care emerges through the humble attitude derived from understanding the small scale of the human position in the universe. The epistemic imperative to make sense of the world creates feelings of inquisitiveness, which leads to mindful inquiry.<sup>57</sup> Despite its practical effectiveness, a morality of environmental stewardship is still egotistical. Such a morality understands a self-conscious subject in an ecosystem as a benevolent guardian keeping all its elements in their proper places for the stability of the system. A creature insignificant in scale

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<sup>53</sup> Scott F. Aikin, "The Dogma of Environmental Revelation," *Ethics and the Environment* 13, no. 2 (2008): 29.

<sup>54</sup> Aikin, "The Dogma of Environmental Revelation," 25-6.

<sup>55</sup> Manussos Marangudakis, "On Nature, Christianity, and Deep Ecology: A Response to W. S. Helton and N. D. Helton," *Journal of Moral Education* 37, no. 2 (2008): 245. Environmental moral philosophers often find common points with religious traditions, but reference to religion is not required to build a philosophy.

<sup>56</sup> Marc Bekoff, and Jan Nystrom, "The Other Side of Silence: Rachel Carson's Views of Animals," *Zygon: Journal of Religion and Science* 39, no. 4 (December 2004): 875-876.

<sup>57</sup> Catherine M. Roach, Tim I. Hollis, Brian E. McLaren, and Dean L. Y. Bavington, "Ducks, Bogs, and Guns: A Case Study of Stewardship Ethics in Newfoundland," *Ethics and the Environment* 11, no. 1 (Spring 2006): 58-60.

installs itself as a kindly master over all because of its peculiar powers of self-conscious thinking to create systems of understanding the universe. A subject, capable of systematic knowledge, knows best, so directs and commands all processes for what he takes to be their own good. The epistemic presuppositions of a stewardship morality result in a commanding attitude that irreconcilably clashes with the sympathetic attitudes which ground stewardship morality.<sup>58</sup>

The inescapable problem of the property understanding of intrinsic value is one of method. The goal is admirable: to find that nature's value is a discoverable fact, that the value of a mountain is just as real, and just as foolish to deny, as its location, height, and mineral composition. In paradigm examples of environmental writing — Henry David Thoreau, John Muir, Leopold, and Næss — the writers experience the value of nature as part of nature itself. But not everyone who experiences nature experiences its value, so those who do experience its value must intuit some quality in addition to the perceptual experience alone. Many arguments for complex moral theories begin from premises their advocates declare intuitively true. The environmental moral philosophers discussed in this chapter seek to add the intrinsic value of nature to the list of those intuitive truths, even though the nature of this value is often ambiguous or utterly mysterious. Næss calls direct intuition “the most important category of knowing.”<sup>59</sup> Indeed, the inventor of the term ‘deep ecology’ distrusts the proliferation among environmentalist theorists of new systems of rights, obligations, and responsibilities among individuals, species, phyla, and ecosystems because of their complexity. A philosophical system deriving moral conclusions from complicated arguments connecting a plethora of abstract principles has doubtful plausibility, says Næss, because it lacks “a clear intuitive basis.”<sup>60</sup>

Recent work on intuition may create serious problems for moral reasoning that depends

<sup>58</sup> Isaac Asimov, *Foundation and Earth* (New York: Doubleday, 1986), 346-349. An example that illustrates what is disturbing about this attitude of humble directorship is the character arc of this novel's protagonist, Golan Trevize. In the preceding novel in Asimov's series, Trevize, through means of unimportant and complicated technobabble, is able to choose in one moment of decision the future evolutionary development for the entire Milky Way Galaxy. He spends this entire novel working out why he chose as he did, tortured by remorse over whether he made the correct decision, and whether one person should even have been empowered to do so. He eventually discovers the figure whose telepathic influence actually had been shaping the development of the galaxy for the last 20,000 years: R Daneel Olivaw, the last living robot. Olivaw justifies his mental manipulation of trillions of humans spread across the galaxy's inhabited planets with a principle of stewardship: Asimov's Zeroth Law of Robotics, “A robot may not harm humanity, or through inaction allow humanity to come to harm.” A single robot, insignificant in terms of physical scale, has a moral principle literally hardwired into him, which dedicated him to direct in secret a massive population of entities. Olivaw sees nothing questionable about secretly directing the development of a galaxy for 20,000 years, because his mental powers were greater than any other entity in it. Knowing that he knew best, he took control. His control was secret, and so unable to be critiqued. He would not have understood why anyone would critique him anyway, because he knew that knew best.

<sup>59</sup> David Rothenberg, *Is It Painful to Think? Conversations with Arne Næss* (Minneapolis: University of Minnesota Press, 1993), 93.

<sup>60</sup> Arne Næss, “Anti-Fascist Character of the Eight Points of the Deep Ecology Movement,” *Selected Works*, 98.

on intuitive methods. In philosophical arguments, intuitions act as premises. When an argument is intended to have universal scope, the premises must be understood as obviously universally true. But there can be no proposition that, with sufficient gumption and creativity of the disputant, is universally, obviously true.<sup>61</sup> Intuitions regarding the same philosophical problems vary from person to person. Research on this variation has focussed on problems in analytic epistemology, but one can apply these conclusions to the environmentalist intuition of the intrinsic value of nature, taking due account of those who have the experience without the intuition.<sup>62</sup> As a result of his empirical research, Jonathan Weinberg no longer understands intuitions as revealing that which is obviously true.<sup>63</sup> An advocate of the intrinsic value of nature would “trust the intensively meaningful and spontaneous experience” to justify that he had intuited an indisputable universal truth. Those who do not intuit such an indisputable truth would simply be wrong. At the very least, they would not belong to the community of environmental moral philosophers, because they do not share the premise of the value of the nonhuman apart from its possibilities as resources for humans. In other words, such people are part of the problem that those who do experience the intuition are trying to solve.

Here we see a more unsavory side of the politics of environmental philosophy. One can only participate in the debates of environmental morality if one shares the foundational premises, such as nature having intrinsic value. Those who would call that premise into question are not members of the environmental philosophy community, because one is defined as a member of that community by seeing no need to question that premise. This exclusionary social dynamic is how a topic of investigation, such as the intrinsic value of nature, becomes, in Scott Aikin’s perjorative words, a dogma. Because intuitions cannot be genuinely universal, no intuition can be a foundation for a universal moral principle. The only function the property understanding of intrinsic value can claim is to facilitate social exclusion from discourse. But just because the property understanding of intrinsic value does not stand up to the above critiques, this does not invalidate the alternative valuation understanding of intrinsic value.

The critique of the valuation understanding was that valuation remained anthropogenic: the decision of whether something is valuable rests with humanity. Some environmental philosophers sought a basis for value in some other foundation than human understanding. But a body’s value property remained hidden, and one is always left with human attitudes, some blend

<sup>61</sup> Timothy Williamson, *The Philosophy of Philosophy* (Malden, Mass.: Blackwell, 2007), 210-214.

<sup>62</sup> Joshua Alexander, Stacy Swain, and Jonathan M. Weinberg, “The Instability of Philosophical Intuitions: Running Hot and Cold on Truetemp,” *Philosophy and Phenomenological Research* 76, no. 1 (January 2008): 138-155.

<sup>63</sup> Jonathan M. Weinberg, “How to Challenge Intuitions Empirically Without Risking Skepticism,” *Midwest Studies in Philosophy* 31 (2007): 337.

of reverence and care. The property of value itself is never discovered, no matter how hard one may search for it. If humans are to care for that which is not human, it will have to be a human decision to value, not a human discovery of value independent of their valuations. The anthropogenic nature of the act of valuation is only a problem if all human decisions are taken to come from caprice and naive self-interest. But it is possible for humans to investigate the world and make decisions paying mindful respect to the bodies involved and affected by those decisions, whether or not those bodies are human. Respect for those bodies would be undercut if one understood the goal of an investigation to speak for them. This moral exhortation sounds like humble respect, but implicitly encourages the hubris of imposing narrative-formation capacities on bodies that do not share such abilities.

If one believes that humans can investigate nature and learn from it without exploitive motives or hubris and with curiosity and respect, then one's problem will not be that the act of valuation is a human act. The problem, instead, is to show that it is better for humans to have a respectful and caring attitude for the different, rather than a naively self-interested attitude. The property understanding of intrinsic value fails to understand the different. This model of thinking searches for some property common to all bodies, some feature of all bodies in regard to which they are all the same: their value. An attitude of care, meanwhile, need not rely on any commonality among that which is cared for. What I call care for a body is the attitude I described earlier in the chapter as the valuation understanding of intrinsic value: to value a body for what it is, its singular identity being different from every other body.

Because I do not regard intuition as a reliable guide to truth, I am left having to avoid justifying my reasons why one should care for a body by reference to their intuitive clarity or truth. Instead, the ultimate justification for believing in a principle of nature's intrinsic value lies in an existential dilemma about whether it is worth existing at all. To answer this question positively requires developing a network of concepts that justify a sense of wonder at the diversity of existence, expanding moral considerability to the scale of the universe. My hypothesis is that intrinsically valuing singular identity itself is the best moral principle for such a goal. There are two very good reasons not to accept a principle of valuing singularity. The first, which I think is the most fundamental, I call the problem of ubiquity. Because the identity of each body involves at least a slight variation from the identity of every other body, each body is a singularity. Change is the generation of variations from any given status quo, the production of singularities that did not previously exist.

But if each body is a singularity, then valuing singularity means valuing all bodies absolutely. If every body that exists is singular, then it is no greater compliment to call a body

singular than to call it existent. A property is worthless if all bodies have that property: saying everything is valuable practically amounts to saying that nothing is valuable. Callicott writes, “An ethic that embraces everything embraces nothing.”<sup>64</sup> Camus writes, “To say that everything is privileged is tantamount to saying that everything is equivalent.”<sup>65</sup> However, I cannot find such an argument convincing, for two reasons. First, consider an analogous point. Say for the sake of the moment’s argument that string theory is the absolutely correct scientific and mathematical description of the universe (and lay aside any questions of scientific realism, as this is a single-purpose analogy only). This being the case, all the matter and energy of the universe is made of extremely small vibrating strings. To say that some body is made of strings is the same as saying it exists, so saying it is made of strings is an empty compliment. Yet one can still investigate strings scientifically and mathematically, eventually building a comprehensive understanding of the universe that is radically different than previous systems of physics. Analogously, if one accepts a principle of difference itself, singularity, being valuable, then one’s entire approach to the universe is different from what it was before this acceptance.

Such a view will not help one make practical decisions about whether one body is more valuable than another body, because the value of singularity so conceived is an absolute: each body is valuable, period. This conception of singularity’s universality alters no individual decisions; it is not a moral concept strictly speaking. It functions instead as an ethical concept: an idea which, as it comes to inform one’s habitual thinking, transforms one’s character, one’s personality. Valuation of singularity is not valuation by privilege. Universally applied privilege is, as Callicott and Camus say, contradictory, because privilege requires a contrast class of that to which one is indifferent. Valuing singularity universally does not directly impact individual decisions, but conditions the theme of one’s approach to the world. Return to Sartre’s *Nausea*, and Roquentin. His anxiety stems from an ontological problem. The singularity of the world is intolerable to him because genuine difference from what has come before implies the inevitable inadequacy of general statements. His only means of understanding the world is through general statements, which he aims to be universally applicable over time. The validity of an act of understanding is grounded in the possibility of complete understanding of the universe. If he believes the world is not fully comprehensible through this means, then it is not worth bothering to try. This question, whether to bother thinking, is a foundational for philosophy. I call it foundational because someone who has never thought philosophically before will be moved to do so from taking this question — Why bother? — seriously. As long as she continues to investigate

<sup>64</sup> Callicott, *In Defence of the Land Ethic*, 10.

<sup>65</sup> Albert Camus, “The Myth of Sisyphus,” in *The Plague, The Fall, Exile and the Kingdom, and Selected Essays*, trans. Justin O’Brien (New York: Alfred A. Knopf, 2004), 529.

this question on her own power, and not receive by rote any beliefs or ideas as dogma, the activity of philosophy continues.

The question ‘Why bother?’ is not the only question that can spark a person’s first philosophical exploration, but it is important for one of the most important matters for environmental philosophy: survival. Even the most misanthropic environmentalist philosopher who believes humanity to be inherently destructive and evil will still consider survival a key goal. In his case, it would be the survival of nature. Environmental philosophy arose with the environmentalist political movement, and they share the goal of finding out how to make sure Earth’s ecosystems survive the destructive activity of contemporary industry. To embrace the environmentalist movement is to embrace this goal in the present moment. Survival, whether of humanity, nature, or some rearrangement of them in a new kind of relationship, is a goal. Accepting survival as a goal requires a positive answer to the question ‘Why bother?’ To answer that question positively is to reject the possibility of completion as a ground for the validity of the attempt to understand the world. If one considers environmentalism important, one desires the survival of healthy ecosystems. This is not a nihilistic answer because there is no place in it for the universal indifference of someone like Roquentin who cannot understand the value of existence.

In some other time, place, and circumstance, some singularity may develop in the future that would invalidate the concerns of the environmentalist movement today. The world may change in a way that would even require a negative answer to an existentially foundational question. Some singularity may one day develop that would invalidate even the most obvious and comforting truths of the present. Someone who accepts the value of singularity holds the same ontological view about the universe as Roquentin. She diverges from him only insofar as she finds joy, not anxiety, in reality’s constant escape from universal statements. From the same ontological premise, the ethical conclusion differs. Dealing with such a narrator instead of Roquentin, perhaps Sartre’s narrator would have been something like Poppy, the joyful primary school teacher from Mike Leigh’s *Happy-Go-Lucky*.<sup>66</sup> It would be a slight exaggeration to call *Nausea* an inappropriate title for a book with this kind of narrator.

There is another conception of difference that is capable of being used for practical decisions. The two conceptions are related to each other, but have different characters and functions. This other conception of difference is a practical matter, more suited to moral inquiries and decisions. This conception of difference is my answer to the other reason not to accept the value of difference itself. It is the problem of destructive differences. From the fact of their singularity, each genocidal dictator, each HIV virus, each sludge-spewing chemical plant is

<sup>66</sup> Mike Leigh, *Happy-Go-Lucky*, DVD, directed by Mike Leigh (2008; Los Angeles: Miramax Lionsgate, 2011).



valuable, despite their destructiveness. However, thinking this way articulates an ethical concept of difference as universal singularity improperly, as if it were a moral concept for practical decision making. But universal singularity can be understood morally as well as ethically. All bodies are singular, but their singularity can also be mapped. Such mapping can measure the ways in which a body diverges from a field in comparison to which it had been indistinguishable, or in comparison to otherwise similar bodies. One can measure the degree of creativity a particular singular body has, providing one keeps a contrast class in mind.

Generating a singularity is a process of creation and destruction. The above examples of extremely destructive bodies throw the problem into its sharpest relief. When each state of affairs is singular, any change in a state of affairs destroys that state and its absolutely valuable singularity. But such change is process itself, the transformation of states of affairs. In transformation, what once was is destroyed. A new state is created, but destruction is required for that process of creation to succeed. Accepting the absolute value of singularity in a moral perspective focussing on the inevitability of destruction leads to a state of continual mourning. Ecology, with its focus on the interdependence of processes in their generation and transformation, supplies the basic framework of a guide to practical action: identifying which processes will empower or harm one.<sup>67</sup> Practicality and survival are different concerns from understanding singularity. A way to be mindful of the power one's actions have to transform the world is to investigate and be able to predict with reasonable accuracy what new singularities will be generated from one's actions, and which singularities will be destroyed. Despite change, and so creation and destruction, continuing without cease, valuing singularity is the means by which one appreciates the significance of change.

In moral contexts, singularity is a tool, a means of measuring degrees and kinds of divergence. But the moral conception of singularity, in contrast to the ethical, does not imply goals for action; it is only a tool for understanding the consequences of one's actions. The specific kinds of processes that are most important to measuring singularity will be described in later chapters. What is most important now is to understand the partiality of singularity measurement. Its implied goal is the preservation of one's own body, and the preservation or production of other bodies that it is in one's interest to preserve or produce. In moral contexts alone, how one should choose what bodies are beneficial to one's interests is an open question. The choice could be made by caprice, by profit, or by any means. Considering singularity in an ethical context guides a personality to make a better practical choice. Such a personality focusses on the joy of

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<sup>67</sup> Benedict Spinoza, *The Ethics, Treatise on the Emendation of the Intellect, Selected Letters*, ed. Seymour Feldman, trans. Samuel Shirley (Indianapolis: Hackett, 1992), 207.

producing novelty and divergence, and so in moral matters, proliferates diversity and complexity, growing the intensity of heterogeneity in existence. This is in contrast to the perspective that focusses on the loss that accompanies change. A nobler way to articulate the value of singularity ethically, in one's character is to exhalt in the production of divergences, the diversification of existence, and the breakdown of stagnating orders to create new systems of relations and frameworks of existence. A recurring theme in environmental philosophy's discourse is that maintaining and increasing diversity and difference is an important good.<sup>68</sup> If valuing singularity means valuing diversity, then singularity makes an excellent candidate for the central concept of a comprehensive philosophical worldview for environmental thinking in the twenty-first century.

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<sup>68</sup> Smith, *An Ethics of Place*, 185.

## 2. CARE FOR THE DIFFERENT AND THE PROBLEM OF ECOFASCISM

The central organizing question of this chapter is to examine how the principle of valuing singularity, the production of difference, justifies care for a body. I examine two possible justifications: 1) I care for a body because it is different from me; 2) I care for a body because of what it is. Caring for a body because it is different from me has often been understood as the justification of care central to environmental philosophy. However, caring for a body because it is different from me is open to an objection that applies to both its biocentric and ecocentric versions. Such philosophies have been called a new kind of fascism, promoting the debasement of humanity, human rights, and the political liberties that the Western tradition of moral discourse has established over centuries. As a means to my major goal, I describe this objection to ecocentricity, and my response to it. My response does not consist of a defense of caring for a body because it is different from me, because I think it is possible, though not inevitable, that an anti-human, anti-liberty morality could be built from this principle. I instead defend a moral attitude of care that fully embraces difference in environmental contexts, care for a body because of what it is, its singular identity.

One principle of practical morality that deals with difference directly is the precautionary principle for the avoidance of harm. If the action of some body would harm me, I would value some other body that interferes with the dangerous one to prevent its harming me. There are two problems such an approach to care has for a program of environmental philosophy. One is underdetermination. The avoidance of harm is an important principle for many environmental philosophers. Garrett Hardin, for example, makes the avoidance or lessening of harm a central element in his analysis of the long-term effects of technological development.<sup>69</sup> But analysis of harms and upsets alone — the calculation of practical difference — does not have to include environmental matters. One can develop a vibrant and complex moral philosophy based on avoiding harm only to oneself or one's community. Ecosystems themselves and most of their constituents may be too different, and too far separated from one's everyday life to matter. Another problem is the anthropocentrism I discussed in the previous chapter. A morality based on the precautionary principle alone, whether for the sake of an individual or community, is not satisfactory for my goals. Bodies are understood exclusively, or at least predominantly, as resources for those who value them. A defining turn in environmental philosophy is that these kinds of justifications for care are discredited as reductive and lacking respect for that for which

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<sup>69</sup> Garrett Hardin, *The Limits of Altruism: An Ecologist's View of Survival* (Bloomington: Indiana University Press, 1977), 351-352.

one cares.

Human needs for survival and flourishing are important to several contemporary approaches to environmental philosophy and the history of its development. After all, the practical goal of environmental thinking as the philosophy of a political movement is to aid humanity's survival by means of protecting the ecosystems in which they live. Human health crises in the urbanizing industrial period of human history have been taken as a model for moral systems focussed on ecosystem preservation and pollution avoidance.<sup>70</sup> Contemporary environmentalist political movements have also understood the protection of the environment, the surroundings of a human community, as the motive of their political action.<sup>71</sup> James Sterba argues that the political philosophies of egoism, libertarianism, and socialism, taken in a context of environmental philosophy, mandate a principle of the defense of one's own species. One has licence to damage or destroy that which will harm one, which he calls a "principle of preservation."<sup>72</sup> This is a principle of survival, and although problems of survival play a role in my project, they make only one part of an environmental philosophy in which singularity is a ground for a principle of intrinsic value.

Caring for that which is different from me is perhaps the most prevalent model of care in environmental moralities. The human cares for the nonhuman; cultural bodies care for natural bodies; the civilized man cares for the wilderness. I care for Not-I or Other. The reason I care is because that for which I care is different from me. An open question is whether one should understand difference from me in a contrastive sense, or some other sense. As environmental philosophy has developed, this justification for care has been roped together with several other assumptions about what humanity is, and what nature is. The following pages will explore how care is justified in environmental philosophy according to the contrast of humanity and nature. If difference is understood contrastively, care for what is different from me is care for what is the negation of myself. This contrastive conception of difference structures the dichotomy of technology and nature, a frequent theme in environmental philosophy. In such dualistic thinking, humanity is often understood to be alienated from nature by its very essence: even though humans evolved to their present state as all other forms of life did, through humanity's peculiar intelligence it has transcended nature.<sup>73</sup> The unbridgeable divide between technology and

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<sup>70</sup> Christopher J. Preston and Steven H. Corey, "Public Health and Environmentalism: Adding Garbage to the History of Environmental Ethics," *Environmental Ethics* 27, no. 1 (Spring 2005): 10-15.

<sup>71</sup> Midori Kagawa-Fox, "Environmental Ethics From the Japanese Perspective," *Ethics, Place, and Environment* 13, no. 1 (2010): 62-66.

<sup>72</sup> James P. Sterba, "Biocentrism and Human Health," *Ethics and the Environment* 5, no. 2 (2000): 273.

<sup>73</sup> Neil Evernden, *The Natural Alien: Humankind and Environment* (Toronto: University of Toronto Press, 1985), 118.

nature is often taken for granted.<sup>74</sup> Nature is understood as pure, peaceful, harmonious, an equilibrium, in contrast to humanity, understood as corrupt, violent, disruptive, and prone to provoking catastrophe. The prevalence of this dichotomy in environmentalist rhetoric precipitates a stern critique of environmentalism as hostile to humanity, as environmentalism inevitably slides into ecofascism. I will first explain and criticize the contrastive concepts of the dichotomy before turning to what I call the humanist critique of environmental moral philosophy.

Before I begin this analysis, I want to make a brief qualifying note. A reader may notice that this justification of care appears similar in structure to the philosophy of Emmanuel Levinas, particularly his understanding of the human subject as essentially ethical, where one is a subject only insofar as the Other calls for the subject to care for it. Although there may be superficial similarities, understanding Levinas is no help in this project. The Other in Levinas' philosophy seems to be an encounter with difference, that which escapes my own supposedly complete system of understanding existence. The Other is a break from the comfort of totality, that which is outside of all my categories of explanation, no matter how apparently complete my system of understanding may be.<sup>75</sup> This difference constitutes itself as an ethical call.<sup>76</sup> However, there is only one experience that constitutes this breaking moment when that which is different from all that I can understand reveals itself: the experience of the human face.<sup>77</sup> Despite the Other being named the Other, and so understood through its difference from the I, the call it sends me to care for it is based on the commonality of I and the Other: we are the same, both faces, calling to each other. A forest has no face, yet the greatest potential of environmental philosophy is an ability to build ethical and moral relationships with ecosystemic bodies.

The major I / Not-I dichotomy in environmental philosophy is that of the human and nonhuman, often parsed as culture and nature, or civilization and wilderness. Many environmental philosophers accept this dichotomy, and take as their major task defining and explaining its details. Others make a problem of it and work to break it down. Among those who accept the dichotomy of human civilization and nonhuman nature, the difference is understood in two ways: 1) The separation is inescapable, because part of the essence of humanity itself is to be unnatural; or 2) The separation has developed through history, usually through some human activity such as agriculture, urbanism, or industry. But the activity supporting the contrastive

<sup>74</sup> Erazim Kohák, *The Embers and the Stars: A Philosophical Inquiry into the Moral Sense of Nature* (Chicago: University of Chicago Press, 1984), 32-34.

<sup>75</sup> Emmanuel Levinas, *Totality and Infinity*, trans. Alphonso Lingis (Pittsburgh: Duquesne University Press, 1969), 39-40.

<sup>76</sup> Levinas, *Totality and Infinity*, 197.

<sup>77</sup> Levinas, *Totality and Infinity*, 66-67.

separation need not be a human activity. Much of the political rhetoric of environmental activism begins from the idea that there is a primordial balance of nature which human technology has disrupted, the goal of activism being to restore that balance. Humanity, according to this way of thinking, has interfered with the natural development of the Earth, disrupting the harmony of nature which must be restored.<sup>78</sup>

One can understand the goal of environmental activism as the inversion of what George Sessions describes as the dominant paradigm of Western thinking regarding nature: that humanity constitutes an absolutely separate and different order of being from all else on Earth, and is the superior member.<sup>79</sup> The idea is anticipated in Spinoza, who writes of the opinion, widespread even in his pre-industrial era, that humanity is essentially unnatural. “They appear to go so far as to conceive man in Nature as a kingdom within a kingdom. They believe that he disturbs rather than follows Nature’s order.”<sup>80</sup> Such environmental activism thinks as follows: because the root cause of contemporary ecological catastrophes is humanity’s sense of superiority over the nonhuman or nature, to halt this catastrophic movement requires reversing humanity’s attitude of superiority relative to nature. Instead of humanity, the superior member of the dichotomy is nature because of its balance, its divine harmony. Humanity is then a disruptor, a force for corruption, an aberration from and threat to nature’s harmony. Helena Siipi surveys many contemporary debates in philosophy and politics that revolve around ways to understand this categorical separation of the human and natural. She discusses the genetic engineering of plants and animals for agricultural and medical purposes; organic, free range, and factory farming techniques; and the human-assisted evolution of domestic and agricultural animals, making pets and livestock out of wild creatures. All of these debates revolve around an unquestioned assumption that to be natural is to be good, and that human interference in a body is a corrupting influence that renders it unnatural. On these debates, the political environmentalist demands that there must be some return to the basic goodness of nature.<sup>81</sup>

But environmental philosophy includes more subtle analyses of our planet’s contemporary ecological problems. Sessions understands “the diminishment of man and the diminishment of the planet and its nonhuman inhabitants as essentially one and the same problem.”<sup>82</sup> Basically, we’re all in this together. This is a step towards greater nuance in thinking.

<sup>78</sup> J. Baird Callicott, “Multicultural Environmental Ethics,” *Daedalus* 130, no. 4 (Fall 2001): 79.

<sup>79</sup> George Sessions, “Ecological Consciousness and Paradigm Change,” in *Deep Ecology*, ed. Michael Tobias (San Marcos, California: Avant Books, 1984), 29.

<sup>80</sup> Benedict Spinoza, *The Ethics, Treatise on the Emendation of the Intellect, Selected Letters*, ed. Seymour Feldman, trans. Samuel Shirley (Indianapolis: Hackett, 1992), 102.

<sup>81</sup> Helena Siipi, “Dimensions of Naturalness,” *Ethics and the Environment* 13, no. 1 (2008): 71-103.

<sup>82</sup> Sessions, “Ecological Consciousness and Paradigm Change,” 28.

But Sessions, despite this moment of subtlety, throughout his work maintains the absolute dichotomy of humanity and nature. He simply carries out a less hostile inversion. For him, humanity is separate from nature to fulfill a role as nature's protector.<sup>83</sup> One diagnosis for the cause of humanity's environmental catastrophes is that we have stopped following nature, and created non-natural ways of existence. Nature is understood as a primitive state of harmony. Those who follow nature do no harm, because nature, understood in contrast to technological humanity, is a state of being that does no harm to Earth. This idea follows Holmes Rolston III's philosophy from *Conserving Natural Value*.<sup>84</sup> Humanity is considered as once having been part of nature, but having acted to create this absolute separation, this fall from a state of grace.

Nature has long been understood as a primordial harmony, a peacefully ordered balance, in contrast to the violent, disordering forces of humanity. The structure of absolute dichotomy remains the same, but the concept now includes a dichotomy of ordered harmony and disordered chaos linked respectively with nature and humanity. Dennis Jelinski describes the following five conceptions of nature as a harmonious purity: 1) The ancient Greek concept of justice was understood as the harmonious order of nature, which human activity could either follow or disrupt. 2) A central premise of William Paley's nineteenth century design argument for the existence of God is that nature is a perfect creation, which therefore could only have been created by a perfect being. 3) The early conservationist movement in America also used the balance of nature as a concept in its rhetoric. 4) The science of ecology began with ecosystems conceived as superorganisms whose constituents act as organs maintaining a balanced harmony, although the consensus of modern ecologists has abandoned such strong ecosystemic unity.<sup>85</sup> 5) The Gaia Hypothesis in planetary ecology is a popular articulation of this concept of nature as perfect harmony. Nature, left to its own devices, will create the conditions that sustain itself and the planet as a whole. Only the unnatural activity of humanity throws off this balance and results in the contemporary global environmental catastrophe.<sup>86</sup>

The absolute dichotomy of harmonious nature and disruptive humanity permeates the American tradition of environmental philosophy. According to J. Baird Callicott, the works of Henry David Thoreau, John Muir, Aldo Leopold, and many others articulate the dichotomy through an image of American wilderness as a real-life Eden. He even uses the term 'Edenic' to describe the romantic idealization of the wilderness as that which is utterly alien to humanity,

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<sup>83</sup> Elizabeth Skakoon, "Nature and Human Identity," *Environmental Ethics* 30, no. 1 (Spring 2008): 40-41.

<sup>84</sup> Nathan Kowalski, "Following Human Nature," *Environmental Ethics* 28, no. 2 (Summer 2006): 165-83.

<sup>85</sup> Dennis E. Jelinski, "There Is No Mother Nature—There Is No Balance of Nature: Culture, Ecology, and Conservation," *Human Ecology* 33, no. 2 (April 2005): 271-280.

<sup>86</sup> Michael Tobias, "Humanity and Radical Will: Reflections From the Island of Life," in *Deep Ecology*, 2-27.

unstained by its corrupting influence.<sup>87</sup> Ralph Waldo Emerson, a foundational figure of American environmentalism in the nineteenth century, popularized an understanding of nature as absolutely different from humanity. Nature is an Eden corrupted by the merest touch of humanity. Ironically, Frank Coleman identifies Emerson's dichotomous account of nature as encouraging widescale land theft and the clearing of forests. Wilderness was so alien to humanity that even value could not apply to it.<sup>88</sup> The poetry of Alaskan John Haines, a canonical figure of twentieth century wilderness literature, understands wilderness as the calm silence disrupted by the clattering noise of humanity.<sup>89</sup> Erazim Kohák, a Czech emigré who settled in rural New England, also distinguishes wilderness and urbanity in terms of silence and noise.<sup>90</sup> Wilderness is, for Jim Cheney, a place that has remained exempt from humanity's fall into an instrumentalist way of thinking based solely upon exploitation of resources. It is where humanity can rediscover its pre-fallen nature through a primitive way of life. Such a life forgoes the abstractions of modern technological ways of life to rediscover the mythological ideal of humanity living in perfect harmony within nature.<sup>91</sup> Wilderness is defined by a negation of all that is essential to contemporary humanity. Anthropomorphism of thought and morality is, for an environmental moral philosopher, the greatest sin.

But there is nothing more anthropomorphic than this American image of wilderness as Eden, because understanding it requires contrast with humanity. Wilderness in this tradition is the negation of humanity. It is not positively defined in its own terms, but only as a reversal of technological humanity, the mirror image of human nature. Only the idea of the corrupted has any positive content, while the purity of nature remains essentially mysterious. In this way of thinking, the idea of wilderness has no meaning apart from contrast with humanity. The absolute dichotomy of humanity and nature results in implausible Edenic idealizations of nature that have nothing to do with reality. Figures like Christopher McCandless and Timothy Treadwell demonstrate the folly of Edenic thinking, even while they are regarded as exemplars of those who have given up hope for inevitably corrupt humanity and have thrown themselves into the purity of wilderness. They represent two ways of thinking based on the Edenic understanding of wilderness, displayed for McCandless in the nonfiction novel *Into the Wild*, and for Treadwell in

<sup>87</sup> J. Baird Callicott, "What 'Wilderness' in Frontier Ecosystems?" *Environmental Ethics* 30, no. 3 (Fall 2008): 237.

<sup>88</sup> Frank M. Coleman, "Classical Liberalism and American Landscape Representation: The Imperial Self in Nature," *Ethics, Place, and Environment* 13, no. 1 (2010): 75-96.

<sup>89</sup> Neil W. Browne, *The World in Which We Occur: John Dewey, Pragmatist Ecology, and American Ecological Writing in the Twentieth Century* (Tuscaloosa: University of Alabama Press, 2007), 131-132.

<sup>90</sup> Kohák, *The Embers and the Stars*, 36-37.

<sup>91</sup> As cited in Mick Smith, *An Ethics of Place: Radical Ecology, Postmodernity, and Social Theory* (Albany: State University of New York Press, 2001), 4.



the documentary *Grizzly Man*. McCandless sought an authentic encounter with wilderness, a contest of immense danger whose authenticity derived from the genuine possibility of his death. Treadwell sought an even more radical break from human culture: literally to become a bear. Identifying humanity only with hate and cynicism, he saw in the bears he observed only love and sincerity, and committed so deeply to this vision that he even ignored the depth of violence in the actions of bears themselves.<sup>92</sup> *Grizzly Man* director Werner Herzog offers an illuminating critique of the Edenic understanding of wilderness, even though much of his meditation on Treadwell hews closely to the language of humanity and nature as an absolute dichotomy. Speaking from the Peruvian jungle during the making of his 1982 film *Fitzcarraldo*, he compares the jungle's continuous birdsong to the humming of constant murder, and shrieks of pain.<sup>93</sup> Violence is endemic to both humanity and nature. McCandless and Treadwell serve as cautionary tales about idealizing nature as the absolute other of humanity.

The absolute dichotomy of humanity and nature can even induce political apathy in an environmental activist. One becomes convinced that Earth has long passed the point of no return in the destruction of nature, that there remain no pure spaces that humanity has left untainted. Even exploration is understood as a source of corruption. Humanity has voyaged over all the land surface of Earth and settled most of it; ships ply the oceans while manned and robotic submarines explore their lowest depths; airplanes and high-altitude balloons traverse the atmosphere at every level; Earth's upper atmosphere is filled with satellites and space junk; human-made robots have reached every planet in our solar system, flying by the outer gas giants and leaving litter on the surface of Earth's moon, Venus, and Mars. Humanity's violation of natural purity is no longer even restricted to the pedestrian scale. Biogenetic technology allows humans to meddle at the molecular level, creating through technological manipulation new kinds of organisms.<sup>94</sup> For someone thinking in terms of the absolute dichotomy of humanity and nature, the creation of microbial life forms with entirely synthetic genomes at the J. Craig Venter Institute would be the ultimate violation of nature's purity: the first completely unnatural life, unable even to fall from Edenic purity as humans have.<sup>95</sup> One blogger described this event by the

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<sup>92</sup> Martin Drenthen, "Fatal Attraction: Wildness in Contemporary Film," *Environmental Ethics* 31, no. 3 (Fall 2009): 297-315.

<sup>93</sup> Werner Herzog, "The Chasm," *My Best Fiend*, DVD, directed by Werner Herzog (1999; Troy, Michigan: Anchor Bay Entertainment, 2002).

<sup>94</sup> Siipi, "Dimensions of Naturalness," 72-74.

<sup>95</sup> Nicholas Wade, "Researchers Say They Created 'Synthetic Cell,'" *New York Times*, May 21, 2010, accessed July 12, 2010, <http://www.nytimes.com/2010/05/21/science/21cell.html>.

sarcastic title, “Mankind creates first synthetic genome, officially replaces God.”<sup>96</sup> If one takes nature to be a purity that is destroyed by even the slightest human interference, then once life is open to human manipulation at the molecular level, nature on Earth is entirely eradicated. “Nature is no longer ‘natural,’ the reliable ‘dense’ background of our lives; it now appears as a fragile mechanism, which, at any point, can explode in a catastrophic direction.”<sup>97</sup> Slavoj Žižek describes a world that is no longer nature, because all aspects of it are open to human interference, human violation of nature’s purity, that would disrupt its harmonious equilibrium. He also describes a nature that is dense, mysterious, and unchanging, a background upon which human dramas can play out without need for our reference or concern. Humanity is understood as an opposing force to nature, destabilizing the stable. Understanding nature solely as the opposite of humanity ignores its complexity.

The dichotomy of humanity and nature is a central premise in much of traditional environmental philosophy, the reason why one cares for nature being that it is all that humanity and individual humans are not and cannot be. In exploring this dichotomy, I have already indicated some of its limitations. When nature is understood as a harmonious, peaceful purity, it may be taken as an absolute good. If humanity is understood as the contrast class to an absolute good, then it must be an absolute evil, a violent agent of discord and corruption. And should not absolute evils be wiped from existence? I ask this question ironically, not only because I am a human who would like to continue living. Very few environmental philosophers state this explicitly, but a tone of disdain for humanity is a recurring element of Western environmentalist writing since Thoreau. This question displays the absurdity that can too easily follow from a belief in the dichotomy of humanity and nature. If what one cares for is essentially good, and one identifies what is worthy of care by its difference from one, then a contrastive understanding of difference makes oneself essentially evil.

There are three ways to critique this kind of environmental morality: 1) Show that nature is not uniformly peaceful, harmonious, and pure, an empirical investigation into the behaviour of nonhumans on an individual and historical level; 2) Understand humanity as itself part of nature, albeit a part with some very peculiar capacities; 3) Develop a justification for care where caring is not justified by its difference from that which cares. The three approaches work best when they are closely connected because each functions as a corollary of the other. If nature is not a pure harmony, then any destructive tendencies in technological humanity do not necessarily set

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<sup>96</sup> Julian Sancton, “Mankind creates first synthetic genome, officially replaces God,” *Vanity Fair*, May 21, 2010, accessed July 12, 2010, <http://www.vanityfair.com/online/daily/2010/05/mankind-creates-first-synthetic-genome-officially-replaces-god.html>.

<sup>97</sup> Slavoj Žižek, “Unbehagen in der Natur: Ecology Against Nature,” *Bedeutung Magazine* 1 (2008): 43.

humans apart from nature. If humanity is not different from nature, then it is not productive to justify care for nature on its being different from oneself. One's concept of difference is more nuanced than a starkly contrastive dichotomy. The more productive justification of care is to care for a body because of its singular identity, because that body is unique. One could still incorporate a morality based on a principle of singularity into an environmental philosophy that includes the essentializing dichotomy of humanity and nature, but coordination with the other two critiques can avoid the mistake of the dichotomy. However, there remains another problem with justifying care by referring to the singularity of a body's identity. One can still slip into anti-humanist thinking. If one cares for the different, one devalues what is the same; care for that which is not human devalues or excludes the human. Environmental moralities reduce to self-hatred disguised as altruism.

The question remains whether all biocentric and ecocentric moralities tend to devalue humanity, no matter if their conception of difference is simplistic or nuanced. If so, then such moralities would sacrifice human interests and humans themselves for the preservation of nature. In such moralities, the ecosystem as a whole is the body of paramount concern. Individual animals, plants, fungi, and so on are those bodies that constitute the ecosystem, the parts of that larger whole. That whole is, as Aldo Leopold put it, a biotic community. Humanity can become part of it by settling within an ecosystem and acting in a manner that maintains the land's health, "the capacity of the land for self-renewal."<sup>98</sup> So the health of the land is, for biocentric moralities, the paramount good, and all human action must be oriented toward maintaining the self-producing activity of the land. Action that does not do so is evil and destructive, interfering with the processes of the land which would properly maintain vibrant varieties of life for an indefinite future.

This principle has led to Leopold's philosophy being labelled anti-democratic, more specifically ecofascist. Ecofascism outlines a political order in which individual welfare is subordinated to the welfare of the biotic community, the land, or the ecosystem as a whole.<sup>99</sup> On this interpretation of Leopold, moral principles of rights and dignity specific to humanity would be dispensed with "because humans in the theory are only valuable insofar as they serve the ends of the biotic whole."<sup>100</sup> Humans are not denounced because of any essential element of humanity that prevents them from aiding the health of a biotic community. But any rights of individual

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<sup>98</sup> Aldo Leopold, *A Sand County Almanac* (New York, Ballantine Books, 1970), 258.

<sup>99</sup> Kristin Schrader-Frechette, "Individualism, Holism, and Environmental Ethics," *Ethics and the Environment* 1, no. 1 (1996): 63.

<sup>100</sup> Charles Starkey, "The Land Ethic, Moral Development, and Ecological Rationality," *Southern Journal of Philosophy* 45, no. 1 (Spring 2007): 153.

humans are subordinated to ecosystemic health. J. Baird Callicott, Leopold's most prominent contemporary advocate, in his early writings endorsed this misanthropic interpretation of land ethic philosophy.<sup>101</sup> If a land does not maintain itself, it is because of human interference. A healthy ecosystem, or biotic community in Leopoldian terminology, is a wild and varied place constituted through many different kinds of organism together in relationships that benefit the whole and produce a stable ecosystem where that constitutive activity can continue. An unhealthy ecosystem is one that humans have shaped according to a technological plan, a place where the only activities that may take place are those that are of direct benefit to the human planners. Leopold gives the example of a monoculture farm.<sup>102</sup>

The contemporary industrial farm can indeed be understood as a large scale assault on an ecosystem, flattening out the diversity of a land with a single technological program, the mass production of food for humans alone, whether directly or to feed humans' livestock. Human needs are the only ultimate goal of industrial agriculture. No natural processes any longer maintain the health of industrial farmland, which has become an entirely artificial system. Farmland faces a moral quandary when the need of many species to live good lives supercede the good lives of humans. The humans are fed through the uniform production processes of industrial farms, but at the cost of the complex harmoniously self-producing ecosystem those farms have replaced. Humans have opposed themselves to the good of many species which are more at home in a complex ecosystem than on industrial farms. Industrial farming is required to sustain an enormous human population. The enormity of humanity requires enormous human industry to supply the daily needs and satisfy the desires of humanity. To understand the contemporary ecological, technological, and social phenomenon that I call enormous industry, one must understand the rise and fall of civilizations throughout human history, and the peculiar scale and intensity of our modern situation.

Throughout humanity's history, when we have organized ourselves in large numbers, ecological degradation and destruction has been the usual result. Over-exploitation of the land was a significant factor in the economic decline and fall of the great empires of ancient Mesopotamia and India. For thousands of years, large human communities have altered their ecologies with agriculture and resource harvesting for food and manufacturing. Industrial power at some intensity has always existed in human history, although before the invention of steam power, industry operated at a relatively low intensity. As human economies succeed, their population increases, putting additional strain on their surrounding ecology, until a tipping point

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<sup>101</sup> Michael E. Zimmerman, "The Threat of Ecofascism," *Social Theory and Practice* 21, no. 2 (Summer 1995): 227-230.

<sup>102</sup> Leopold, *A Sand County Almanac*, 111-115.

is eventually reached. Human growth outpaces the processes by which their food and resource bases renew themselves. The land does not respond with sufficient speed to human demands, and the economy collapses, taking the civilization with it, as its human population disperses again.<sup>103</sup> As human life in the area becomes less intense, the once-disrupted processes recover. Sometimes, species are driven to extinction, but the ecosystems change, and develop new ways of flourishing, at least until its human inhabitants grow ambitious again.

Archaeological investigation of numerous human civilizations has put the lie to any image of ancient humanity possessing some harmonious relation with Earth that we have since lost. But the contemporary problem of environmental pollution differs from the ancient ecological crises in two important, related ways. The scale of contemporary human society is literally global. The Mesopotamian cities of Ur and Lagash were the centres of urbanizing and farming processes that deforested and overgrazed the Fertile Crescent. As local production became unsustainable, trade with other Persian Gulf cities like Dilmun and as far east as Balochistan supplemented Mesopotamian weaknesses, but only forestalled the inevitable fall. Mesopotamians dispersed from their cities and returned to lifestyles of lower ecological impact while the Fertile Crescent's nonhuman ecological processes restored that territory's richness and diversity.<sup>104</sup> Almost all of humanity today lives entangled in urban lifestyles that produce enormous amounts of pollution and waste. The economies of every country and continent are so inextricably integrated through processes of trade and investment that humanity now constitutes a single massive civilization under a variety of territorial political and social orders. In the event of a civilizational collapse, there is nowhere for humanity to disperse. Even the Mongol Empire did not stretch into Britain, Africa, Australia, or the Americas.

The scale of contemporary human industry is one major difference of the contemporary era from those destructive urban patterns of ancient times. What I call the theatricality of enormous industry and its pollution events is perhaps a more politically galvanizing aspect than simply the large scale of these events. People's attitude toward nature as a resource to be exploited and a challenge to be conquered has not changed from the ancient to contemporary industrial epoch.<sup>105</sup> Sing Chew traces in history the ecological causes of the decline of humanity's great empires. These ecologically degrading activities proceeded very slowly, over decades and generations, so went largely unnoticed. Poetry and philosophy that survives from ancient

<sup>103</sup> Sing C. Chew, *World Ecological Degradation: Accumulation, Urbanization, and Deforestation, 3000 B.C. – A.D. 2000* (Walnut Creek, California: Altamira Press, 2001), 1-10.

<sup>104</sup> Chew, *World Ecological Degradation*, 18-26.

<sup>105</sup> Søren Riis, "Towards the Origin of Modern Technology: Reconfiguring Martin Heidegger's Thinking," *Continental Philosophy Review* 44 (2011): 110-112.

empires shows that the blurry boundary of nature and culture was often an issue for consideration. But the framework of such consideration was literary contemplation rather than activism aimed at changing the industrial processes of their civilizations.<sup>106</sup> The reason attitudes regarding current ecological degradation have been galvanized is the speed and visibility of individual ecological crises. Their speed and visibility are core elements of the theatricality of contemporary industrial activities.

Mass media communicates terrifying images of ecological destruction, incidents of catastrophe so large, and which diverge radically from slow rates of change, that people are shocked into activism. I consider an early example of theatricality in contemporary environmental activism to be Rachel Carson's *Silent Spring*, whose artful and emotional prose describes in heart-wrenching detail the destruction of birds on a massive scale thanks to pesticide pollution. Activism focussing on theatricality is a politicized aesthetics that calls attention to how unmindful industrial activity transforms scenes of nature that one expects to be aesthetically beautiful into the ugly and absurd. Theatricality has only become more prominent in activism since Carson. Documentarians travel to the Pacific Trash Vortex, a porous island in the middle of the northern Pacific composed of plastic trash that accumulates at the vortex of its major currents. This island is twice the size of Texas.<sup>107</sup> The Aral Sea, once Earth's fourth-largest lake, has shrunk to ten percent of its former size after fifty years of Soviet cotton farm irrigation from its waters. Camera crews go to the former Aral coast to see enormous ships abandoned in desert.<sup>108</sup>

The photographer Lu Guang has a continuing project centering on enormous industry in northern China and Mongolia. His landscapes are dominated by skies of brown-green smoke, and earth turned to the colour of rust. Waters flowing through a multi-story high dam are a brackish, metallic brown. A woman sits on a small, cement island in the middle of a lake of bright green sewage and decaying garbage.<sup>109</sup> Edward Burtynsky's documentary *Manufactured Landscapes* sees him walking through mounds of fragmented computer parts — e-waste — that are kilometres long and several stories high, seeping toxic heavy metals into ground water in a village in Zhejiang province.<sup>110</sup> The largest scales of enormous industry have an intense

<sup>106</sup> Chew, *World Ecological Degradation*, 158-167.

<sup>107</sup> Brian Handwerk. "Photos: Giant Ocean-Trash Vortex Documented – A First." *National Geographic News*, September 4, 2009, accessed September 5, 2010. <http://news.nationalgeographic.com/news/2009/09/photogalleries/pacific-garbage-patch-pictures/>

<sup>108</sup> Norman Precoda, "Requiem for the Aral Sea," *Ambio* 3, no. 4 (May 1991): 109-114.

<sup>109</sup> David Walker, "Lu Guang Wins National Geographic Photography Grant," *Photo District News*, May 27, 2010, accessed September 5, 2010. [http://www.pdnonline.com/pdn/content\\_display/photo-news/photojournalism/e3i7c717df4a3ba58ebabe31ce5a5c47bbe](http://www.pdnonline.com/pdn/content_display/photo-news/photojournalism/e3i7c717df4a3ba58ebabe31ce5a5c47bbe).

<sup>110</sup> Jennifer Baichwal, "Scene 5," *Edward Burtynsky: Manufactured Landscapes*, DVD, directed by Jennifer Baichwal (Toronto: Mercury Films, 2006).

theatricality that dwarfs even these images. The best example is China's South-to-North Water Diversion Project: the radical transformation of the entire Yangtze river itself, diverting enormous amounts of water from it to the Yellow and Hai rivers through a system of canals built to modify existing tributaries. By the 2050s when this project is completed, the entire landscape of China will be transformed.<sup>111</sup>

An example of ecological degradation or destruction is theatrical when it is so enormous or strange that its very existence challenges one's presuppositions about what can exist. Such an object must, literally, be perceived to be believed, an event of destruction whose very existence challenges its perceivers to believe that it can exist, even as they perceive it. This is why photographs and films are such striking means of perceiving industrial theatricality. Photographs, whether taken from valleys among mountains of shattered computer parts or from a helicopter flying over a canal linking rivers that span a country, are more transparent than paintings and more comprehensive than descriptions. A photographer can compose her image, but the body itself must exist in order to be photographed. Undoctored, or honest, photographs are evidence for the existence of what is photographed. More than this, the photographer's image has a depth of detail that goes beyond the ability of a human painter to include or a human writer to describe. "Photographs become standard evidence for historical occurrences, and acquire a hidden political significance . . . They stir the viewer; he feels challenged by them in a new way."<sup>112</sup> Humanity can create catastrophes on a level comparable to nature, their scale and absurdity arousing confusion and fear in people trying to understand them. This description of theatricality resembles the philosophical concept of sublimity. "If nature is to be judged by us dynamically as sublime, it must be represented as arousing fear . . . for the aesthetic power of judgment nature can count as a power, thus as dynamically sublime, only insofar as it is considered an object of fear."<sup>113</sup> On the Kantian model, humans become fearful in a sublime experience of nature because humanity is fragile compared to nature. Now "fragility has just changed sides,"<sup>114</sup> as humanity has the power to be considered an object of fear.

But sublimity's associated feelings of fear and awe are inadequate to the absurdity of humanity's acts of enormous pollution. The Soviet ship rusting in the Aral desert that was once the shore of a vast sea inspires cynical laughter just as much as fear. Satellite images of the Pacific

<sup>111</sup> Jared Diamond, *Collapse: How Societies Choose to Fail or Succeed* (New York: Penguin Books, 2006), 367.

<sup>112</sup> Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction," in *Illuminations*, ed. Hannah Arendt (New York: Schocken Books, 1968), 226.

<sup>113</sup> Immanuel Kant, *Critique of the Power of Judgment*, trans. Paul Guyer (New York: Cambridge University Press, 2000), 143-144.

<sup>114</sup> Michel Serres, *The Natural Contract*, trans. Elizabeth MacArthur and William Paulson (Ann Arbor: University of Michigan Press, 1995), 20.

Trash Vortex, and even the silliness of its name, inspire not fear, but ironic disdain. As well, these films and images inspire pity for the birds who fall through the plastic 'land' trying to walk on it. On the Kantian account of sublimity, what provokes the experience of the sublime is utterly alien from humanity. For environmental philosophers who consider religion to be the best route to valuing nature, the sublimity of nature at its most grand and fantastic inspires reverence. When humanity becomes the creator of the sublime, such experiences inspire emotions and thoughts more complex than awe. In the same way that one interprets and engages with an artwork, one can dialogue with documentary images and films of these catastrophes. Documentary art is how people far from these catastrophes experience them, and the means by which activists recruit by stirring the emotions. Photography and cinema are especially powerful because of how directly they capture images of the catastrophes. Human ecological catastrophe is rendered as theatre, so I call the effects of these grand follies of enormous industry not sublime, but theatrical.

One way many environmental philosophers advocate to end this destructive theatricality is to call for reducing the physical scale of human civilization: stepping back from enormity. Steady state economics, a style of economic planning and management that aims for stability and stasis rather than continual growth, is one possibility.<sup>115</sup> Instead of massive industrial farms, humans would gather their food from small family or community plots nestled in a diverse ecosystem among a panoply of cohabitants and competitors. The size of human families and communities would also have to shrink. Human population reduction is one of the eight points of the deep ecology platform, which says "The flourishing of human life is compatible with a substantial decrease of the human population. The flourishing of nonhuman life requires such a decrease."<sup>116</sup> One arrives at a chilling quandary. If agriculture consistent with the health of natural ecosystems is incapable of feeding the current human population, then the surplus must die. If the problem is genuinely as urgent as contemporary industrial theatricality suggests, then advocating for smaller family size and awaiting change at the pace of ordinary aging may take too much time. Anyone who wants to hold an environmental morality focussing on ecosystemic health must deal with the problem that great human misery may be required to restore Earth's ecosystems to a healthier state, and that misery for such a purpose would be good. When the good of nature results in great ill for humanity, environmental philosophy faces a fearsome problem.

A moral stand prioritizing the flourishing of nature above that of humanity is denounced as ecofascism, the sacrifice of individual claims to life and liberty for the sake of the whole. In traditional fascism, that whole is the nation. In ecofascism, that whole is the ecosystem. There are

<sup>115</sup> Herman E. Daly, "Economics and Sustainability: In Defense of a Steady-State Economy," in *Deep Ecology*, 94-95.

<sup>116</sup> Arne Næss, "Sustainable Development and Deep Ecology," in *The Selected Works of Arne Næss*, ed. Alan Drengron (Dordrecht: Springer Netherlands, 2005), 565.



enough similarities between contemporary environmentalist political programs and the ideas of Nazi philosopher Walther Schoenichen to give one pause. Schoenichen endorsed strict controls on industrial pollution, the protection of wilderness areas and their isolation from human contact, and critiqued Judeo-Christian theology for promoting a vision of humanity as utterly separate from and superior to nature.<sup>117</sup> Schoenichen's philosophy is compatible with the paradigm of environmentalist thinkers such as Næss and Leopold. The only exceptions in Schoenichen's thought are his most blatantly racist ideas — a culture is authentically natural for him when society is rooted in a mystical union of blood and soil — and when he praises the Third Reich as the first ecologically progressive state.<sup>118</sup>

Insofar as a technological lifestyle functions to make all bodies potential resources, technology alienates humanity from nature. This alienation is not an absolute separation, the creation of a new ontological category, but is nevertheless assumed to be a profound misunderstanding of what humanity can be. Supposedly, the most authentic life for humanity is one integrated with nature, part of a biotic community acting to maintain ecosystemic health. A human community living along these lines would be small enough that one could bicycle from one end to the other, exist by subsistence farming, free range livestock agriculture, and basic manufacturing, mostly along the model of craftsmanship and small factories.<sup>119</sup> These communities need not be embedded in wilderness, but should share common resources with neighbouring creatures such as wolves and bears.<sup>120</sup> Such a lifestyle combines the connectedness to Earth of the idealized peasant with the scientific attention to detail and underlying physical causes of events which in the pre-industrial period of human development was explained through myth.<sup>121</sup> Of course, such communities could not support a global human population as large as the current one, so any large-scale socio-political switch to this lifestyle would require a drastic population reduction. This is how humanity would live if we would give up artificial ways of life with their tendency to individual caprice, and follow nature to maintain the harmony of ecosystems. Humanity must remember how to “fit into the stability of ecosystems, thereby acknowledging our dependence on spontaneous nature for sustenance.”<sup>122</sup> Humanity has

<sup>117</sup> Zimmerman, “The Threat of Ecofascism,” 212-215.

<sup>118</sup> Zimmerman, “The Threat of Ecofascism,” 217-219.

<sup>119</sup> Arne Næss, *Ecology, Community, and Lifestyle*, trans. David Rothenberg (New York: Cambridge University Press, 1989), 144-146.

<sup>120</sup> Arne Næss and Ivar Mysterud, “Philosophy of Wolf Policies I: General Principles and Preliminary Exploration of Selected Norms,” *Conservation Biology* 1, no. 1 (May 1987): 22-34.

<sup>121</sup> Simone Weil, *The Need for Roots: Prelude to a Declaration of Duties Towards Mankind* (London: Routledge, 1952), 43-44.

<sup>122</sup> Nicole Klenk, “The Ethics of ‘Following Nature’ in Forestry: Academic Forest Scientists and Ralston’s Environmental Ethics,” *Environmental Ethics* 31, no. 1 (Spring 2009): 70-71.

uprooted itself and made itself homeless, the destruction of natural harmonies throughout Earth being the practical result of this arrogance.<sup>123</sup>

If the above description is the only social and political conclusion for environmental moral thinking, then environmentalism constitutes a challenge to every political system centred on human liberty. But whether this is a challenge depends on how one understands liberty. The particular concept of liberty this agrarian vision of humanity challenges is the capacity to uproot oneself from oppressive traditions and live according to one's own terms. This concept of liberty is the foundation of what I call the humanist critique of environmental morality. If a human's rootedness in history, family, community, cultural traditions, and natural place in a harmonious ecosystem is the good of environmental morality, then such a morality opposes humanist freedom. Humanist freedom is a revolution against the determinism of natural instincts, articulating a capacity to constitute a new order through a radical break with the past, living according to reason and not instinct.<sup>124</sup> Understanding humanity as radically different from nature and a corrupter of natural harmony implies a powerful political conservatism. "Although ecologists are constantly demanding that we change radically our way of life, underlying this demand is its opposite, a deep distrust of change, of development, of progress: every radical change can have the unintended consequence of triggering a catastrophe."<sup>125</sup>

From the humanist perspective, which Luc Ferry typifies, humans are agents of radical change through their being non-natural, or anti-natural. The actions of such creatures can engender catastrophe, but for the sake of novelty and freedom, that risk is acceptable. The creative reason of humanity is a condition for the possibility of technology and its associated lifestyles. Human reason consists in breaking with any tradition that would keep one rooted to historical precedent and ecological niche. Leaving this rootedness behind, human reason seeks physical and intellectual discoveries. Human reason, says the humanist, is a powerful force for change.<sup>126</sup> From this perspective, an environmental philosopher would say that ecological catastrophe is inevitable after humanity conceives of itself as radically different from nature, and a humanist would declare catastrophe to be a contingent, unfortunate screw-up, admirable ambitions gone awry. But such a disaster is worth the risk compared to the ultimate good of maintaining the freedom of human reason.

Ecofascism is too extreme an ideology for most environmental activists to hold, despite

<sup>123</sup> Martin Heidegger, "Letter on Humanism," in *Basic Writings*, ed. David Farrell Krell (Toronto: Harper Perennial, 2008), 241-243.

<sup>124</sup> Luc Ferry, and Alain Renaut, *Heidegger and Modernity*, trans. Franklin Philip (Chicago: University of Chicago Press, 1990), 4. Ferry sees himself as a representative of a liberatory humanist tradition of philosophy and politics.

<sup>125</sup> Žižek, "Ecology Against Nature," 45.

<sup>126</sup> Luc Ferry, *The New Ecological Order*, trans. Carol Volk (Chicago: University of Chicago Press, 1995), 93-4.

common ideas between admitted Nazis like Schoenichen and democratic philosophers and activists like Næss, Rachel Carson, and Marxist ecologist Murray Bookchin.<sup>127</sup> Nazi environmental philosophy developed in the social context of reactionary political philosophy of writers such as Ernst Junger, who critiqued technology as a downfall from an authentic German life in harmony with nature. Falling away from ecologically harmonious authenticity transformed singular humans into identical worker-soldiers.<sup>128</sup> But mythical narratives of race were more important to the violence of the Nazi regime. The human relationship of harmony through rootedness in nature was an image of the authentic German soul, contrasted with the homeless, disconnected urban capitalism of degenerate races.<sup>129</sup> Contemporary environmental moral philosophy developed in the context of the democratic and radical left. Næss praises small, almost autarkically self-sufficient rural towns as the ideal human community for maintaining ecological health and harmony. These ideal environmentalist communities are built on patterns of anarchist mutual aid among humans, animal and plant neighbours, and their shared environment. But Næss qualifies his praise, even of anarchism. He is conscious of the dangers small town life poses for innovative thought, where there is intense social pressure against deviance from traditional patterns of thought and behaviour.<sup>130</sup> Freedom to innovate in thought can be just as important to an ecocentric philosopher as to a humanist. The play of concepts in the actual world is more complex than the simple dichotomy of environmentalist and humanist implies. It is a mistake to identify opposition to ecologically destructive technology with opposition to human liberty of thought.

Nonetheless, opposition to the dangerous technology of enormous industry has often denounced the freedom to make a revolutionary new beginning like that which made such technology possible. There are two dovetailing approaches to showing the mistake of this connection. 1) Care is not a zero-sum competition between the human and nonhuman. Creating a single general category in one's thinking for all that is not human oversimplifies the variety of existence. Such a simplified context tends to slip into talk of stark oppositions between immutable essences. Any critique of technology which uses this oppositional language denigrates free humanity and valorizes instinctual nature. Ferry, speaking for liberal humanism, understands environmentalism this way. If humanity is understood as one species among a wide variety of organisms and ecosystems, then it makes no sense to conceive of humanity and nature as

<sup>127</sup> As Kenneth Mars said in *The Producers* (1968), Hitler was a wonderful dancer. This is no reason to denounce dance.

<sup>128</sup> Michael E. Zimmerman, *Heidegger's Confrontation with Modernity: Technology, Politics, and Art* (Bloomington: Indiana University Press, 1990), 35-36.

<sup>129</sup> Susan Power Bratton, "Luc Ferry's Critique of Deep Ecology, Nazi Nature Protection Laws, and Environmental Anti-Semitism," *Ethics and the Environment*, 4, no. 1 (1999): 5-7.

<sup>130</sup> Næss, *Ecology, Community, and Lifestyle*, 144-146.

essentially opposed. A critique of technology is a practical opposition to contemporary enormous industry. 2) Heideggerian ideas have influenced environmental philosophy, creating conceptual distortions in its practical political project that leave it open to humanist critique. I will deal with the latter approach first, because my engagement with Martin Heidegger results in further reasons to critique the essentializing distinction of humanity and nature. I will conclude by understanding care as a creative process, a peculiarly human freedom that can encourage the diversity and vibrancy of ecosystems.

A major difficulty with bringing Heidegger into any philosophical discussion is that the discussion rapidly becomes all about Heidegger rather than the original topic. Environmental philosophy does not typically focus on an analysis of Heidegger's concepts, but he is often an informal influence on the field. Næss observes that a majority of the younger environmentalist thinkers and activists he met throughout his life take Heidegger as a framework on which to build their own critiques of contemporary technology.<sup>131</sup> Paul Shepard writes that Heidegger had a unique insight into the essence of technology, providing the only critical framework through which environmental philosophers could develop a non-industrial way of thinking.<sup>132</sup> A critique of technology is a primary task of environmental philosophy. Practically speaking, this at minimum involves developing a sense of restraint regarding the technological powers that humanity has developed. Human powers have grown enormous, and a moral philosophy whose major questions focus only on interactions between individual humans operates on too small a scale to have any meaningful input into the unprecedented power modern humanity gains from enormity. Our philosophy must catch up to our powers. As the twentieth century's most profound critic of technology, Heidegger cannot be ignored.

I already described the basic points of Heidegger's critique of technology when I discussed the ecologically sustainable rural human community, living in a harmonious relationship with the natural constituents of its ecosystem.<sup>133</sup> I described Heidegger's critique of the technological way of thinking when I discussed the worldview in which all bodies are reduced to mere resources for human plans and activities.<sup>134</sup> Environmentalists, and Heidegger, reject this instrumentalist understanding of the world. When one's questions are about political and social structures, the Heideggerian critique of technology is quite often the environmental philosopher's. Here again is a thought that gives pause. When I say that the political and social dimensions of Heidegger's thinking are the same as an environmental philosopher, I do not call environmental philosophers

<sup>131</sup> Arne Næss, "Heidegger, Postmodern Theory, and Deep Ecology," *Trumpeter* 14, no. 4 (1997): 2-7.

<sup>132</sup> Paul Shepard, "If You Care About Nature You Can't Go On Hating the Germans Like This," in *Deep Ecology*, 206-

<sup>133</sup> Zimmerman, *Heidegger's Confrontation with Modernity*, 71.

<sup>134</sup> Zimmerman, *Heidegger's Confrontation with Modernity*, 86-87.

Nazis, even though this was Ferry's superficial conclusion. Although Nazi environmental law nominally protected all living beings, their practice during the Second World War shows how laughably nominal such protection was.<sup>135</sup> Heidegger was a Nazi, a racist, and a warmonger. But these elements of his thinking are separate from his influence on contemporary environmental philosophy. Solely in the social and political diagnosis of the problem of contemporary technology, Heidegger and environmental philosophers agree. The technological attitude, they say, takes all bodies to be mere resources, purposeless vessels whose only good is how they can be used for human ends. How Heidegger envisions the development of this attitude and how to overcome it mark his divergence from environmental philosophy. And it illustrates the reasons why Heidegger's ideas will only retard environmental philosophy's creativity.

At issue is how one can understand the peculiarly human capacities of technology, reason, and freedom. These are the powers that supposedly separate humanity from nature. Heidegger's thinking was nuanced enough that he did not see humanity and nature as an absolute dichotomy. The proper relationship of humanity and nature is belonging together. There is, however, a difference of essence between the two. But this difference is complementary, not oppositional. Human thinking, the power to build complex systems of understanding, constitutes what he calls a clearing in which beings reveal themselves. This clearing is a framework of understanding which provides a context for the appearance of beings.<sup>136</sup> Human thinking does not constitute this clearing independently of being; humans are the particular conduit through which being is revealed on Earth. Heidegger understands history as this play of being as it reveals and conceals itself.<sup>137</sup> Technology is terrifying for him because a condition of technological phenomena is an attitude by which being reveals itself only as fuel, that which may be used, and the unique singularity of beings is concealed.<sup>138</sup> Singularity can only be revealed in relaxed social contexts where people live in small communities, production is a matter of careful handicraft, and nature plays a benign role in the everyday life of the community. This is an environment where people can live authentically, where beings can properly reveal themselves through humanity letting them be.<sup>139</sup>

The central issue for how I understand Heidegger's thought is working out what human freedom is. Enlightenment philosophy developed a concept of freedom as a radical break from

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<sup>135</sup> Bratton, "Luc Ferry's Critique of Deep Ecology," 14-15.

<sup>136</sup> Martin Heidegger, "The End of Philosophy and the Task of Thinking," in *Basic Writings*, 447.

<sup>137</sup> Zimmerman, *Heidegger's Confrontation with Modernity*, 192-195.

<sup>138</sup> Martin Heidegger, "The Question Concerning Technology," in *Basic Writings*, 332.

<sup>139</sup> Zimmerman, *Heidegger's Confrontation with Modernity*, 108.

the determinism of natural instinct and mechanism. I called this the humanist perspective.<sup>140</sup> From the perspective of the environmental philosopher, belief that human reason was such a break from nature was a matter of extreme hubris. This hubris enabled humanity to become an agent of global destruction, the technological architect of enormous industry. For Heidegger, being concealed itself, its singularity, through human hubris. That humans could conceive themselves as free from the determinations of being and able to shift its course through their activity is an illusion, just one aspect of technological humanity's forgetfulness of being.<sup>141</sup> Human hubris is the motivator of technological civilization to dominate the world. Humanist philosophies conceived of subjectivity as the origin of the only active force in the world, the only force that, in breaking from the constraints of mechanistic laws of nature, could create the genuinely new. Human subjectivity was conceived as the capacity to break from determination by past causes.

Understood morally, those causes are historical, as human freedom breaks from the stagnation of long-established social traditions. Understood ontologically, human freedom is the power to break from the physical determinism of linear causality. The freedom of the human subject was the conceptual pivot point on which multiple domains of philosophy were aligned in the development of Enlightenment thinking. Freedom to escape determination by the world came to be understood as a promise to create a wholly free world through the universal exercise of human reason. Understanding humanity as the only source of freedom in the universe was the means by which humanity convinced itself that its proper role was to dominate Earth.<sup>142</sup> For Heidegger, hubris and false consciousness characterize the attitude of humanism. Humanity's hubris is to believe that we are in control of being. We are unable to recognize that this feeling of control is a false consciousness of our abilities: humanity, the proper conduit of being, is led astray by its pride to believe itself to be in charge. The ecological and humanitarian disasters perpetuated by people who hold this attitude are the side-effects of ontological short-sightedness.

Heidegger understands human activity as without agency of its own: being itself is the only agent according to his ontology. This is what prevents a genuinely productive uptake of his ideas into environmental philosophy. At heart, environmental philosophy remains a program of political and social reform and revolution, which would be a radical break with humanity's technological lifestyle. Discovering ecologically sustainable ways of life is not a matter of waiting

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<sup>140</sup> Ferry, *The New Ecological Order*, 93-4.

<sup>141</sup> Zimmerman, *Heidegger's Confrontation with Modernity*, 264-265. In believing that humanity once had a genuinely authentic relationship with being from which we had fallen through technological ways of life, Heidegger is an exemplar of Edenic thinking.

<sup>142</sup> Ferry and Renaut, *Heidegger and Modernity*, 57-59.

for being to reveal itself in some new manner, waiting for an environmentalist messiah, the god that will save us. Power rests with us to change our lives. Yet this is not a power that puts humanity in any kind of superior position. To think so would only repeat the hubris that first facilitated the development of destructive enormous industry, the belief that all human innovation is progress. Environmental philosophy requires a new kind of humility. No matter how powerful the human drive to conquer Earth may become, perfect control can never be achieved. As in the case of Timothy Treadwell, when someone tries to force his own morality, his own philosophy, his own way of life onto nature, the result is disaster. Humanity's contemporary enormous industry is capable of actions that strain human epistemic powers. This strain is the tension between the sublime and the absurd that constitutes theatricality. Environmental morality admonishes one never to act without careful attention to the situation in which one acts. One must always know what one is doing.

The science of ecology enables one to achieve this expanding knowledge of the consequences of actions. An ecologist is a keen observer, a detective who investigates every relationship which the activity of the region under study constitutes. She works out how one relationship affects the development of another, how one set of relationships may prevent or forestall the constitution of some other relationship. Ecology is the science of mindfulness. To be mindful is to pay maximum attention to the world, one's surroundings, one's thoughts, and one's projects. Mindfulness is thoughtful attention, not only focussing on the obvious features of one's existence, but trying to work out their deepest details, the subtlest connections among phenomena.<sup>143</sup> A mindful observer thinks without disciplinary boundaries, because, for example, facts of epidemiology or microbiology could have considerable impact on facts of botany. Ecology is a transdisciplinary knowledge, a science in which attention is paid to problems that play out in a world that does not easily fit into the definitions of scientific disciplines and sub-disciplines. Bodies affect each other unconstrained by divisions of research fields. Through this transdisciplinarity, ecology offers the opportunity to transform philosophy, as philosophical analysis and critique becomes integrated with ecological investigation and policy formation. Philosophy that takes ecology seriously will leave the isolated realm of an armchair philosopher's intuitions of nature's value and take an active role in investigations of the world.

University of North Texas (UNT) philosophy department workshops on recovery from Hurricane Katrina and on the ecology of Cape Horn, Chile are illustrative examples. The Katrina project examines the links between failures of government administration, architecture, urban

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<sup>143</sup> Adam Riggio, "John Dewey as a Philosopher of Contingency and the Value of this Idea for Environmental Philosophy," *Environmental Ethics* 33, no. 4 (Winter 2012): 402.

planning, and environmental neglect, which together contributed to the destruction of large swaths of New Orleans. Examining these kinds of relationships among what have typically been considered different kinds of bodies is an ecological investigation.<sup>144</sup> UNT's role at the Chilean national park at the Cape Horn archipelago works through problems of environmental philosophy using the experience of studying ecosystems, and improving the study of ecosystems through the institutional critiques of environmental philosophy. "The approach taken by UNT Philosophy sees the goal of achieving policy relevance as being tied to developing new institutional types of knowledge production. To be specific: environmental philosophy must challenge the current institutional definition of what counts as philosophy."<sup>145</sup> Ecology is the science whose focus is the constitutive power of bodies acting simultaneously in the same place in the world. Ecology studies the activities through which bodies constitute the place in which they live. An ecological philosophy examines the possibilities and deeper meanings of these relationships among active bodies.

These relationships are often surprising, confounding the expectations of a non-professional observer, someone who has not become used to the inventiveness of creatures which ecology throws into focus. An intuitive environmental philosopher of the type I discussed in the previous chapter may undergo a mystical experience of the value of nature by experiencing a gigantic oak tree.<sup>146</sup> The intuitive philosopher may stand in awe of the tree's size, its singular beauty, and presumably its intrinsic value. He may consider the tree in terms of what in the previous chapter I called the absolute value of its singularity. At the sight of that tree infected by a disease and dying, that intuitive philosopher might mourn its passing. But an ecologist sees much more. A dead tree, half-fallen, ensnared in the branches of its neighbours, is a shelter for raccoons and grouse, the latter also feeding on growths on the side of the oak. The activities of a swarm of bees fill a hollow oak with honeycombs. The layers of an oak's dead bark is an excellent place for insect eggs, larvae, and cocoons. Those insects also make a feast for chickadees. An ecologist, Aldo Leopold in this case, observes this vast multiplicity of productive relationships that the death of an oak tree makes possible.<sup>147</sup> These productive relationships constitute the many practical values of the singular tree. I take Leopold as a paradigm here to offer a reply to those who denounce him as an ecofascist, because in his accounts of how ecosystems actually operate, a healthy ecosystem fluctuates much more dynamically than the image of harmonious equilibrium

<sup>144</sup> R. W. Kates et al., "Reconstruction of New Orleans After Hurricane Katrina: A Research Perspective," *Cities and Rivers II: New Orleans, The Mississippi Delta, and Katrina* (2006) <http://www.ndsciencehumanitiespolicy.org/katrina/>

<sup>145</sup> Robert Frodeman, "Redefining Ecological Ethics: Science, Policy, and Philosophy at Cape Horn," *Science and Engineering Ethics* 14 (2008): 604-605.

<sup>146</sup> Scott F. Aikin, "The Dogma of Environmental Revelation," *Ethics and the Environment* 13, no. 2 (2008): 28.

<sup>147</sup> Leopold, *A Sand County Almanac*, 78-82.



would first suggest.

Ecology offers a way of understanding how relationships are constituted among bodies and how bodies themselves act that differs from the approaches I have described so far in this chapter. The humanist takes there to be an absolute dichotomy of humanity and nature, humanity being able to escape the determinism of instinct and necessity in which nonhumans are inevitably ensnared. The traditional environmental philosopher likewise takes there to be an essential dichotomy of humanity and nature, humanity having used its peculiar ingenuity to transgress its proper place in nature, destroying nature's harmonious equilibrium. Radical activity is vilified. The Heideggerian takes humanity, with its peculiar powers to create frameworks of understanding, to be the conduit by which being reveals itself. Humanity and nature are both passive figures, acting out the concealing and revealing play of being. Humanity is the vessel of being's revelation.

An ecologist takes humanity to be one figure among many to constitute an ecosystem whose structure is dynamic. The apparent stability of an ecosystem's structure is more often than not a brief pause in a complex and messy collision of a huge variety of organic and inorganic bodies. An ecosystem is a roiling mess of co-habitants taking advantage of each other, as the chickadees, raccoons, and grouse take advantage of a collapsed tree. When philosophy takes the viewpoint of ecology, all bodies are understood to be active, their collisions creating the incredible variety of nature. The dominance of one type of body creates the dull, easily collapsible monoculture of a mechanized industrial farm.<sup>148</sup> But a dominant body can conceive of ways to restore variety and wildness to what was once boring and moribund. In an *ecological* philosophy, creativity is never vilified in itself, only the destructive effects of irresponsible creativity, action without mindful attention to the field where this creative force acts.

Ecological understanding collapses any absolute dichotomy of humanity and nature in a manner that reduces neither pole to the other. That entire framework of thinking is done away with. One focusses on the relationships among bodies, how the activities of those bodies interact to constitute those relationships, and the possibilities those relationships open and close. A body itself receives no definition other than mapping its potential activity, literally what it can do. Ecology is the epistemic context in which one can best articulate care as the valuation of singularity. This justification of care, the singular identity of the body in question, is superior because it allows no possibility of understanding care as a zero-sum game. If one understands care to be justified through commonality, then the discovery of a body having more in common with me than another would increase the intensity of care for the former at the latter's expense. A

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<sup>148</sup> Leopold, *A Sand County Almanac*, 111-115.

similar calculus of care balancing applies to care justified through a body's contrastive difference. Discovering a body more different from me than some other body would increase the intensity of care for the newly found body over the one that is similar to me. This latter dynamic is at the heart of the ecofascist or misanthropic interpretation of biocentric and ecocentric moralities. Nature and humanity are utterly different, one seeking holistic harmony and the other technological growth and domination. The thriving of one is at the expense of the other. Increased care for nature detracts from care for humanity. But caring justified by a body's singular identity involves none of these calculations. From a perspective of care, one need not care less for one body to care for another. Understanding a body includes it in the group of that for which one cares, a group that can grow without conceivable limit.

A body is complex, composed of many aspects and constituted from many smaller and larger bodies affecting its generation. Some of these bodies that affect its generation become physically enfolded in the body in question, and some remain outside, providing the context of that body's coming together, of its generation, its assembling. On the ecological understanding of a body, in the process of generation a body is differentiated from those bodies that constitute it. That differentiation process constitutes a new generator of activity which then plays a role in the constitution of other bodies. Each body is singular: it exists in a particular place, for the duration of a particular time. A body's properties may be shared by other bodies. For example, two bodies can have the same weight. But each body exists at its own place and time, each property of that body belonging to it alone. The equal weight of two bodies is a coincidental occurrence of the same measure for one aspect of two different bodies. Commonality is a coincidental resemblance of properties. Singularity is identity.<sup>149</sup> A definition of singularity as identity works in an ecological context.

This chapter explores the various ways care can be justified and the moral implications of these diverging justifications. "Care requires attending to and respecting difference."<sup>150</sup> The concept of singularity is difference that does not rest on contrast with some body taken as a reference point of sameness or difference. A body is what it is, and no other body can be exactly the same. Singularity is identity considered in itself, having passed all limits of commonality. Understanding care as justified through the singularity of that for which one cares removes the sting of anthropocentrism from the act of valuation. This is the framework through which one can value a body intrinsically without having to depend on some specific value property. That which is valued is the body itself, not some property of the body that can be isolated from its

<sup>149</sup> Gilles Deleuze and Félix Guattari, *A Thousand Plateaus*, trans. Brian Massumi (Minneapolis: Minnesota University Press, 1987), 261-262.

<sup>150</sup> Lisa Kretz, "Open Continuity," *Ethics and the Environment* 14, no. 2 (Fall 2009): 120.

entire constitution and shared with all other value-worthy bodies. The whole body, all its properties, its situation of existence, its relationships with all other bodies, is what is valued, as well as being the reason for its being valued. The moral act of valuation rests on a metaphysical principle of the singularity of a body's identity.

### 3. TWO PARADOXES OF PRACTICAL PHILOSOPHY

The contemporary sub-discipline of environmental philosophy began as a political movement. Andrew Light distinguishes environmental philosophy from other branches of the discipline by saying that where the rest of philosophy seeks truth, environmental philosophers seek to craft good policy.<sup>151</sup> Environmental philosophy took seriously the activists who would give their lives for the sake of a forest or to stop the hunting of wild animals. While there have been many disagreements on whether to use methods of violence or sabotage in environmental activism, theorists take activists' care for nonhumans to heart, and work to build a systematic philosophy for this concern.<sup>152</sup> More than just the personal commitment of the activist motivates an environmental philosopher's break from mainstream tradition. It is commonly accepted throughout the discipline of environmental philosophy that human industry caused a crisis unprecedented in its scope and destructiveness. One often reads that the ability of Earth itself to maintain life as we understand it is at risk. Contemporary environmental philosophers see themselves as leading a charge to transform society radically. The ultimate goals may vary, with some advocating sustainable economic development and escaping dependence on fossil fuel, and some advocating a return to a low-population agrarian society. Each environmental philosopher has his or her own vision of the ecologically friendly civilization, but almost all call for radical change.

This chapter examines a bind in which environmental philosophy finds itself, given that its very identity as a discipline is integrated deeply with political activism and policy. The urgency surrounding environmentalist activism is largely motivated by the unprecedented enormity of contemporary industry. Philosophers were some of the first writers to become conscious of this urgency, but today they have largely fallen behind in activism, as more immediately practical professions foster vibrant environmentalist movements. Environmental philosophy discourse today tends to consist of academic arguments over the details of principles and systems of norms. The audience for these increasingly technical disputes is rarely the general public, but instead other specialists in environmental philosophy. The academicization of environmental philosophy discourse has caused it to become disconnected from the environmental movement in politics.

The disconnect of an increasingly technical field of philosophical discourse not only applies to environmental theory, but to the discipline as a whole. Lee McIntyre cites the near-

<sup>151</sup> Andrew Light, "Environmental Pragmatism as Philosophy or Metaphilosophy? On the Weston-Katz Debate," in *Environmental Pragmatism*, eds. Andrew Light and Eric Katz (New York: Routledge, 1996), 327.

<sup>152</sup> Roderick Frazier Nash, *The Rights of Nature: A History of Environmental Ethics* (Madison: University of Wisconsin Press, 1989), 193-195.

closure and eventual downsizing of the philosophy department at University of Nevada-Las Vegas (UNLV) in 2011 as the first instance of a growing crisis in the field. UNLV administrators, faced with tightening budgets and an economic recession, cut funding and positions in their institution that were seen to produce no public benefit or having public relevance. Philosophy was judged to be a discipline whose products seem completely disconnected from the concerns of the general public, and was slated to be cut entirely from the university. After an uproar in the community of professors, the department was salvaged, though all junior-level faculty were let go. But the fact that a philosophy department, once taken for granted as a necessary element of a university, could face such drastic action is a sign that the discipline is in serious danger from over-technical discourse and the resultant community insularity.<sup>153</sup>

Regarding environmental philosophy, there are two responses one can take to this problem. I believe both to be excellent ideas. One would be to try to resume the political lead again, which means joining a transdisciplinary conversation with farmers, economists, architects, and engineers. Environmental philosophers must overcome a prejudice that lingers in the field about such professions, because in the beginning years of environmental philosophy many such professionals were adamantly opposed to environmentalism.<sup>154</sup> The second response, which I take in this work, is to keep back self-consciously from immediate political action. This response conceives philosophy as creating a comprehensive way of understanding the world that complements the moral debates on norms: an ontology suitable to environmentalist activism. A philosophy comprehensive of ontology, ethics, and morality is relevant to political action, supplying new ways of thinking about the universe that constitute an important background to environmental activism. From a philosophy like this, ordinary people who hold environmentalist values can build a more complex vision of humanity's place in the world.

This is the first paradox of any philosophy that develops from a political movement: that an esoteric network of concepts can provide, if not a program, then an impetus for political activism. Arne Næss is a paradigm case to illustrate this paradox, and I will return to his work throughout this chapter. His concept of the intrinsic value of all bodies is a fruitful starting point. He was motivated to create this concept by a powerful sense of urgency for social and political action. The destructive acts of enormous industry, which I defined in my second chapter as the theatrical large-scale industrial processes of contemporary technology, provoked this sense of urgency. All facets of the environmental movement share this urgency: the fear that no matter what action we take to change industry and society from its destructive habits, it may already be

<sup>153</sup> Lee McIntyre, "Making Philosophy Matter – Or Else," *The Chronicle of Higher Education*, December 11, 2011, accessed January 31, 2012, <http://chronicle.com/article/Making-Philosophy-Matter-or/130029>.

<sup>154</sup> Aldo Leopold, *A Sand County Almanac* (New York: Ballantine Books, 1970), 272-276.

too late. This sense of urgency explains why Næss described the concept of intrinsic value in relatively simple terms. His descriptions of the idea were sometimes too simple. Having a goal to make his theories applicable and expedient for mass movement, he articulated this fascinating concept as a mere dogma. Næss is a tragic figure, wedged in a bind between the complexity of his own thinking and the urgent desire to simplify his ideas for political action.

Environmental philosophy began as a blend of philosophy, science, and activism. Seminal figures in the tradition such as Aldo Leopold, Rachel Carson, and Næss continue to be referenced as forerunners and inspirations for contemporary thinkers and activists. This blend is sometimes uncomfortable when considered abstractly, with friction between the restraint asked of scientific practice, the careful attention paid to argumentation in philosophy, and the urgent provocation of the activist. But the real-life exemplars managed this apparent friction relatively well. Take the case of Leopold, who worked as a professor at University of Wisconsin-Madison, conducting the first scientific studies of Wisconsin's ecology, and writing essays intended to stir people into abandoning the popular image of nature as a resource to be scientifically managed. Ecocentrism, the philosophy that developed from Leopold's writings, is just one response to what is generally taken to be a radical situation: human activity causing the destruction of a harmonious ecological balance.<sup>155</sup> But today's environmental activist understands her role as separate from a philosopher. Activism is the task of reporters, photographers, documentarians, and political organizations.

So the media advocacy once carried out, for example, in the essays of Aldo Leopold and Næss, and the speeches and books of John Muir, is no longer a philosopher's task. What about designing the social and architectural structures of ecologically sustainable human communities? Næss laid out plans for such a society in the 1980s.<sup>156</sup> Val Plumwood's late work includes complex analyses of what economic, political, and social structures create and accentuate ecological disasters today, and she outlines methods of reform along sustainable lines.<sup>157</sup> Yet these plans are not just designed, but brought into action by people who have little or nothing to do with the field of philosophy. Farmers are developing new methods of non-industrial agriculture that can produce food on a large scale without overtaxing soil, and integrating insect colonies with fields.<sup>158</sup> Experimental farms in Oregon are building sewage and sanitation systems that recycle human manure into fertilizer, their goal being to create a zero-waste urban plumbing

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<sup>155</sup> J. Baird Callicott, *In Defence of the Land Ethic: Essays in Environmental Philosophy* (Albany: State University of New York Press, 1989), 3-4.

<sup>156</sup> Arne Næss, *Ecology, Community, and Lifestyle*, trans. David Rothenberg (New York: Cambridge University Press, 1989), 138-146.

<sup>157</sup> Val Plumwood, *Environmental Culture: The Ecological Crisis of Reason* (New York: Routledge, 2002).

<sup>158</sup> Jennifer Reeve, "Long-Term Sustainability of a Low-Input Organic Farm," presented at the Sixth International Conference on Environmental, Cultural, Economic, and Social Sustainability, Cuenca, Ecuador, January 5, 2010.

infrastructure.<sup>159</sup>

Professors of architecture are integrating ecological sustainability into their curriculum, creating a new generation of architects who design buildings, towns, and cities with a goal of zero waste production.<sup>160</sup> These architects are working now, in one case designing a radical method for household-based rainwater harvesting in India's most densely packed cities that could almost completely replace reservoir water supplies whose dams disrupt local rivers.<sup>161</sup> Urban architects have already absorbed lessons of twentieth-century environmental philosophy which describe an ecologically fruitful lifestyle as founded in a holistic understanding of one's place on Earth.<sup>162</sup> Architects now put these concepts to work designing urban habitats that integrate their human dwellers with surrounding ecologies, rather than bulldozing them.<sup>163</sup> Environmentalist architecture and urban planning is a growing element of the field's education, one noteworthy institution being California Polytechnic's Center for Regenerative Studies. Pioneered by John T. Lyle, the Center's philosophy conceives of architecture not as the production of static edifices, but as the management of cyclical ecological processes, whether in urban or rural environments.<sup>164</sup> There is even an ecological revolution in accountancy, in the form of a movement to abolish the 'miscellaneous' column from reports, because it is often used to hide environmentally destructive costs or ignore ecologically fruitful activities.<sup>165</sup> These examples display a political environmentalist movement driven by practical scientists, committed professionals, and tradespeople. Although work may not be proceeding with the speed that some militant environmentalists believe is required, work is getting done, driven by farmers, architects, and

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<sup>159</sup> Laura Dvorak, "Reclaiming Everyone's Soil-Opportunity to Understand Relational Cycles of Ecology: An Examination of Humanure Through the Lens of Global Environmental Crisis and Humanity's Spiritual Catharsis," presented at the Sixth International Conference on Environmental, Cultural, Economic, and Social Sustainability, Cuenca, Ecuador, January 6, 2010.

<sup>160</sup> Ameera H. Al-Hassan, and Steven J. M. Dudek, "Teaching Sustainability in Schools of Architecture: Prescribed or Integrated?" presented at the Sixth International Conference on Environmental, Cultural, Economic, and Social Sustainability, Cuenca, Ecuador, January 5, 2010.

<sup>161</sup> Uday Chipalkatty, "Signing with Rain for Singing in Rain: Rain Water Harvesting in Urban Areas," presented at the Sixth International Conference on Environmental, Cultural, Economic, and Social Sustainability, Cuenca, Ecuador, January 5, 2010.

<sup>162</sup> Tim Ingold, "Bindings and Boundaries: Entanglements of Life in an Open World," *Environment and Planning* 40 (2008): 1801-1802.

<sup>163</sup> Alan Derbyshire, "Sustainable Urban Habitats: the Contributory Components of Viable Eco-Diverse Cityscapes," presented at the Sixth International Conference on Environmental, Cultural, Economic, and Social Sustainability, Cuenca, Ecuador, January 7, 2010.

<sup>164</sup> David W. Orr, *The Nature of Design: Ecology, Culture, and Human Intention* (Oxford: Oxford University Press, 2002), 162-167.

<sup>165</sup> Alan Parkinson, and Lysie Chia Yin Chew, "The Use of Environmental Management Accounting Information by Managers in Companies in China: Theoretical Themes, Recognized Realities," presented at the Sixth International Conference on Environmental, Cultural, Economic, and Social Sustainability, Cuenca, Ecuador, January 7, 2010.

engineers, vocations that in Leopold's time were generally quite hostile to any environmentalist appeal.<sup>166</sup>

So what is the role of the philosopher in the twenty-first century's transdisciplinary political movement to correct humanity's ecologically destructive activities? The major debates in the academic journals of environmental philosophy tend to revolve around topics of little relevance to the practical projects outlined above. There are, in this recent literature, attempts to theorize a concept of the Good that can be relevant to environmental moral philosophy, in contrast to those moral systems the field generally considers humanist.<sup>167</sup> Ever since Peter Singer's *Animal Liberation*, philosophers have debated how, and to what degree, one should consider nonhumans of varying types as having some measure of moral worth. Types of organisms under consideration include animals, humans with the intellectual capacity of animals,<sup>168</sup> plants,<sup>169</sup> or microbes.<sup>170</sup> Vegetarian and vegan social movements have caught on with greater force in secular circles because of these debates. Some, such as Singer, justify lifestyles without consuming animal products using arguments against causing pain to creatures, while others, like Carol Adams, take any form of predation or reliance on less intelligent creatures to live as inherently exploitive and immoral.<sup>171</sup> But even though veganist political activism relies on theoretical arguments for animal consumption being a moral wrong, the argument itself does not motivate the activism. Political action is motivated by strong belief, and the desire to universalize that belief. Considering political activity alone, a vegan who believes in Singer's justifications and a vegan who believes in Adams' are indistinguishable. Both advocate that the public adopt vegan lifestyles.

To philosophers, in contrast, how a belief is justified and how a belief motivates political activity are equally important to the act of believing. One recurring problem of justification is whether environmental moral theories should seek their justification in human good alone, or the good of nonhuman organisms or ecosystems in addition to or to the exclusion of humanity. In environmental philosophy discourse, this is called the anthropocentrism debate: arguments over whether an environmentalist can act morally if her values are justified with reference to human

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<sup>166</sup> Leopold, *A Sand County Almanac*, 265-272.

<sup>167</sup> John Nolt, "The Move From *Is* to *Good* in Environmental Ethics," *Environmental Ethics* 31, no. 2 (Summer 2009): 135-154.

<sup>168</sup> Julia K. Tanner, "The Argument from Marginal Cases and the Slippery Slope Objection," *Environmental Values* 18, no. 1 (February 2009): 51-66.

<sup>169</sup> Matthew Hall, "Plant Autonomy and Plant Ethics," *Environmental Ethics* 31, no. 2 (Summer 2009): 169-181.

<sup>170</sup> Charles S. Cockell, "The Value of Microorganisms," *Environmental Ethics* 27, no. 4 (Winter 2005): 375-390.

<sup>171</sup> Carol J. Adams, "The Feminist Traffic in Animals," in *Ecofeminism: Women, Animals, and Nature*, ed. Greta Gaard (Philadelphia: Temple University Press, 1993), 195-218.



goods alone.<sup>172</sup> But activists themselves carry on the political work of the environmentalist movement, no matter what kind of body is the ultimate object of their concern. Another topic of academic environmental philosophy discussions is interpreting the writings of pivotal figures in the history of environmental thinking such as Thoreau and Leopold, among many others. But problems such as, for example, what exactly was Thoreau's concept of health do not matter to someone organizing an ecologically sustainable farming community.<sup>173</sup> Whether Leopold was influenced by pragmatism has nothing to do with the current task of working ecologists.<sup>174</sup> The scholarly interpretation of sources, influences, and subtle technical details of early environmentalist thinkers likely matters little to contemporary projects to put human societies and economies in an ecologically sustainable path. Philosophers, through their debates and arguments, continue to create complex systems of morality and ontology. Many environmental philosophers describe themselves as driven by the sense of urgency I discussed, but much published work of environmental philosophy remains disconnected from the urgent tasks of action in the world. Architects, engineers, farmers, and accountants are not waiting for philosophers to give them a theoretical framework for the moral beliefs they already hold deeply. They are already working, and philosophers are more usually left behind.

Environmental activism began as a project of philosophy. It was unorthodox philosophy, sometimes written as diaries and travelogues, but philosophy nonetheless insofar as they created concepts for environmentalism. That the aesthetic explorations of Thoreau and Muir evolved into the transdisciplinary writing of Leopold and Næss was perhaps required. One can hardly know how to fix an ecological problem, or repair relationships among human communities and their environments, if one does not learn the detailed processes that constitute ecologies. But a prominent trend continues in contemporary environmental philosophy of writing as if humanity is ignorant of the harm that modern enormous industry does. For example, writing in 2009 Lisa Kretz says, "The failure of many humans to locate themselves ecologically has contributed directly to the current ecological crisis," as if there were not already a globally popular movement encouraging people to reconsider their lives in exactly this way.<sup>175</sup> Ecological concern is a matter

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<sup>172</sup> Katie McShane, "Anthropocentrism vs Nonanthropocentrism: Why Should We Care?" *Environmental Values* 16, no. 2 (May 2007): 169-186.

<sup>173</sup> Antonio Casada da Rocha, "The Value of Health in the Writings of H. D. Thoreau," *Environmental Values* 18, no. 2 (May 2009): 201-215.

<sup>174</sup> J. Baird Callicott, et al, "Was Aldo Leopold a Pragmatist? Rescuing Leopold from the Imagination of Bryan Norton," *Environmental Values* 18, no. 4 (November 2009): 453-486. Callicott's hostile reading of pragmatist philosophers such as William James and John Dewey might turn readers away from productive ideas found in a more charitable interpretation of these thinkers. See, for example, the collection *Environmental Pragmatism*, eds. Andrew Light and Eric Katz (New York: Routledge, 1996).

<sup>175</sup> Lisa Kretz, "Open Continuity," *Ethics and the Environment* 14, no. 2 (Fall 2009): 116.

of popular debate, a subject of popular social consciousness. Not everyone radically disconnects their lives from industrial civilization. But everyone who knows who Al Gore is, or who followed news of the 2010 *Deepwater Horizon* oil well disaster, has engaged with the issue enough to understand that human industrial activity does ecological harm. Academic environmental philosophy is hardly in the vanguard of public advocacy and activism. The political lobbies and public outreach organizations like Greenpeace and the Sierra Club, or of public figures like Gore and environmentalist politicians, do not include the philosophical community in their discussions. As evident in the near-shutdown of UNLV's philosophy department, few consider the discipline relevant to contemporary concerns anymore.

The style of discussion in philosophy is in an important respect incompatible with the requirements of effective political activism, or with developing architectural and engineering projects for ecologically sustainable human communities. So environmental philosophy finds itself facing a second paradox in its development from a political movement. One expects in building, arguing over, and trying to improve a system of morality that people would eventually follow that system. No system of morality can control human action absolutely. Humanity has long had moral injunctions against killing people, yet there is no community where murders never take place. But today's environmental activists rarely wait for a moral philosopher to tell them if they are right before doing their own practical work. The debates of environmental philosophy consist of subtle distinctions and careful conceptual explorations that do not fit easily into a political slogan such as "Not Man Apart!"<sup>176</sup> and "The Future Is In Our Hands!"<sup>177</sup>

Such sloganeering might strike a philosopher as simplistic and without nuance. Yet to many others, understanding a concept as a simple slogan can render an idea personally, socially, and politically meaningful, encouraging its uptake. It often shocks members of the more intellectually sophisticated minority to see how powerful a slogan can be when people incorporate it into their lives.<sup>178</sup> Habits of nuanced thinking prevent one from mastering the simplicity of articulation required for political action. One understands an idea better with attentive, nuanced thinking, but the second paradox of environmental philosophy's political heritage is that subtle

<sup>176</sup> Robinson Jeffers, *Not Man Apart: Photographs of the Big Sur Coast*, ed. David Ross Brower (New York: Bristol Park Books, 1995). "Not Man Apart!" is the slogan of the Sierra Club.

<sup>177</sup> Arne Næss, *Ecology, Community, and Lifestyle*, 88-89. "The Future Is in Our Hands!" is the name of a Norwegian environmentalist political movement.

<sup>178</sup> D. T. Max, "The Unfinished: David Foster Wallace's Struggle to Surpass *Infinite Jest*," *The New Yorker*, March 9, 2009, accessed September 12, 2010. [http://www.newyorker.com/reporting/2009/03/09/090309fa\\_fact\\_max](http://www.newyorker.com/reporting/2009/03/09/090309fa_fact_max). As a young man, Wallace was the only educated person in his addiction recovery group, and was shocked and impressed to find corny slogans like "One day at a time," sparking transformations in the lives of his fellow addicts. He began to see himself as burdened by his education in contemporary philosophy and work in postmodern literature. So used to nuanced analysis, he found it more difficult than his less-educated fellows to learn the mental habits of recovery.

thinking generates differences among the members of a political movement, and these differences of opinion condition internal disagreements and breakdowns in the unity of mass actions. The concept of intrinsic value as a property of bodies may not stand up to nuanced philosophical scrutiny, but its simplicity makes it perfect as a slogan to motivate a political movement. It can be used as a motto by which political and social action to protect the nonhuman elements of Earth's ecosystem can commence and continue.

Næss is the philosopher whose normative system gives this tenuous ontological concept a central political role. The following analysis will describe how the disconnect of academic environmental philosophers with general public politics permits the political effectiveness of a philosophically untenable concept. For Næss, the environmental philosopher engages in two tasks: the creation and refinement of philosophical concepts, and the translation of those concepts into effective political and social norms. The first task is the kind of nuanced analysis that Næss called "precisation." Although awkward in English, it is a literal translation of a more common word in Norwegian. Næss developed this philosophical concept in his four volume work *Interpretation and Preciseness*. "A sentence  $S_1$  is more precise than another,  $S_0$ , if and only if the latter,  $S_0$ , permits (in ordinary or technical talk) all interpretations of the former, whereas the former,  $S_1$ , does not admit all interpretations of the latter,  $S_0$ ."<sup>179</sup> Each step in reformulating a sentence or description to narrow and restrict its possible interpretations is an act of precisation.

A more precise articulation of an idea accomplishes two goals. It narrows the number of ways one can understand that idea, while that smaller set of more precise meanings does not add any interpretations that were not part of the idea's earlier, less precise articulation. Ideally, precisation is the process of philosophical analysis. Beginning with a simple articulation of some idea which might be understood in many different, equally plausible ways, philosophical analysis reduces the number and variety of interpretations, and prevents divergence in understanding. Nuanced philosophical reasoning requires precisation because philosophical concepts and systems are highly technical and complex. So each sentence describing a philosophical system must be written with the most exact meaning possible. Sentences for political action must be simpler, therefore easier to understand. "The choice of a rather indefinite and ambiguous sentence in the most elementary argumentations makes this fairly short and easily understandable and opens a variety of different possibilities for derivation and interpretation."<sup>180</sup> Short, slogan-like sentences are easy to understand, but can be understood in a variety of ways because they are not very precise. In the context of political activity, sentences can have as many divergent interpretations

<sup>179</sup> Næss, *Ecology, Community, and Lifestyle*, 42.

<sup>180</sup> Næss, *Ecology, Community, and Lifestyle*, 43.

as there are listeners, as long as the listeners all agree that the same action plans follow from their simple sentences. As one makes an articulation more precise, it “is apt to be long and complicated.”<sup>181</sup> Simple sentences are not comprehensive accounts of reality, but “keys to the discovery of new sets of connections between things, the sum total of which may not at all be adequately described in terms of the original statement.”<sup>182</sup> Such simplicity, for Næss, is essential to make philosophical concepts motivate action, whether that action be further discovery of ideas or political agitation.

According to Næss, short exhortations drive people to the political actions required for a social movement like environmentalism. Næss uses a system of notation where normative propositions are imperatives ending in exclamation marks. Such imperative statements as “Nonviolence!” and “All living beings have same right to live and blossom!”<sup>183</sup> do articulate norms. But this form of imperative statement is so imprecise that everyone who believes in a slogan could understand it differently. His study of preciseness emerged from this analysis of the vagueness of norms when articulated as political slogans.<sup>184</sup> As a community of philosophers would explain such normative propositions, the explications would increase in length, and would lose their effectiveness as political motivations. Næss himself knew they were imprecise, and regretted having to use them in philosophical works. But he traded precision for political effectiveness upon embracing the political mission of his environmental philosophy.

But it can be dangerous to use simple normative propositions — essentially, brief exclamatory slogans — because they are ambiguous enough that some of their possible interpretations can diverge so radically from the utterer’s political intent that the original purpose of the norm is contradicted. The Sierra Club, for example, advocates for changing society in a more ecologically harmonious direction in a democratic framework. Yet their “Not Man Apart!” slogan can be interpreted as a strong biocentric norm. Human civic freedoms cannot be allowed to permit actions causing ecological harm, so these freedoms must be curtailed for the sake of prevention. The needs of a whole ecosystem must take precedence over those of one individual who in part constitutes that ecosystem. I discussed the problems of this anti-democratic interpretation of environmentalism in the previous chapter. But this interpretation has high-profile adherents. James Lovelock, inventor of the Gaia hypothesis in planetary ecology,

<sup>181</sup> Næss, *Ecology, Community, and Lifestyle*, 43. Næss does refer to slogan-based political thought as a “quagmire,” but admits that short exhortations have the ability to drive people to action.

<sup>182</sup> Arne Næss, *Gandhi and the Nuclear Age* (Totowa, New Jersey: Bedminster Press, 1965), 133.

<sup>183</sup> Arne Næss, “Integration of the 8 Points into Ecosophy T,” *The Selected Works of Arne Næss*, ed. Alan Drengson (Dordrecht: Springer Netherlands, 2005), 535.

<sup>184</sup> Benjamin Howe, “Was Arne Næss Recognized as the Founder of Deep Ecology Prematurely? Semantics and Environmental Philosophy,” *Environmental Ethics* 32, no. 4 (Winter 2010): 378.

advocates ending global democracy to repair climate change effectively, because he holds that only authoritarian political methods can best prevent humans from doing ecological harm for selfish reasons.<sup>185</sup> The philosopher must use his skills of analysis to make these ambiguous slogans more precise, so that political actions do not collapse into disorder when people diverge too wildly in how they understand its motivating norms.

Næss' second task for the environmental philosopher is the translation of precise philosophical analyses back into political norms, and to express those norms in a manner that prevents the ambiguity which may lead to self-contradiction. Næss believed he had achieved this task with his philosophical analyses and constructions, particularly his personal ecological philosophy, called Ecosophy T. In Næss' philosophy, an ecosophy is a kind of total view whose primary concern is ecological and whose normative aspects are so well-understood as to be "directly ready for action."<sup>186</sup> 'Total view' is a term Næss uses to describe a systematic set of fundamental philosophical positions which encompass all that the holder of the view deems important in the world.<sup>187</sup> Félix Guattari theorizes ecosophy similarly, as a worldview functioning at the intersection of ecological relationships, social relationships, and the forces constitutive of one's identity in its political and psychological dimensions.<sup>188</sup> A total view is a philosophical system one has developed through one's own thought, "which you feel at home with."<sup>189</sup> The philosopher can handle complex philosophical analyses, such as those Næss carried out on Spinoza's *Ethics*, the works of Gandhi, and in experimental philosophy. The philosopher can unite the principles and concepts he learns from analysis into a complex total view, as Næss did with Ecosophy T.

The normative propositions articulated in this creative process are simple in form: brief imperatives. But they are the result of careful philosophical analysis and construction that has provided an elaborate conceptual system to reference in case of ambiguous interpretation. This dual role of the philosopher has been crafted on the presumption of a firm class division of society based on philosophical skill. All people are capable of professing these norms and understanding

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<sup>185</sup> Leo Hickman, "James Lovelock on the Value of Skeptics and Why Copenhagen Was Doomed," *The Guardian*, March 29, 2010, accessed September 12, 2010. <http://www.guardian.co.uk/environment/blog/2010/mar/29/james-lovelock>.

<sup>186</sup> Næss, *Ecology, Community, and Lifestyle*, 37. The T stands for Tvergastein Mountain, the location of the hut where Næss composed many of his later philosophical and political writings. He intends the initial to indicate the personal, idiosyncratic nature of an ecosophy, because in his vision of an ecologically mindful society, every individual would have an ecosophy of their own, all including norms focussed on sustainability.

<sup>187</sup> Arne Næss, "Reflections About Total Views," *Philosophy and Phenomenological Research* 25, no. 1 (September 1964): 22-23.

<sup>188</sup> François Dosse, *Gilles Deleuze and Félix Guattari: Intersecting Lives*, trans. Deborah Glassmann (New York: Columbia University Press, 2010), 391.

<sup>189</sup> Næss, *Ecology, Community, and Lifestyle*, 37.

how they may be articulated precisely in their particular projects of living and thinking. But only the philosopher can analyze and construct the systems of norms which are then put to work as public beliefs. The philosopher becomes a kind of spiritual and conceptual director of society. He does not rule through legislation and force of arms. The social director of thought, in his conceptual role, operates through controlling the meaning of political and social norms. In his spiritual role, the philosopher assumes a kind of religious leadership, but operating through individual counsel. At moments of popular doubt in the prescribed meanings of social norms, the philosopher intervenes at the individual level to restore their faith.<sup>190</sup>

Næss assembled an ontology based on the constitutive relation. I will explore this concept in more detail in the following chapter. His own account of an ontology of the constitutive relation is not as systematic as that carried out in the works of Gilles Deleuze and Félix Guattari, which I will explore in more detail later. Næss is less interested in the ontological aspects of the constitutive relation, instead focussing on the particular political or social norms that the concept can imply. He states his ontological account of the constitutive relation quite simply: “We arrive, not at the things themselves, but at networks or fields of relations in which things participate and from which they cannot be isolated.”<sup>191</sup> He is careful in this brief, yet precise, sentence to note that the fundamental nature of existence is not a matter of single things isolated in their individuality. All bodies exist as integrated fields, mutually influencing and dependent on each other for their own identity. “The term ‘relational field’ refers to the totality of our interrelated experience . . . Things of the order ‘material things’ are conceived of as junctions within the field. . . . I interpret this to mean that *the relations* which define the thing *conceptually* converge at the same junction.”<sup>192</sup> I think the reason for this concentration is the political urgency of environmental philosophy’s legacy as a social movement. To match the pace of ecological destructiveness of enormous industry, an environmentalist philosophy must put its systems of concepts into political movement as quickly as possible. The creation and articulation of social norms is the political point of philosophy.

Næss crafts from the potentially complex and challenging ontology of the constitutive relation an environmentalist socio-political program with a conviction that the consensus of all individual environmental philosophers and activists is required in this age of enormous industry. Næss thinks such a program is possible, but only because he simplifies the philosophy into a form that non-philosophers can easily understand, his normative order, “All living beings have same right to live and blossom!” This norm includes two concepts — natural rights and blossoming —

<sup>190</sup> Næss, *Gandhi and the Nuclear Age*, 72-74.

<sup>191</sup> Næss, *Ecology, Community, and Lifestyle*, 49.

<sup>192</sup> Næss, *Ecology, Community, and Lifestyle*, 55.

which can be confusing. Rights only make sense in either of two ways. 1) Laws operate in a legal regime in which there are various ways in which one cannot act upon the bodies to whom those laws apply within the scope of that regime. It is difficult to motivate people toward political action based on this concept of rights because the power to bestow rights on some group of bodies rests entirely in the hands of those the legal system currently empowers. There is no motivation beyond the desires of the already-empowered to extend legal protections to some group that is currently not enfranchised. And one could always prefer not to. The language of political activism involving rights often implies belief in the following conception. 2) Rights are a property that all bodies of a particular kind possess primitively, the same kind of property as their colour or their size. The political movement is not about changing desires, as it would have to be under the previous conception. The movement is instead about forcing people to recognize some pre-existent, but long ignored, property of some group of bodies. Næss believes that the only way to motivate effective popular politics is through activists' belief in rights or value as a naturally occurring property of bodies themselves.<sup>193</sup> But this understanding of rights is vulnerable to the same arguments I raised against the property understanding of intrinsic value. Indeed, this conception of rights is a legal articulation of the property understanding.

Beyond this problem, there are important difficulties with enshrining and enforcing a right to live and blossom for all individual creatures and communities of creatures. Blossoming means a creature or community unfolding its potential capacities to the fullest possible extent. Where political and moral norms universally respect blossoming, the practical result tends not to be an ideal harmony of a deep ecologist's intuition, but great misery. Erazim Kohák describes a public outcry in the 1970s against American National Park policies to cull the herds of wild horses in the Grand Canyon. When the cull stopped and the horses were allowed to blossom free of constraint, their population quickly grew to overtake available food supply, and many horses starved to death, for Kohák a more miserable end than a few hunters' bullets.<sup>194</sup> Næss is aware of such limitations on his norm of blossoming, and addresses them with the same kind of qualification he gives to every element of his ecosophy when considered in the abstract. The norm to respect blossoming "is not some kind of unconditional *isolatable* norm to treat everything the same way. It is only a fragment of a total view."<sup>195</sup> In this total view, concepts are

<sup>193</sup> Næss, "Expert Views on the Inherent Value of Nature," in *Selected Works*, 163-164.

<sup>194</sup> Erazim Kohák, *The Embers and the Stars: A Philosophical Inquiry into the Moral Sense of Nature* (Chicago: University of Chicago Press, 1984), 98. Kohák points out that the slower deaths by starvation of Grand Canyon horses caused no public outcry, because the media only covered the morally black and white tale of human hunters shooting down majestic animals. This story indicates again the theatricality required to spur political action, and shows the importance of the mass media in encouraging political mobilization through theatre.

<sup>195</sup> Næss, *Ecology, Community, and Lifestyle*, 167.

united in a manner which may leave a philosopher scratching his head at the paradoxes and incompatibilities that emerge from these juxtapositions.

Næss describes a model of the socio-political policies required to respect this equal right to live and blossom in his article on wolf populations sharing territory in rural Norway with sheep farmers. Næss is just one of many environmental thinkers whose philosophy involves as a key ideal the image of nature as a harmony disrupted by human industrial activity. But his solution to the question of how to share this particular Norwegian territory among farmers, sheep, and wolves ignores goals of restoring harmony. Instead, there is a political calculation that considers equally the interests of each relevant community. The solution is a compromise, with wolves allowed periodically to feed upon sheep, farmers accepting lower levels of profit, and sheep having to live with occasionally dying to feed wolves and humans while under protection from undue suffering.<sup>196</sup> On this compromise, the wolves are allowed more leeway to eat sheep without disruption as a recompense for a dangerously low population. At the time of writing, there were only 5-10 wolves in all of Norway.<sup>197</sup>

So this is the result, which some might call strange or at least unexpected, of the political articulation of a universal norm that all must live and blossom with equal opportunity. One ends up with a variety of compromise positions among different populations. No community or individual is able to act to the maximum of what it can do, because other communities and individuals will get in the way and force a compromise. This is the reason why understanding nature as having existed in a condition of perfect or divine harmony before the era of enormous industry is romantic naivete. Edenic harmony is only possible among creatures whose activities never conflict.<sup>198</sup> There is a broad consensus in environmental philosophy that to treat the world only as a resource for humanity's projects is immoral.<sup>199</sup> But nature as it exists is competitive: organisms do treat other creatures as resources. Food is perhaps an obvious example, because aside from microbes which feed only on nonliving molecules like sucrose, and plants generating energy from photosynthesis and nitrogen absorption, all organisms eat other organisms to survive.<sup>200</sup> The relationships among organisms to sustain their lives are not always matters of fatal

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<sup>196</sup> Arne Næss, and Ivar Mysterud, "Philosophy of Wolf Policies I: General Principles and Preliminary Exploration of Selected Norms," *Conservation Biology* 1, no. 1 (May 1987): 27-32.

<sup>197</sup> Næss and Mysterud, "Philosophy of Wolf Policies I," 22.

<sup>198</sup> Carol P. Christ, and Kathryn Rountree, "Humanity in the Web of Life," *Environmental Ethics* 28, no. 2 (Summer 2006): 187-189. This article shows a romanticized image of the Maori living in perfect harmony with an Edenic nature.

<sup>199</sup> Val Plumwood, "Integrating Ethical Frameworks for Animals, Humans, and Nature: A Critical Feminist Eco-Socialist Analysis." *Ethics and the Environment*, 5, no. 2 (2000): 296-297.

<sup>200</sup> Evan Thompson, *Mind in Life: Biology, Phenomenology, and the Sciences of the Mind* (Cambridge: Harvard University Press, 2007), 158.



consumption. The sheep are resources for the wolves and the human farmers to live. This is even so for vegetarian sheep farmers who are only interested in their wool for clothing. Grass is a resource for the sheep, as is the human institution of the family farm that protects them from suffering injury by wolves.<sup>201</sup>

One might think that a philosopher could not hold a doctrine that all bodies have absolute intrinsic value while also endorsing this kind of ecosystemic politics of compromise. Each inevitable sacrifice accompanying any compromise would be an absolute sacrifice. If one must preserve what is valuable, then all bodies having value must imply that all bodies must be preserved. But the only fully moral regime this concept of value would allow results in death, because most forms of eating would be immoral. Compromise among all co-habitants is the only practical way to enact such a doctrine. The compromises of worldly action reconcile the absolute and practical conceptions of singularity. Practical difference is evident from the collision of bodies in the world, such as the sheep farmers living in the same territory as wolves, and protecting their sheep with decimating force. The maximum benefit to the humans results in the utter destruction of the wolves. Absolute singularity motivates a farmer's desire to step back from maximizing his power at all costs because the existential value of the world lies in its diversity. Intrinsic value is an ontological principle in Næss' system, a property of bodies themselves. But to recognize that all bodies have a value intrinsic to their existence introduces into one's ontology a normative imperative: to act in all possible ways to preserve that value. Because the norm's imperative extends to all living beings, it is also an ontological claim that all living beings have intrinsic value. So one obeys the norm's imperative by preserving those valuable bodies — that is, all bodies — to the greatest possible degree.

This qualification that one must act to preserve valuable bodies to the greatest possible degree requires compromise of the type Næss and Mysterud described in "Philosophy of Wolf Policies I." It is impossible to preserve literally all bodies because some bodies must consume others for the sake of their own preservation, and because no body can be preserved forever. As well, preserving bodies in their current state would prevent the production of new bodies, which would be just as absolutely valuable as the old. But a biocentric morality motivated by a belief in intrinsic value can accomplish the greatest possible preservation. This philosophical vision of politics — pragmatic compromises aiming to maximize preservation of the valuable — unites the two conceptions of the value of singularity I discussed at the end of my first chapter. One believes in the intrinsic value of all singularities, but having accepted that absolute preservation is impossible, one works to preserve all that can be, while encouraging the production of new

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<sup>201</sup> Arne Næss, and Ivar Mysterud, "Philosophy of Wolf Policies I," 27.

singularities. One manages process for the sake of diversity, the variety of singularities.

The question remains, however, of what effect Næss' vision of the philosopher as biocentric spiritual and conceptual advisor will have on society, whether this peaceful approach to steering a society's thinking is genuinely democratic or a more insidious form of totalitarianism. An idea is politically most powerful when it is not questioned. No one even thinks of questioning it; such a thought would be as strange as questioning breath. To have an order of unquestioning followers enforcing a single idea on its opponents is not enough. Totalitarian promulgation of an idea inspires resistance among opponents and selfish opportunism among its proponents. The critique of environmental philosophy as ecofascism is that an ecocentric political philosophy would suppress individual freedoms of thought and speech for the sake of ecosystemic health. The enforcement of a single dogma on a human population ends democratic deliberation and any politics of genuine consensus.<sup>202</sup> Næss understands that fascistic social mobilization is ultimately self-defeating, setting into motion the forces of internal corruption and external resistance that destroy the goals for which mobilization begins. Even in the radical transformation of human society along ecocentric moral principles, he believes liberty must be preserved.<sup>203</sup>

One does not need force of arms to enforce a dogma. Enormous industry creates images and events of such theatrical terror and absurdity that it impresses a mode of intense urgency upon an environmentalist philosopher. Activism must match the accelerating pace of industry.<sup>204</sup> In order to make human civilization ecologically sustainable as fast as possible, a new ecocentric morality is required, but that new morality must be adopted quickly. However, it must not be so quick, as in a fascist mobilization, that the movement itself breeds popular resistance. An entire society of people trained and persuaded through formal education, media manipulation, and the day to day influence of one's family, friends, and peers who are already indoctrinated, will live with biocentric or ecocentric moral attitudes at the centre of their lives. The environmental philosopher as ecocentric spiritual and conceptual advisor would be the designer of this regime of influence on thinking. Only in severe cases of rebellion would the environmental philosopher intervene in an individual case, as Næss described in his example of Gandhian face-to-face political action. This is a social activism free of violence and coercion.<sup>205</sup> But it is not a democratic social activism.

There is a way to unite respect for democracy with ecocentric moralities, although it does not work with the speed of fascist mobilization or the comprehensive effectiveness of

<sup>202</sup> Luc Ferry, *The New Ecological Order*, trans. Carol Volk (Chicago: University of Chicago Press, 1995), 82-83.

<sup>203</sup> Næss, "Sustainable Development and Deep Ecology," in *Selected Works*, 570-571.

<sup>204</sup> Næss, "Politics and the Ecological Crisis: An Introductory Note," in *Selected Works*, 194.

<sup>205</sup> Næss, *Gandhi and the Nuclear Age*, 72-73.

institutional thought control. This is the model of inspiration through living as an exemplar of an ecocentric morality. One lives according to the ontological principle that all things have intrinsic value and the moral norm that all living bodies have a right to blossom, the example catching on in society through its very demonstration in life. Each exemplar will live a slightly different ecocentric morality, unique to her own personality and the demands of the situations in her own life. And those who follow an ecocentric exemplar will likewise vary their morality from their chosen model. Næss himself anticipated this in his talk about the nature of his own personal philosophy, or total view, Ecosophy T. He did not want people to follow it directly, but to create their own ecosophy for their own situations, having been inspired by his model. He writes this way about deep ecology, and philosophy itself. Each person's philosophical worldview need not be consistent with each other in every individual element of doctrine — they need only carry out the same practical activities.<sup>206</sup> Exemplary behaviour is the living articulation of metaphysics through one's own identity. Insofar as environmentalist political activism focusses on the constitution of identities through inspirational behaviour, its moral thinking and political activity have become a matter of ethical philosophy as I defined it at the beginning of my project. Trying to persuade people to change their lives through philosophical argument provokes counter-argument and backlash, slowing down the process of social change that the environmentalist believes to be so urgent. The exemplary lives of ecologically mindful individuals become models through the force of their singular personality for those who have yet to give environmental matters much thought.<sup>207</sup> Society can only be changed in a way that respects freedom of thought through these living exemplars of a new style of life.

The method of social change through changing minds with the exemplary demonstrations of the great environmentalists is more friendly to democratic freedoms than environmental authoritarianism or the vision of the philosopher as a spiritual advisor who calmly enforces doctrine. But the method of exemplary inspiration as Næss understands it remains remarkably classist. Society is divided into the exemplary ones, with whom Næss would include himself, and the followers, those who absorb the ideas demonstrated in the lives of the environmentalist exemplars to make them unquestioned dogmas, that over which it seems senseless to argue.<sup>208</sup> Philosophers exist as both exemplary environmentalist leaders and as followers. They are able to understand the principles behind the simple, slogan-like norms such as “All living beings have

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<sup>206</sup> Næss, “Deep Ecology and Lifestyle,” in *Selected Writings*, 105.

<sup>207</sup> Nathan Andersen, “Exemplars in Environmental Ethics: Taking Seriously the Lives of Thoreau, Leopold, Dillard, and Abbey,” *Ethics, Place, and Environment* 13, no. 1 (2010): 44.

<sup>208</sup> *The Call of the Mountain: Arne Næss and the Deep Ecology Movement*, directed by Jan van Boeckel, and Pat van Boeckel (Blankenheim, Netherlands: ReRun Productions, 1997).

same right to live and blossom!” The exemplary philosophers would have the mystical experiences of intuiting wonder at the harmonious goodness of nature, and formulate norms based on these intuitions. Follower philosophers would build systems of argumentation to justify those norms, make the norms more precise, or apply those meanings to more particular or situational problems. The role of the non-philosophical populace would be to accept these moral doctrines without question and live according to their dictates.

Here the skeptic has something to critique. Intuitions vary considerably across and within cultures, so a single person’s intuition has no better chance of insight into genuinely universal truth than some other person’s contrary intuition.<sup>209</sup> What seems for one person to be intuitively obvious might seem absurd to another. If people are to carry out a socio-political program without doubt, intuitions cannot conflict: the follower of a cause must believe that her cause is true, and all others false or inadequate. Large numbers of people must transform their thinking, and this must be done at a rapid pace if one shares the environmentalist mood of urgency. Yet an intuition is not an insight into genuinely universal truth, but an experience in which the intuiter contemplates what seems obvious to him. The obvious is that which the intuiter has never conceived as being sensible to call into question.<sup>210</sup> So the environmentalist goal of fostering in people intuitions of the beauty, harmony, wonder, and goodness of nature is a social program of changing that which an ordinary person finds obvious. There need be no reference to any actual facts, only the institutional and philosophical machinery to convince people of dogmatic principles. One does not need reference to facts to convince someone that an idea is true.

But none of these elaborate machinations of social engineering are actually required, when the destruction that enormous industry causes can be measured practically. Once this is done, one can experiment with new ways of life, whether or not they are industrial inventions, that are ecologically sustainable, and will end those harmful effects. Transforming society through institutionally engineering widespread belief in the veracity of intuitions of nature’s wonder and goodness promulgated by environmentalist exemplars requires unquestioning belief in dogmatic principles. Such an extreme transformation of human thought is not required to prevent the large-scale destruction caused through contemporary enormous industry. One need only perceive the harms done, understand what causes those harms, and undertake experimentation to end them while maintaining and spreading industry’s benefits. Those benefits include medical science, infrastructure to aid people’s survival against harsh weather, disease prevention,

<sup>209</sup> Shaun Nichols, Stephen Stich, and Jonathan M. Weinberg, “Normativity and Epistemic Intuitions,” *Philosophical Topics* 11, no. 4 (December 2001): 429-460.

<sup>210</sup> Jonathan M. Weinberg, “How to Challenge Intuitions Empirically Without Risking Skepticism,” *Midwest Studies in Philosophy* 31 (2007): 337-338.

widespread education, and democratic communication. The harms of enormous industry are not just those obvious examples which strike us with their immediate theatricality, like the ships anchored in an Uzbek desert, and the oil slicks in the Gulf of Mexico which are visible from space. The sensitivity to subtle relations and interdependencies that ecological science teaches can accustom people to look for more insidious harms of equally large, if hidden, scales.

In this latter area, philosophy can serve a practical purpose. Of central importance to this purpose is the ontological concept of the constitutive relation. Constructing a metaphysically systematic philosophy is one way to integrate ontological and moral concepts into an adaptive program for thinking that is both theoretical and practical. Such a program that integrates the practical and theoretical elements of philosophy is about the construction of a subjectivity. So adaptive political programs are matters for putting ethical philosophy into practice. Such programs are not suited for applying moral rules and norms. Practice also provides a defence for the concept of total views or philosophical worldviews in general. It is poor practice in academic philosophy today to speak of having a worldview; such words betray amateurishness. Philosophy today consists of sub-disciplines whose boundaries are shaped by conceptual and scientific inquiries. Contemporary philosophers investigate problems; they do not construct worldviews. Only people outside professional philosophy speak of developing a worldview.

Yet these are precisely the people who, at this moment in the historical development of the discipline of philosophy, are in a position to judge it. Remember that the existence of the UNLV philosophy department was jeopardized on grounds that the institutional practice of philosophy was no longer relevant to the material practice of public life. Næss developed his concept of the philosophical total view — essentially the same as what I call a comprehensive worldview — as a tool for professional philosophers to inform the practice of ordinary people.<sup>211</sup> A sub-discipline of philosophy cannot be part of a political movement if its message to non-professional philosophers is that their less rigorous way of thinking about ideas is not welcome in the philosophical community. If the concerns and habits of ordinary people are of no relevance to philosophy, then philosophy is irrelevant to ordinary people. If environmental philosophers want to take seriously their heritage as a political movement, then its ideas, even applied in amateurish

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<sup>211</sup> I consider the term ‘total view’ problematic because of the connotations of the word ‘total.’ I use of the terms ‘totalization’ and ‘totality’ throughout this work to refer to a conception of comprehensiveness which implies that one’s knowledge of all existing and possible states is complete, and that nothing can surprise a totalizing system of understanding. Totalization is a conceptual version of how Leopold described the monoculture farm: a single concept that is used to eradicate all possible forms of thinking but those compatible with the concept itself. Just as monoculture farming weakens the physical health of the land, totalizing thought weakens the mental health of a person. I conceive of a comprehensive worldview as a framework of thinking that one can apply to any situation, but which makes no demands that a situation in the world should be understood only in terms of that framework. One should always allow, as a matter of prudence at least, different perspectives to understand the world. I explore this idea in detail in Chapter Seven.

ways, should be able to enter the daily habits of ordinary people's thinking. The UNT philosophy department's transdisciplinary engagement with scientific research is one way to demonstrate philosophy's relevance to the material lives and concerns of the wider population. Another way is developing environmentalist exemplars which inspire other people to transform their daily practice in a more ecologically mindful direction.

The historical analyses of environmental philosophy have identified those elements of the Western philosophical tradition that have helped produce the cultural blindnesses responsible for the contemporary ecological crisis. It takes more effort to understand the convergences and similarities of humans and nonhumans, as opposed to their radical difference. Humanity is different from that which is not human, but this difference must not be understood in a way that alienates humanity from the nonhuman, or collapses the nonhuman into a single category and ignores the diversity of existence. I consider the latter the greater mistake. In my view, philosophy's role in the practical environmentalist project is to develop a way of thinking that is open to the multiplicity of difference and divergence in the world, understands humanity as part of this world, and appreciates the interdependence and integration of all the elements of existence. I believe a philosophy based on the concept of the constitutive relation can achieve this. My goal for the rest of this work is to build such a philosophy, show where it stands in relation to mainstream environmental philosophy, and demonstrate where it can serve as critique and corrective.

#### 4. UNITY AND THE CONSTITUTIVE RELATION

To achieve its deepest and most complete success, the social and political program of environmental philosophy requires that people radically transform what they consider obviously true. Its moral principles cannot be accepted without a change in how one thinks of reality. If one's ontology is based on discrete individuals whose relationships are accidental to their identities, then principles centred on the integration and interdependence of bodies will be difficult, if not impossible, to embrace. And such a shift in how one thinks about the world must be ethically meaningful. A decision is ethically meaningful when it is consistent with one's self-consciousness, when one understands and accepts the causes and reasons for one's decision. Only in the context of this consistency can one take full responsibility for that decision. So a decision becomes ethically meaningful through self-consciousness. According to one standard view in moral philosophy, to make a self-conscious decision requires understanding oneself as a discrete individual, sufficiently autonomous to make decisions and accept responsibility for them. I call this concept of the discrete autonomous individual an *egoistic* concept of subjectivity. But to accept an ecological philosophy, one must be very careful with this egoistic self-understanding. The concept has its place, and is useful for some ethical and moral problems, but egoism as I have explained it must not be the only concept of subjectivity in a philosopher's thinking. Autonomy must not be understood as contrary to integration. The primary discovery of ecology is that no body can exist in isolation, that its generation and continued existence not only depends on its relations with those bodies that share its history, but is also constituted in its singular identity through those relations.<sup>212</sup> Because the ontological fact of interdependence has clear implications for practical action, this ecological discovery also has a moral aspect.

A philosophical focus on interdependence can result in a strong holistic interpretation of ecology, in which the entire ecosystem or even the biosphere as a whole subsumes a body's individuality. To conceive of oneself as interdependent with one's environment, one must understand oneself as a body autonomous in its self-consciousness, but at the same time constitutive of a larger body such as an ecosystem, society, or planet. This is also a kind of holism, but one in which one privileges not the larger bodies the relations of parts create. What matters for integrative ontology are the relations that integrate parts. One must understand oneself as an autonomous body constituted from smaller bodies and fields of force. Ecological philosophy requires a theory of subjectivity as constituted from a plurality of forces: a subjectivity is a

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<sup>212</sup> Arne Næss, *Ecology, Community, and Lifestyle*, trans. David Rothenberg (New York: Cambridge University Press, 1989), 49.

complex whole capable of creativity. Every body is a whole, constituted from parts, and each of those parts is a whole with its own parts, and so on. At no point can one discover a body that is truly simple, a unity having no component parts. Such a unity is impossible. Physical processes assemble the parts of a body constitutive of that body's properties and its identity. But to call some body a part of another need not imply that it is contained within this other body. Understanding bodies as processes means everyday words like 'part' and 'whole' will have very different meanings.

The production process of bodies is an ontological matter, and it is reasonable to be skeptical that ontological principles can be relevant to moral concerns. But maintaining a strict separation of philosophical domains is counterproductively restrictive, considering the positive results that can come of their convergence on taking appropriate care. Val Plumwood writes:

Mainstream environmental philosophy is problematic not just because of restriction *in* ethics but also of restriction *to* ethics. Most mainstream philosophers continue to view environmental philosophy as primarily concerned with an extension of existing ethical frameworks. For example, instrumentalism is viewed as a problem in ethics, and its solution seen as setting up a theory of intrinsic value. But this neglects the key further aspects we have been examining, of dualism and the account of the self and of human identity as hyperseparated from nature, the connection between this and the instrumental view of nature, as well as the broader historical and political aspects of the critique of dualism and instrumentalism.<sup>213</sup>

What Plumwood calls the hyperseparation of humanity and nature, I call the absolute dichotomy, a term which I think better illustrates the restriction of this ontology to two categories, and the infinite conceptual distance between them. Her point and mine is that understanding and solving the major moral problems of environmental philosophy requires attention to ontological concepts as well as strictly moral or ethical concepts, and how one's understanding of each affects one's understanding of the other.

The constitutive relation is an alternative to the absolute dichotomy of the active and the passive. This dichotomy is the most abstract articulation of a pattern of thinking fundamental to Western philosophy since its beginning in ancient Greece.<sup>214</sup> I have already discussed how belief in the dichotomy of technological humanity and wild nature constitutes an impasse. All that matters in dichotomous thinking is the essential meanings of the two categories, and where each body is to be slotted. So vast varieties of singular identities will be ignored, subsumed habitually into their proper side of the dichotomy. Interdependence means that each body in a relationship

<sup>213</sup> Val Plumwood, *Feminism and the Mastery of Nature* (New York: Routledge, 1993), 173.

<sup>214</sup> Plumwood, *Feminism and the Mastery of Nature*, 107-110.



depends mutually on all others for existence. Only the existence, the survival, of a body is at issue in interdependence. Constitutive relations do not reduce to interdependence, although one can understand constitutive relations to imply interdependence. Constitutive relations take the entirety of a body's identity to be a product of its relations with other bodies. Identity is not a simple unity, but a fluctuating set of "networks or fields of relations in which things participate and from which they cannot be isolated."<sup>215</sup> Changes in one body result in changes in all bodies integrated with it.

If there is a change in a body X that is in some constitutive relation with a body Y, then the identities of X and Y change, because what constitutes the identities, the relation, changes. In deep ecological thinking, a key moral injunction is to act mindfully of one's integration with surrounding bodies. One adopts this norm for the practical purpose of avoiding the destruction that comes from acting without heed to possible consequences. These practical reasons are important for political reasoning and advocacy, the primary focus of environmentalist social movements. The ontological reason to act mindfully of one's interdependence is that one's singular identity is constituted through processes that integrate one's body with other bodies, internally, externally, and bridging the two sides of one's bodily boundary. To act without paying attention to this physical integration is to act without knowledge of fundamental facts about the constitution of one's body.

A human body is an illuminating example because human persons, their natures, and capacities are the typical subjects of ethical thinking and moral systems. Speaking within the context of traditional systems of ethics and morality, the human person is the basic unit, the indivisible atom of a moral calculus. The person holds rights, follows duties, joins contracts, embodies virtues. The person desires, wishes, and thinks. The person is the elementary particle that constitutes families, communities, states, and societies. But thinking only of personality, politics, and society does not offer a complete understanding of a human person. These psychological and social domains are made from processes, which are only at the forefront of a human's self-consciousness. Ontologically, each person is a unique aggregation of forces, bodies, and properties.

These non-self-conscious processes constitutive of a human person include, but are not limited to, the construction of membrane-bounded cells from an amorphous chemical soup, the

<sup>215</sup> Arne Næss, *Ecology, Community, and Lifestyle*, 49. Næss brings up the constitutive relation as an antidote to the tendency in philosophy to think of an absolute dichotomy of the thing-in-itself and the thing-for-me, objectivity and subjectivity. His objection to this way of thinking is that it encourages a person to consider himself utterly segregated from the world in order for his knowledge of the world to be true: knowledge must be purely objective to avoid distortion by subjectivity. As a result, humanity becomes alienated from the world, understanding human interaction with the world as distortive of its objectivity, its truth.

intricate folding and accurate reproduction of chromosomal DNA and proteins, the formation and functioning of organs, the folding of cellular walls to create blood vessels, tendons, muscle, ligaments, bones, and the neuronal structure of the brain and perceptual system.<sup>216</sup> Moral and ethical philosophy focus on activities of decision making in different contexts. Moral philosophy operates in social and political contexts, and ethical philosophy operates in understanding oneself as a person. These chemical processes, in contrast, constitute the physical existence of each individual human, yet are not usually part of self-conscious decision making.<sup>217</sup> The processes change in response to alterations in their environment, but there is typically no deliberation or consciousness involved in such change. Yet in constituting a human body, they constitute just those processes that serve as philosophy's paradigm for the concept of self-awareness. These processes are themselves constituted from processes on even smaller scales: processes of molecular and atomic bonding from which cells and the bodies within cells are made. And a human body does not consist only of internal processes which constitute itself. Colonies of microbes live inside the human digestive system, although they are entirely different organisms from the human, facilitating the nutrient absorption process in a symbiotic relationship that allows the microbes and their human home to thrive, an interdependence relation physically internal to a human.<sup>218</sup>

The processes constitutive of a human body are not exclusively internal. A human exists within an ecosystem, and came to be from a concentration of a variety of bodies in that ecosystem, the food a mother digests which nourishes her embryo, matter being cycled through her body to grow a fetus. The processes which began these flows of matter are ultimately cosmological in scope. The constitution of a human body is one relatively brief phase of the ongoing fluctuations of matter in an ecosystem.<sup>219</sup> That ecosystem, in which a person is a small part, developed in the dynamic and often unstable processes constitutive of the planet Earth.<sup>220</sup> Earth and its solar system are just one small part of the processes of stellar formation and decay constitutive of almost the entire history of the universe. Energy generated from stars thousands of times more luminous than the sun and their supernovae constitute interstellar dust clouds stretching across a galaxy. The movements and interactions of these dust formations and the

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<sup>216</sup> Manuel DeLanda, *Intensive Science and Virtual Philosophy* (New York: Continuum, 2002), 62-64.

<sup>217</sup> The biochemical processes constitutive of a human body can be objects of self-conscious decision making, as in decisions affecting one's health, like whether to smoke, or begin taking some pharmaceutical drug. But this is an example of how a person's power to think can affect processes that began long before that power was developed.

<sup>218</sup> Charles S. Cockell, "The Value of Microorganisms," *Environmental Ethics* 27, no. 4 (Winter 2005): 375-390. A detailed analysis of symbiotic relations will be important later in my project.

<sup>219</sup> Aldo Leopold, *A Sand County Almanac* (New York: Ballantine Books, 1970), 111-115.

<sup>220</sup> Peter Ward, *The Medea Hypothesis: Is Life on Earth Ultimately Self-Destructive?* (Princeton: Princeton University Press, 2009), 81-89.

stellar energy fields that animate them Lee Smolin calls the ecology of a galaxy.<sup>221</sup> Earth, its ecosystems, and its organisms were assembled from clouds of this dust. The processes from which a human body is assembled flow back and forth from inside and outside that body. Air breathed communally by people in proximity is inhaled, joins with the blood of each person, cycles through a body, and is exhaled.<sup>222</sup> One's self-understanding is constituted through processes of another order: social interaction within a family, a community, a state, a global aggregate of people in varying intensities of solidarity, linked through multiple platforms of communication media. A human's self-conscious identity is constituted through these external relations with social processes and institutional structures.<sup>223</sup>

Processes generate a human body, just as processes generate all bodies. This generating activity should not be understood as creating a finished product, which then exists independently. Processes do not stand separate from the body they generate; they are themselves the body in question. The processes constitutive of a body may be considered that body's parts. The parts act to maintain the relations among themselves that constitute the whole, or else that whole breaks down. The parts then disperse, the relations binding them together having disintegrated. In the case of a human body, the dispersal of its constitutive processes is death. Organic bodies display most obviously the processual character of the relations of parts among each other and to the whole, though process is not limited only to the organic. The continuing relations of the parts generate the whole. One cannot think in terms of process without introducing a temporal dimension to identity. If some process plays a role in the generation or maintenance of a body, then that process is part of that body. Its inclusion in the part-whole relation pays no heed to whether a whole physically encloses its parts. A body may be constituted in part from processes that remain entirely external to its physical boundary, providing a context that constrains and opens possible directions of that body's development.<sup>224</sup> Flows of matter and energy constitutive of an ecosystem are one example of such an external system actively developing a body within it, such as a single organism making a home for itself there. The constitution of a body is carried out through processes that integrate that body physically with all processes surrounding it.

Even though bodies should not be considered naive unities, the concept is still useful for describing some processes at some levels of analysis. By naive unity I mean a body considered simpliciter, without giving any thought to the physical complexity of its structure or its historical

<sup>221</sup> Lee Smolin, *The Life of the Cosmos* (New York: Oxford University Press, 1997), 120-122.

<sup>222</sup> Lisa Kretz, "Open Continuity," *Ethics and the Environment* 14, no. 2 (Fall 2009): 124-125.

<sup>223</sup> Manuel DeLanda, *A New Philosophy of Society: Assemblage Theory and Social Complexity* (New York: Continuum, 2006), 56-57.

<sup>224</sup> Félix Guattari, *Chaosmosis: An Ethico-Aesthetic Paradigm*, trans. Paul Bains and Julian Pefanis (Indianapolis: Indiana University Press, 1995), 34-35.

processes of generation. Say that someone, at some moment, perceives a body J, and understands J as a whole constituted from the active relations among its parts. Each of these parts, for this illustration, I will label  $K_1$  through  $K_n$ , for n-many distinct, mutually interactive parts. To investigate the structure of J, one examines all the parts  $K_{1-n}$ , the relations among those parts, and the processes articulated through those relations, all of which are capable of motion and so are active. Having understood these parts, their relations, and processes, one adequately understands the body J insofar as it is a whole constituted from the activities of its parts. And in order to understand J as a whole, one must, as a matter of expediency, understand each of the parts  $K_{1-n}$  as naive unities. But insofar as J is a system of active relations, the investigation will have to be much longer and more complex. This is because the parts of a whole are themselves bodies. Being bodies, the parts of a whole can also be considered wholes, and so on for all of their parts. Every K may be considered a whole constituted from the parts  $L_{1-n}$ , their relations, and their activities. Likewise, every L may be considered wholes constituted from the parts  $M_{1-n}$ , and so it goes.

The concept of the naive unity is useful for purposes of bracketing, to focus on a problem immediately to hand, precisely because such restriction of focus passes over the actual complexity of a situation. The relations of subordinate part to generated whole are also more complex than my illustration can easily indicate. In my illustration, whole J is constituted from parts  $K_{1-n}$ , each whole K is constituted from parts  $L_{1-n}$ , and each whole L is constituted from parts  $M_{1-n}$ , and so on. The structure this account describes is analogous to the nested wholes of Matryoshka dolls. But the image of nested wholes does not capture the complexity of the relations among the various microscopic, mesoscopic, and macroscopic levels in terms of which one can analyze bodies. A whole can also have parts that overlap with other wholes, or are tangential to the whole in question. The processes that generate J need not only occur at K. Processes in L that generate K can also have a direct or indirect role in constituting J. The same applies to processes in M, and processes in N, O, P, or any other Matryoshka-like level I could mention in an abstract structure.

A body can also maintain a single process that generates or maintains several wholes of which it would accordingly be part. Scientific institutions have developed disciplinary boundaries that carve the universe into levels of analysis, each having its own methodological tools and practices. Yet processes affect each other paying no heed to the disciplinary divisions of their study. I do not mean to imply that the divisions of the sciences are somehow illegitimate or a fiction. The effectiveness of the disciplinary sciences puts the lie to a reductive or eliminative account of the social construction of science. After all, just because some complex body like an institution or a scientific discipline is constituted from social processes does not mean that it is

not real, or less real than bodies not made from such processes.<sup>225</sup> Our powers to understand the universe depend on the intellectual efficiencies of the disciplinary system. But tracing affects among relations of complex systems is inherently transdisciplinary.

Manuel DeLanda describes the universe as “a contingent accumulation of layers or strata that may differ in complexity but that coexist and interact with each other in no particular order: a biological entity may interact with a sub-atomic one, as when neurons manipulate concentrations of metallic ions, or a psychological entity interact with a chemical one, as when subjective experience is modified by a drug.”<sup>226</sup> Affects and their constitutive processes proliferate without heed to disciplinary boundaries, or distinction of levels of analysis. This was also the central principle behind Félix Guattari’s approach in *The Three Ecologies*, where he examines the integration of psychological, social, and ecological domains. The constitution of an individual personality “establishes itself at the crossroads of multiple components, each relatively autonomous in relation to the other.”<sup>227</sup> The activity of chloroplasts in one of the leaves of a bush helps constitute a process that plays a key role in maintaining the whole of which it is part. From a Matryoshka understanding of relations of parts and wholes, the chloroplast is part of a cell, the cell is part of a fibre, the fibre is part of a leaf, the leaf is part of a branch, and the branch is part of the bush. But because the activity of the chloroplast maintains the bush as a stable structure, the chloroplast may be considered part of the whole bush. And that chloroplast is also part of the whole forest glen where the bush grows.

Considering the relation of parts and wholes as a matter of generative processes has several implications. One has to do with how bodies are related to each other in terms of their generation. Because a body is considered a part of some other body when it plays a role in the other body’s generative processes, it is possible that a part and the whole it constitutes might not exist simultaneously. The activity of a part L can generate the process K by which the body J is produced, and may be destroyed before K can generate J. This is only one of many possible ways for a generative part and its generated whole to avoid simultaneous existence. Nonetheless, because of L’s role in the generation of J, L can be understood as a part of J in this processual mereology. In addition to temporal mereology, one process can play a role in generating another at a distance. Perhaps this happens as a result of a gravitational field that extends throughout an entire galaxy and plays a role in the generation of bodies thousands of light-years away from each other. So proximity is not required to play a role in a body’s generation either. Because the interaction of processes to generate each other is not limited by simultaneity or proximity, all

<sup>225</sup> Ian Hacking, *The Social Construction of What?* (Cambridge: Harvard University Press, 1999), 64-66.

<sup>226</sup> Manuel DeLanda, *Philosophy and Simulation: The Emergence of Synthetic Reason* (New York: Continuum, 2011), 6.

<sup>227</sup> Félix Guattari, *The Three Ecologies*, trans. Ian Pindar and Paul Sutton (New York: Continuum, 2008), 25.

processes and bodies in the universe may be considered ultimately part of a larger whole: the entirety of the universe itself. Every process ongoing today in the universe is generated by prior processes, making these earlier bodies part of contemporary generative processes, all the way back to the beginning of the universe. Understanding relations of part to whole as roles played in the generative processes of contemporary bodies ultimately makes a whole of the entire universe, thanks to their common origin when a single event, the Big Bang, generated the conditions for the possibility of all future processes.

Another implication of understanding relations of parts and wholes in terms of generative processes is that there are no primitively simple bodies, that every body is a complex whole at every level of analysis. The example of a human body illustrates that there seems to be no ontologically primitive element in a body's physical makeup or (if it has one) self-conscious identity. Such an ontological primitive, which I earlier called a naive unity, would be a simple body that is not constituted by some other process or processes. But no property of any body is not constituted through processes in which that body interacts with other bodies internally or externally. Properties themselves are assemblages: complex bodies, or processes of interaction among bodies and perceivers. This irreducible complexity implies that simple universal words, such as 'green' or 'round,' which are often used to describe properties, do not refer to bodies as simple as the words. Universal property terms are a convenient shorthand for practical descriptions, because the most accurate descriptions of phenomena and bodies would be potentially endless.

Properties are not simply possessions of a body, but are constituted through relations with other bodies. I derive the concept of the constitutive relation from this claim. An exhaustive list of all a body's properties would enumerate all that renders that body singular, its very identity. A body is the sum of its properties, but a property is not a simple unit. To say that an apple is green concisely describes the property, but the universal term 'green' is not an element of an apple's makeup in the same manner as its seeds. This conception of what properties are challenges key premises of debates in analytic ontology, particularly those related to bundle theory. In this debate, *green* is understood to be a property that constitutes a body, like an apple, in a stronger sense than do its seeds or skin. "The strongest version of the bundle theory of substance claims that of necessity, the substances that make up the world are bundles of universals."<sup>228</sup> These would be universals taken to exist in a one-to-one relationship to the property words of language. A universal is a simple entity that would bind together with other such simple entities as *round*, and

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<sup>228</sup> John O'Leary-Hawthorne, "The Bundle Theory of Substance and the Identity of Indiscernibles," *Analysis* 55, no. 3 (July 1995): 191.

*sour* to constitute the apple in question. I do not advocate such a theory.

The colour of the apple is a property, but a property is not the primitive entity, some universal, in which the bundle theorist believes. In the history of Western philosophy, colour has been understood as an observer-dependent property, or secondary quality. But colour is generated by a continuing physical process that articulates itself through the relation of the coloured body, an observer and her perceptual apparatus, and the electromagnetic fields her apparatus detects. The chemical composition of an apple's skin interacts with a field of ambient electromagnetic radiation, a field of photons, in a manner that absorbs all photons except those of a particular set of wavelengths. If a human observer were present in pedestrian proximity to the apple and was interacting with the ambient electromagnetic field, she would perceive the light reflected by the apple, and she would call that light 'green' in English. The property of being green is constituted from the relation of all the molecules linked together to form the apple's skin, with an ambient field of light, and an organism capable of perceiving light with a frequency of about 540 terahertz.

Being constituted from all these relations, is it even proper to say that the apple itself has properties? Where are the properties of a body, if not in that body itself? The answer is not so simple, because a body is not so simple. A body is assembled by many processes whose convergence generates new processes. A complex body constituted from processes great in number and variety will generate more processes from this initial convergence. This is because the more ways there are in which processes can converge, the more those convergences will generate new processes. Some processes break down when they converge. When that happens, the processes that first constituted the body in question begin to malfunction, and the whole system of collaborating processes dissipates. But even the dissipation of a complex process can generate a proliferation of new processes. Consider the decay of a corpse, in which a human body breaks down, but spurs processes of putrefaction; becomes food for worms, insects, and bacteria; and fertilizes plant growth. Processes can converge and diverge in a wide variety of ways, and continue to produce further processes.<sup>229</sup> The property in my example of the green apple is constituted through relations with external bodies (the ambient light field, the organism whose visual cortex detects particular bands of frequencies in that field), and internal bodies (the molecules bonded into the cells constitutive of the apple's skin).

Because properties are constituted from relations of bodies within a given body, even traditionally primary qualities like weight and mass must be understood as relational. An apple, as a body, is clearly a complex body. An apple is an organic body, consisting of skin, flesh, a stalk,

<sup>229</sup> Manuel DeLanda, *Intensive Science and Virtual Philosophy*, 115-117.

seeds, the tougher pockets in which the seeds rest. A better example to show the relational character of all properties is a stone, say a roundish chunk of dolerite. One may naively think of a stone as a simple body, containing no internal parts. But as a body, a stone is an aggregate of several different minerals, their formation affecting each other in the dolerite compound to form a complex solid lattice of their constituent molecules. The atoms of which these molecules are constituted also constitute fields of elementary forces like gravity and electromagnetism when they assemble in very large numbers. On the scale of individual atoms and molecules, these forces are miniscule, but in a great enough aggregate of molecules that I can hold the collection in my hand, the forces can be noticeable on pedestrian perception. The stone's weight, a so-called primitive property, is a function of the gravitational fields that it, the Earth, and all other surrounding bodies, generate. The stone's mass is the combined mass of the atoms that compose it, a collection of all the internal bodies that integrate to constitute the dolerite stone I hold in my hand. This is all a matter of relations among many bodies.

Everyday perception and the language we typically use to describe perception lead us to a naive understanding of properties as being part of a unified substantial object. Edmund Husserl called these kind of simple encounters “an attentive perceiving, I am turned toward the object . . . I seize upon it as this existent here and now.”<sup>230</sup> Conceiving of a body as simply being there is to take it as a naive unity. When one usually conceives of a body as a naive unity, it is to inquire into a matter to which that body is a peripheral concern. As an example, a sociologist of gender does not typically consider hormone chemistry when she investigates working conditions in the fashion retail sector. Hormones are chemically important for the construction of gender, but their complexity does not matter to the social and economic structures that a sociologist investigates. Husserl's approach to experience was to subject the simple and primitive to analysis of an intensity that usually presumes the complexity of what is studied. It was an effort to think the primitive nature of bodies. In the most simple encounter, when one thinks only of how an object stands before oneself, the question of whole and part does not matter. One only understands the presence of the body. Husserl had this bare presence in mind when he used a systematic philosophical approach to the simple encounter as the program of phenomenology. A naive unity is merely present, a brute being standing mute before one. One can understand phenomenology as a philosophical inquiry whose goal is to discover the essence of presence.<sup>231</sup>

<sup>230</sup> Edmund Husserl, *Ideas Pertaining to a Pure Phenomenology and to a Phenomenological Philosophy I*, Fred Kersten, trans. (The Hague: Martinus Nijhoff, 1982), 70.

<sup>231</sup> Angela Ales Bello, “‘Brute Being’ and Hyletic Phenomenology: The Philosophical Legacy of Merleau-Ponty's *The Visible and the Invisible*,” in *Phenomenology and Existentialism in the Twentieth Century: Fruition, Cross-Pollination, Dissemination*, ed. A. T. Tymiecinieka (Dordrecht: Springer Netherlands, 2009), 60.



The Husserlian approach attempts to discover complexity in the presence of objects to perception. It begins from what he calls the natural attitude, apprehending a body as a naive unity, and nothing more. Such an attitude can be sensible, useful, and amenable to many people's intuitions about experience. But such an approach is incompatible with a process philosophy, where the starting point of inquiry is not presence, but assembly. Analysis focussing on process, where no body is a simple unity, understands properties as constituted in relations of convergence and collision. The simple encounter is an immensely productive concept in inquiries like Husserl's, but it can be a stumbling block for an ecological philosophy. Although the influence of phenomenology on environmental moral philosophy may be infrequent, similar interpretations of bodies as naive unities occur in both. When one understands a body as a naive unity, one thinks of this body standing there, present, and its presence is all that matters. There is no need to investigate a mute presence; one needs only to appreciate it.<sup>232</sup> However, if one takes the ultimate nature of all bodies to be their unity, as one perceives a body in a simple encounter, one can miss the complexities of a body's internal structure and external relations and influences.

My understanding of properties gives a stronger reason for taking properties alone to constitute a body than contemporary ontological debates usually offer. The question of identity is the question of what it is to be what one is, "the question of essences — in other words . . . 'What is X?'"<sup>233</sup> The debates in analytic ontology between a bundle theory and a substratum theory revolve around this question of whether universal properties alone are necessary to constitute a body, or whether those properties must inhere in a substrate. When I say that bodies are constituted entirely by their properties, I do not mean to invoke or support a bundle theory, which would give an account of a body such as, "Take my neighbour Cyrano: he is of a certain age, he has a big nose, he has such and such a height, and so on. And this is all there is to know, and all there is to *be* Cyrano — his properties."<sup>234</sup> A property on this view is a simple unity, just like the word in language: 'big-nosed,' '42-years-old,' 'six-foot-two.'

The concept of the constitutive relation does not involve a question of identity in this sense. This kind of identity question is too narrow, more a question of identification rather than an attempt to understand the singularity of bodies. I am instead asking a question of generation, of becoming, the question of how what is comes to be as it is. The constitutive relation is an answer to this question. Identity as understood in the bundle-or-substratum debate can play an

<sup>232</sup> Scott F. Aikin, "The Dogma of Environmental Revelation," *Ethics and the Environment* 13, no. 2. (2008): 27. The intuition of the intrinsic value of nature is often described in environmental philosophy as an experience of nature's mute presence.

<sup>233</sup> Gilles Deleuze, *Difference and Repetition*, trans. Paul Patton (New York: Columbia University Press, 1994), 188.

<sup>234</sup> Jiri Benovsky, "The Bundle Theory and the Substratum Theory: Deadly Enemies or Twin Brothers?" *Philosophical Studies* 141, no. 2 (November 2008): 176.

important role in this question, because an account of becoming must include what becomes. But there is a distinction between how a body becomes what it is, and what a body has become. The latter is the focus of the bundle and substratum theories. The former, the process of generation, is my concern, because at no point does becoming genuinely stop. At no point can I say of some body that it is what it is and will become no more. Identity could only be static if its becoming is complete. The process of becoming is never complete because that would imply that the body under observation will no longer change. Particular processes may have ceased in the body at the moment of observation. For example, the apple in my fruit bowl will ripen no more as it would if still growing on its tree. But further processes, such as decomposition or digestion and absorption into my own body, may still occur. When a property such as Cyrano's being six-foot-two is understood in terms of its generation, one finds it laughable to consider a property term, like being six-foot-two, to refer to a simple unity. Over 200 genes, along with the enzymes and proteins they code, play a role in constituting the height of a human organism.<sup>235</sup> Analytic bundle theory seems unprepared conceptually for the task of understanding the processes by which the properties of bodies are generated.

All bodies are constituted from other bodies internally, externally, and as bodies bridging both internal and external. In the examples above of the human body and a dolerite stone, I described the processes constituting these bodies as they have been discovered through scientific investigations. Speaking more generally, a constitutive process is generated when material and energy converge to create a pattern that is stable enough in its structure to affect and be affected by other such patterns. The concept of stability does not imply that the pattern must be static, nor is my understanding of a body restricted to one moment in time. When I discuss a body, I include that body's full history from constitution to dissolution. The matter and energy constitutive of complex bodies arrange themselves into patterns within a body. These patterns are exchanges of matter and energy from interior to exterior and vice versa.

The variety of processes constitutive of a body produces its singularity. This is why I consider constitutive relations to be integrative in nature, instead of holist, despite the prevalence of holist images throughout the tradition of environmental philosophy. Callicott's early writings developing a moral system centred on the preservation of the biotic community were based on the following kind of holism, where the convergence of parts does not constitute complexity, but unity. Individuals are unimportant, their only relevance being whether they promote the stability of the system of which they are one part. Individuals are replaceable, cogs in the machine of the

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<sup>235</sup> Raymond Mayeux, "Mapping the New Frontier: Complex Genetic Disorders," *Journal of Clinical Investigation* 115, no. 6 (2005): 1404-7.

ecosystem.<sup>236</sup> Holist thinking at its most straightforward makes of the whole a primitive, subsuming its parts, no matter how complex the arrangement of their integration may be, into one unit. Only the whole is morally considerable in such thought. I have shown in chapter two the untenability of simple holism as a principle of environmental moral philosophy. The reason for this untenability is that its moral thinking prioritizes the whole at the expense of the constituent bodies that are its parts. In political contexts, this can result in ecofascism, a disregard for individual lives. The analysis of this chapter shows that a holist understanding of the relations of interdependence and constitutive integration in an ecologically-minded ontology is similarly untenable. And it is untenable for *exactly the same reasons*.

A body is complex because it is constituted from a variety of processes internal and external to that body, or bridging the internal and external through their flow. These processes constitute not just the body in question, but the larger environmental context in which that body is constituted. These processes consist of the matter that a body is made of, but also the fields of force generated within a body, which also help constitute the broader environment in which that body exists. The same goes for a body's properties, whether so-called secondary or perception-dependent properties, like colour; or primary, like mass, traditionally conceived as a property of the body itself apart from any relations with other bodies. Understanding a body exclusively as a simple may be fine for matters of practical identification, but it must be understood as a complex assemblage of processes which consist of fluctuating flows of matter and energy. The concept of process is better suited to understanding the history of a body's generation, continued existence, and dissolution — its becoming. Understanding a body as a naive unity may have the benefit of simplicity, but if one's goal is to understand the world, then the simplicity of one's system of understanding is not a benefit, but a deficit. Complex matters require complex frameworks of understanding.<sup>237</sup> When the constitutive relation is understood as the integrating activity of bodies, instead of the unifying activity of bodies in a holist understanding, the singularity of bodies is preserved, even as their identity is understood as constituted from a plurality of processes. The processes constitutive of a singular body are themselves singular bodies, each with their own identities. So one singularity is constituted from the assembly of many singularities.

Ontological considerations can strengthen an ethical or moral stance, an illustration of how inquiries in one domain of philosophy can aid inquiries in others. Showing how actual processes which constitute bodies in their singular physical identity permits one to focus on how bodies are interdependent not only for their survival, but for their identities as individuals. This

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<sup>236</sup> Michael E. Zimmerman, "The Threat of Ecofascism," *Social Theory and Practice* 21, no. 2 (Summer 1995): 227-230.

<sup>237</sup> Félix Guattari, *Chaosmosis*, 61.

understanding of the nature of bodies lets one approach practical concerns having to do with those bodies in a different, and potentially more productive, way than one would if one holds a more traditional ontology of bodies as ultimately reducible to simple unities. The constitutive relation is a concept of how bodies are generated and exist, an ontological concept. It helps create a more nuanced understanding of interdependence and integration of bodies into ecosystems. But subjectivity, the place and constitution of the thinker itself, must still be integrated into ecological relations.

## 5. AUTOPOIESIS: SELF, SYSTEM, AND PLACE

The previous chapter described the two core concepts that I will use in the rest of this project to spell out in detail my ecological approach to ontology. Understanding bodies as complex wholes means that a body can have many identities depending on one's level of analysis. Every body is an ongoing process of development constituted from the collision and integration of other processes. None of these components is ever subsumed into any other component. That would conceive a whole as a simple unity in which the activity and relationship among the parts are irrelevant to understanding the whole. A whole is never a simple unity, but is a fluctuating assembly of pluralities. The second concept is understanding relations as constitutive. When bodies are understood as processes, any relation of one process to another creates another process. These relations are how ecosystemic bodies are constituted from the co-habitation of various organism populations in a territory. Such ecosystemic bodies are places.

The subject, the one who lives in the world and studies the relations constitutive of ecosystems, must understand herself as one of those very processes. If there is no place for a subject in one's ecological philosophy, then one has made the same mistake that I criticized in earlier chapters: the absolute dichotomy of humanity and nature. There are important contextual differences, of course, having to do with shifting from talk about static essences to process and complex wholes. But the structure of thinking is parallel. One can build an ecological philosophy that understands nature as the integration of continually active processes without an account of how those processes create subjects. But such a philosophy is still the product of a subject's thinking. So it would operate under the assumption that the one who investigates ecological processes is separate from those processes themselves. However, a comprehensive ecological philosophy would include an account of how self-conscious human investigators are constituted through ecological processes, how human subjects are integrated with the places where they are generated. One overcomes the dichotomy of humanity and nature by showing how humanity develops continuously through natural processes. Therefore, an ecological philosophy should have an account of the processes that produce humanity: self-conscious bodies which organize socially. I will deal with the development of self-consciousness first.

I contend that self-consciousness is a development of the physical feedback processes constitutive of the phenomenon of autopoiesis. My account of autopoiesis has three stages of clarification, and one of application. The first is to introduce the complicated history of this concept, specifically how it has been developed as a concept in cognitive science. Second comes my account of how autopoiesis is interpreted in systems theory. I critique the idea in systems

theory that all autopoietic systems are operationally closed, communication between them being impossible. Finally, I introduce my own conception of autopoiesis as a field of perceptual affects, and deploy my concept of autopoiesis as a scientific foundation for Arne Næss' conception of self as a place. Self-as-place is a key concept for Næss' environmentalist philosophy, but he does not go into enough detail in his own work for the concept to be much more than a platitude. I believe the concept of autopoiesis, decoupled from the presumptions about closure in systems theory, can provide Næss' intriguing, if flawed, vision with a more comprehensive scope. In doing so, self-as-place will serve as the concept of self according to the ontology of integration that has informed my project so far.

Humberto Maturana and Francisco Varela, though their major collaborations on autopoiesis took place in the 1970s and early 1980s, developed the concept in the context of cybernetic research that began in the 1950s.<sup>238</sup> Cybernetics was a diverse community of researchers, its several projects coming together in a common inquiry to understand cognition. The cybernetics community saw people with backgrounds in linguistics, computer science, psychology, biology, and philosophy converge onto a single program.<sup>239</sup> Its ultimate goal at the time of cybernetics' genesis was to create an artificial intelligence, a machine that could pass the Turing Test. Such a machine would be able to understand questions asked of it and respond in a manner that would be recognizably intelligent. This task was primarily understood as designing a machine that could understand language. Language is here understood to be the syntactical arrangement of propositions and the semantic meanings of words and expressions.<sup>240</sup> Although the cybernetics community in its initial organization focussed on achieving this goal, it eventually developed into a loosely connected interdisciplinary network of people who today identify as cognitive scientists.<sup>241</sup>

In the decades since its formation, the cognitive science community has developed in a

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<sup>238</sup> Francisco Varela, "The Early Days of Autopoiesis," in *Emergence and Embodiment: Essays on Second-Order Systems Theory*, eds. Bruce Clarke and Mark B. N. Hansen (Durham: Duke University Press, 2009), 64-66. Varela began working with Maturana as a graduate student researcher in Santiago in 1966, the beginning of a close partnership that would last until 1973, when both men had to flee Chile after the Pinochet coup. Elsewhere in this essay, Varela describes himself as a "militant supporter of President Allende's government." Varela and Maturana would continue to collaborate on research after settling outside Chile, co-authoring articles and books until Varela's death in 2001. Varela's own training included not only biological science, but also philosophy. He cites philosophers Georges Canguilhem, Gaston Bachelard, Alexandre Koyré, and Thomas Kuhn as seminal writers in shaping his conception of what science could be. The phenomenological tradition of Husserl, Heidegger, and Merleau-Ponty was also important for the long-term development of his biological ideas about autopoiesis, and what this meant for subjectivity.

<sup>239</sup> Katherine Hayles, *My Mother Was a Computer: Digital Subjects and Literary Texts* (Chicago: University of Chicago Press, 2005), 279-280.

<sup>240</sup> John R. Searle, *Mind: A Brief Introduction* (Oxford: Oxford University Press, 2004), 47-50.

<sup>241</sup> Bruce Clarke, and Mark B. N. Hansen, "Neocybernetic Emergence," in *Emergence and Embodiment*, 2-3.

manner that can be confusing for someone trying to use its concepts for other purposes. The most widespread philosophical influence of its artificial intelligence project in the twentieth century was the conception of the human mind as a computer program, the software of the brain's hardware.<sup>242</sup> Because thinking was conceived in the cognitive science community as software for the composition of language, a mainstream sub-discipline of philosophy of mind has developed that understands cognitive activity to be primarily the composition of language. In the sub-disciplines of contemporary philosophy in North America, philosophy of mind and philosophy of language overlap considerably. Perception is understood as the translation of sensory data into propositional plans and representations of an organism's environment in its neural architecture.<sup>243</sup> This is the compositional theory of mind. In cognitive science, the compositional theory is locked in debate with what are called enactive theories of mind. In enactive theories, perception, not language composition, is the primary cognitive activity.<sup>244</sup> Marek McGann writes, "Cognition is the exercise of skillful know-how in situated and embodied action."<sup>245</sup> Perception is making sense of one's surroundings in terms of what will increase one's power and what will decrease one's power, then acting in such a way that power increases. This account of perception understands it as the power of an organism to discern in the world what I call practical differences. For this perspective, perception does not involve propositional or properly linguistic content at all, but is entirely a matter of affectivity, activity that empowers an organic body or diminishes its power.<sup>246</sup> The debate between the compositional and enactive camps in philosophy of mind is over whether cognition is a matter of knowing how to carry out activities in the world, or a matter of representing and remembering facts about the world as propositions. For a compositional theorist, one cannot know how to act without knowing facts; for an enactive theorist, one cannot know facts without the practical ability to move in the

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<sup>242</sup> Jerry A. Fodor, *Language of Thought 2: The Language of Thought Revisited* (Oxford: Oxford University Press, 2008), 7-8.

<sup>243</sup> Patricia Churchland, *Brain-Wise: Studies in Neurophilosophy* (Cambridge: MIT Press, 2002), 80-88.

<sup>244</sup> Andy Clark's theory of embodied mind can be considered as a modification of the enactive theory. His theory of mind, where mental operations include perceptual processes that take place outside the human body, is described in Andy Clark, *Supersizing the Mind: Embodiment, Action, and Cognitive Extension* (Oxford: Oxford University Press, 2008). In my view, a decisive critique of Clark's approach can be found in Ezequiel DiPaolo, "Extended Life," *Topoi: An International Review of Philosophy* 28 (2009): 9-21. DiPaolo shows that, even though Clark pitches his extended mind hypothesis as a radical departure from received concepts of mind, Clark presupposes many of the mainstream presuppositions about what thinking is that he says should be discarded.

<sup>245</sup> Marek McGann, "Enactive Theorists Do It On Purpose: Toward an Enactive Account of Goals and Goal-Directedness," *Phenomenology and the Cognitive Sciences* 6, no. 4 (2007): 466.

<sup>246</sup> Gilles Deleuze, *Spinoza: Practical Philosophy*, trans. Robert Hurley (San Francisco: City Lights Books, 1988), 49-50.

world.<sup>247</sup>

My use of autopoiesis in ecological philosophy follows the enactive model of cognition. But I do not come to the same conclusions that Varela does, because I am not interested in the same philosophical problems that he is. After first developing of the concept of autopoiesis, Varela elaborated it through engaging with the problems of cognitive science and philosophy of mind. Where he and I converge is at his and Maturana's initial development of the concept of autopoiesis. It was created as a philosophical component of a biological investigation into the question of what life is. They focussed on the simplest metabolic reactions, and examined what kinds of physical structures this chemical activity constituted. Metabolic chemical activity produces molecules that bind together to act as a wall or membrane surrounding that reaction. This wall is thermodynamically open, its structure facilitating an exchange of energy from outside to inside. Surrounding molecules, which can function as fuel for the central metabolic activity, enter. Waste molecules from the metabolic activity exit. Maturana and Varela coined the term 'autopoiesis' for a body whose own chemical activity produces itself.<sup>248</sup> That chemical activity also maintains itself because it produces molecules that reinforce and repair its membrane from the inside. This self-repair prevents the disintegration of an autopoietic body.<sup>249</sup> If metabolic activity is the essential chemical activity of life, then life itself is understood as the physical process of creating a body that maintains its own integrity.<sup>250</sup> Autopoietic chemical activity produces an autonomous body, an individual that is itself, at heart, that chemical activity.<sup>251</sup> Metabolism is the chemical reaction whose outcome is an autopoietic body. Whenever I discuss autopoiesis, I mean this account of the chemical process of metabolism constitutive of autopoietic physical structure.

Starting from this point, Varela developed the concept in a particular direction through his dialogue with cognitive science. For him, the analysis of how autopoietic bodies perceive their surroundings is properly deployed against the compositional theorists of cognition as an alternative account of mind. He developed an account of autopoiesis as sense-making, the

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<sup>247</sup> Jerry A. Fodor, "Having Concepts: A Brief Refutation of the Twentieth Century," *Mind and Language* 19, no. 1 (February 2004): 30-31. Fodor is a nakedly partisan advocate for the compositional theory, but he makes the distinction in very clear language, despite the presumptuous tone he takes toward those with whom he disagrees.

<sup>248</sup> Evan Thompson, *Mind in Life: Biology, Phenomenology, and the Sciences of the Mind* (Cambridge: Harvard University Press, 2007), 98. In this book, Thompson, a student and protégé of Varela, systematizes and expands the thinking of his mentor.

<sup>249</sup> Humberto R. Maturana and Francisco Varela, *Autopoiesis and Cognition: The Realization of the Living* (Boston: D. Reidel, 1980), 98.

<sup>250</sup> Andreas Weber and Francisco Varela, "Life After Kant: Natural Purposes and the Autopoietic Foundations of Biological Individuality," *Phenomenology and the Cognitive Sciences* 1 (2002): 117-118.

<sup>251</sup> Maturana and Varela, *Autopoiesis and Cognition*, 87.



production of significance in the world through the activity of moving in it. Evan Thompson illustrates what sense-making is with the example of a self-propelling bacterium swimming toward an agglomeration of sucrose. The bacterium is able to perceive the presence of sucrose around it, and because sucrose constitutes fuel for its metabolic activity, the bacterium moves towards the region in the agglomeration with a higher concentration of sucrose molecules.<sup>252</sup> As his example suggests, even the most rudimentary forms of life perceive. The example's bacterium is able to distinguish sucrose molecules from an otherwise useless background. The bacterium's act of distinguishing creates a new property in the objects it perceives: their significance. In creating significance, perception constitutes order in an otherwise chaotic world. The enactive theory of mind takes cognition to be the creation of such significance in perception.<sup>253</sup>

On Varela's account of autopoietic perception, an organism's perceptual activity organizes the world according to practical significance for the organism. In the example of the bacterium distinguishing sucrose from the surrounding useless chemicals, the world is organized according to a principle of what is food for that organism. Every perceiving body can create such significance in the world. Thompson elaborates Varela's idea with the suggestion that the creation of significance through perception is a product of the ability to maintain one's existence, self-preserving behaviour, or, following Spinoza, *conatus*. Having concluded that *conativity* constitutes semantic meaning and propositional thinking, Thompson takes *conativity* alone to be sufficient for constituting a self of the same kind as a human.<sup>254</sup> But Varela positioned his ideas as a response to the compositional theory of human cognition, so proposed the creation of significance — *conatus* alone — as the source of the meaning of words. From this premise, Thompson concludes that mind itself is *conatus*, and that all organisms have mind on the human model. Or rather, the peculiarly human mind is a particular case of the mind that all organisms have. Following Varela's contentions, because all organisms have *conative* ability, and *conativity* is the source of linguistic meaning, therefore all organisms have some kind of capacity to compose linguistic propositions.<sup>255</sup>

Scientifically speaking, this is unlikely, although many aspects of Varela's thought are more subtle in their distinctions than Thompson's advocacy of primitive linguistic capacities across all life.<sup>256</sup> But autopoiesis as a concept can be salvaged from this conclusion, because the

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<sup>252</sup> Thompson, *Mind in Life*, 157. Thompson advocates for the enactive theory of mind based on this understanding of perception as sense-making that he inherited from Varela along with this example.

<sup>253</sup> Helena Knyazeva, "Nonlinear Cobweb of Cognition," *Foundations of Science* 14, no. 3 (August 2009): 168.

<sup>254</sup> Thompson, *Mind in Life*, 157-158.

<sup>255</sup> Thompson, *Mind in Life*, 161-162.

<sup>256</sup> John Protevi, "Beyond Autopoiesis: Inflections of Emergence and Politics in Francisco Varela," in *Emergence and Embodiment*, 104.

suggestion that conativity implies linguistic abilities results from a historical contingency of the fragmentation of the cybernetics community. The two theories of mind actually study different physical processes. Enactive theorists study autopoiesis, the activity of perception in an organism's environment, and the structure of perceptual apparatuses. Compositional theorists study the neurological underpinnings of syntax and semantics, and the parallelism of language and thought that developed from the computer metaphor of the mind. Manuel DeLanda describes the matter as a confusion between significance and signification. Significance is one's knowledge of an event in terms of how that event makes a difference to the life of the knower, or any body that is caught in the affects that event generates. Signification refers to the semantic content of linguistic units.<sup>257</sup> Enactive theorists understand mind as the creator of significance, while compositional theorists understand mind as the creator of signification. Because both groups call their area of study cognition, they do not always clearly understand that they are talking about different activities. It is as if a group of silver miners walked into an office at Google full of staticians, to tell them they will never discover the data they are mining without proper drilling equipment, while the data miners are incredulous that the silver miners achieve anything without programming skills. If the discussion is about cognition, then one can easily presume that everyone is on the same page. But parsing the difference between the enactive and compositional areas of study shows that this may not be so.

Systems theory offers a more fruitful articulation of the concept of autopoiesis than its use in cognitive science, despite some problems of its own. Systems theory concentrates its analysis on the structure and assembly of the autopoietic body itself, specifically its closure. I described earlier how metabolic chemical activity constitutes an autopoietic structure: a membrane develops that protects the metabolic activity from interference, but allows fuel to enter and waste to exit. This is the thermodynamic openness of autopoietic bodies. But in creating the membrane, all the functions of an autopoietic body not having to do with energy exchange become self-referring, a reflexive feedback mechanism. This is because the continuing stability of an organism requires the construction of an autopoietic membrane. But the construction of a membrane also constitutes a turning away from all that is outside it, apart from thermodynamic exchange alone. All activity of an autopoietic organism is conditioned by the organism's own idiosyncratic structure.<sup>258</sup> Conceived this way, a system develops, excepting energy flows, in isolation from any other bodies surrounding it.<sup>259</sup> This isolation is not total, because an autopoietic body can still affect and be affected by its environment and surrounding bodies. Autopoietic bodies detect

<sup>257</sup> Manuel DeLanda, *Philosophy and Simulation: The Emergence of Synthetic Reason* (New York: Continuum, 2011), 94.

<sup>258</sup> Maturana and Varela, *Autopoiesis and Cognition*, 50-51.

<sup>259</sup> Maturana and Varela, *Autopoiesis and Cognition*, 73.

these affects and respond to them, but from the perspective of the responding body, these affects are merely irritations, and the response is always formulated on the terms of the internal mechanisms peculiar to that body.<sup>260</sup> Niklas Luhmann calls this mutual affectivity of autopoietic bodies structural coupling. A body's internal feedback mechanisms can be trained to respond with satisfaction to its environment. This response to stimulus, however, is just a matter of minimal response to a disturbance to avoid catastrophe.<sup>261</sup>

This may seem like an objection against incorporating autopoiesis into the ecological philosophy I have been developing. The works of Maturana and Varela suggest, and Luhmann openly states, that the concept of autopoiesis implies a radical isolation of organic bodies. Ecological philosophy, in contrast, stresses integration and interdependence. But Luhmann's account includes a key premise that I do not accept. He understands communication between bodies as transmission. For Luhmann, an act of communication between two autopoietic bodies would proceed as follows. Body A includes among its internal contents the information *x*, and sends that information outside of itself through its environment until body B receives it into its internal contents. This transmission must proceed without any alteration to *x*. If *x* were altered in any way, it would no longer be the same information as when it was inside A, and with any alteration of the information, the communication fails. But because all activity of an autopoietic body is conditioned by its own structure, and this structure is idiosyncratic, in order for B to receive *x*, B would have to condition it according to its own idiosyncracies. This conditioning cannot happen without altering *x*, so communication is impossible.<sup>262</sup>

The conclusion that communication is not possible has several epistemological, ethical, and moral implications, one of which radically reconceives the meaning of information. The only information that can exist in the systems theory paradigm has nothing to do with communication between systems, but is instead a matter of the system itself creating meaning according to the parameters and principles of its own internal processes.<sup>263</sup> This conception of information is compatible with Varela's concept of autopoietic perception as sense-making, but any information within a body never engages with the outer world. Each autopoietic body is alienated from each other because they are unable to communicate, only to disturb and destabilize each other's self-maintaining processes from the outside. Because humans are understood in systems theory as autopoietic bodies, each subject is physically and emotionally

<sup>260</sup> Niklas Luhmann, *The Reality of the Mass Media*, trans. Kathleen Cross (Stanford: Stanford University Press, 2000), 88.

<sup>261</sup> Niklas Luhmann, "Self-Organization and Autopoiesis," in *Emergence and Embodiment*, 147-148.

<sup>262</sup> Carey Wolfe, "Meaning as Event-Machine, or Systems Theory as the 'Reconstruction of Deconstruction:' Derrida and Luhmann," in *Emergence and Embodiment*, 228.

<sup>263</sup> Thompson, *Mind in Life*, 57.

separate. This is because no information can be transmitted between them without being altered by the self-referential operation of each individual body. Genuine understanding of another would be an extremely rare lucky occurrence, and would never be confirmable anyway because there can be no genuine communication between the investigator and the one she wants to understand.<sup>264</sup> Emerging from this conclusion is a conception of the subject as an incomprehensible, isolated unit, souls like Roquentin tortured by their inevitable loneliness.

The radically isolationist interpretation of autopoiesis has been applied in environmental philosophy. Ecosystems have been conceived in this way. Diverse collections of organisms constitute ecosystems through their activity moving through and shaping nonorganic physical features of territory like rivers, mountains, and plains. An ecosystem contains self-referring mechanisms. One example is predator and prey population fluctuations, which affect other activity within their ecosystem.<sup>265</sup> Ecosystems have been described theoretically as autopoietic because these self-referring processes of feedback function without any reference to bodies outside the process. So the behaviour of all the bodies within such a process is governed through that behaviour's own internal dynamic.<sup>266</sup> Systems theory is useful in allowing ecological processes to be represented as differential equations relating changes in one body to changes in others. The facility of these equations to model ecological niches mathematically has been known for decades.<sup>267</sup> But one should remain wary of understanding all self-referring or feedback processes to constitute closed, isolated bodies. Many complex processes do include feedback mechanisms, rendering them autopoietic, at least in some fashion. At question is whether the presence of any feedback mechanism in any complex systematic relationship constitutes genuine systemic closure.

There is a tension in the concept of closure. Despite being mutually affective, or structurally coupled in Varela, Thompson, and Luhmann's terminology, individual organic bodies remain separate and unable to comprehend any aspect of the world around them. So if I am going to use autopoiesis in an ecological philosophy, I will have to show that affectivity can carry out all the activities that Luhmann believed possible only on a transmission model of information. As commonly understood, the concept of autopoietic closure presupposes that

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<sup>264</sup> Zenon Bankowski, "How Does It Feel to Be on Your Own? The Person in the Sight of Autopoiesis," *Ratio Juris* 7, no. 2 (1994): 258-259.

<sup>265</sup> William M. Schaffer, "Order and Chaos in Ecological Systems," *Ecology* 66, no. 1 (February 1985): 99-103.

<sup>266</sup> Miyuko Naruse and Takashi Iba, "Ecosystem as an Autopoietic System: Considering the Relationship Between Ecology and Society Based on Luhmann's Theory" (paper presented at the Fourth Joint Japan-North America Mathematical Sociology Conference, Redondo Beach, California, May 31, 2008), 7.

<sup>267</sup> Bernard C. Patten and Gregor T. Auble, "A Systems Approach to the Concept of Niche," *Synthese* 43, no. 1 (January 1980): 162-166.

affects alone can never be detailed enough to communicate the genuine complexity of the world. An affect is often understood as a mere feeling that arises when a body detects its being somehow impinged upon. On this conception, an affect can never be complex.<sup>268</sup> Varela himself was often frustrated by the strong isolationist conceptions Luhmann's influence brought to discourse about autopoietic systems. Mark B. N. Hansen writes that Varela once said, "Luhmann was the worst thing to have happened to [me]."<sup>269</sup>

Yet Varela sometimes analyzed ecological processes as if they implied the very closure that he repudiates in Luhmann's work. For example, Varela is a critic of the idea that natural selection tends toward species developing optimal traits for survival in their ecosystem. His grounds are that optimizing adaptationism presupposes that processes internal to an organism can communicate enough of their detail with processes external to it for an optimal path to be found easily. Such communication, Varela says, is impossible because an organism — and even a species — is considered to be an autopoietically closed system. There can be no genuine exchange of information between a system and its environment. A system can only muddle through, reacting to the buffeting of environmental disturbance. A system can optimize its adaptations to its environment only if system and environment can communicate in detail. At best, a system can satisfice its way to a workable solution to some environmental problem, and evolution is the process of species change through this satisficing.<sup>270</sup> This example shows that even though Varela hesitated to admit the implications of the strong isolationist interpretation of autopoiesis, he sometimes allowed them.

My interpretation of autopoietic closure differs from Luhmann's in one important respect that allows me to incorporate this concept in an ecological philosophy of integration. Luhmann does not think affectivity can achieve all that much. But I think affects can do a great deal, even highly detailed communication. One need not understand communication as transmission without alteration of content. One can take communication to be the orienting of two bodies to each other, producing harmonic relations by means of affects. What is received from one system, through a shared environment, into another system may change. For example, a star may release nuclear energy as an electromagnetic wave, which I may perceive on Earth as a green light, after I receive that energy as neuro-electrical impulses in my optic nerves. But the reason I always perceive a green light when I expose my eyes to electromagnetic radiation with a frequency of

<sup>268</sup> Lawrence Grossberg, "Affect's Future: Rediscovering the Virtual in the Actual," in *The Affect Theory Reader*, eds. Melissa Gregg and Gregory J. Seigworth (Durham: Duke University Press, 2010), 310.

<sup>269</sup> Mark B. N. Hansen, "System-Environment Hybrids," in *Emergence and Embodiment*, 131. The conversation between Varela and Hansen took place at a conference in 2000 in honour of Cornelius Castoriadis at Columbia

<sup>270</sup> Renaud Barbaras, "Francisco Varela: A New Idea of Perception and Life," *Phenomenology and the Cognitive Sciences* 1 (2002): 129.

540 terahertz is because the pattern of the radiation (its frequency) remains stable across all translations of its matter. There is regularity in perception where it counts, in this case the frequency of the radiation.<sup>271</sup> Autopoietic bodies interact with each other through what in systems theory is called structural coupling. Considering just what structural coupling can do will show the practical power of affectivity.

Through their motion, bodies create affects, and these affects interact with each other. Sometimes, these interactions are destructive, and their collisions result in further affects that break apart the bodies that created them. Other times, affects interact to constitute a field that can sustain itself, a harmonious relationship among many bodies that can extend to a much larger area than the pedestrian level of the individual bodies themselves. Structural coupling as a phenomenon has two aspects: bodies generating complex fields of affects with continually fluctuating intensities, and bodies adjusting to the affects of those fields. Because the character of the field can change radically with even a slight variation in the intensity of an affect, structural couplings can include tremendous amounts of detail, far more than Luhmann concluded that a mere affect could do.<sup>272</sup> When the bodies generating these fields of affectivity are organisms, some of these affects are perceptual. An organism's perceptual apparatus detects fluctuations and stabilities in the field of affects that surround it. Some affects are invisible to some organisms, but there can be perceptual organs for a wider variety of affects than humans detect. Bats and dolphins can detect fields of sound affects with such detail that they can navigate their environment by this means alone. Mormyrid, or elephant-nose, fish can detect electrical fields in similar detail.<sup>273</sup> Humans can detect linguistic affects, visible marks or audible patterns that articulate ideas, descriptions, and orders. Human consciousness is itself an extremely complex field of affectivity, and the external expression of internal processes.<sup>274</sup>

Luhmann holds that a system can never build an adequate understanding of its environment, because as a single system, it will never be as complex as its environment, which contains all other systems and processes. Since a system can only understand something according to its own structure, it will always miss some details of its environment.<sup>275</sup> Considered

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<sup>271</sup> Linda Brigham, "Communication Versus Communion in Psychic Systems: Maturana, Luhmann, and Cognitive Neurology," in *Emergence and Embodiment*, 209.

<sup>272</sup> Hanjo Berressem, "Structural Couplings: Radical Constructivism and Deleuzian Ecologies," in *Deleuze/Guattari and Ecology*, ed. Bernd Herzogenrath (New York: Palgrave Macmillan, 2009), 80-81.

<sup>273</sup> Simon Conway Morris, *Life's Solution: Inevitable Humans in a Lonely Universe* (New York: Cambridge University Press, 2003), 184-186.

<sup>274</sup> Gilles Deleuze, *Pure Immanence: Essays on a Life*, trans. Anne Boyman (New York: Zone Books, 2001), 26-27.

<sup>275</sup> Bruce Clarke, "Heinz von Foerster's Demons: The Emergence of Second Order Systems Theory," in *Emergence and Embodiment*, 53.

epistemologically, an organism will only consciously detect those affects for which it has a perceptual apparatus; for example, a human cannot echolocate like a bat or perceive electric charge like a mormyrid. Even beyond this limitation, knowledge is further restricted by the focus in perception required for worldly action: in order to carry out some action, one must ignore any affects irrelevant to it.<sup>276</sup> Because a system is always interacting with the field of affects which constitute its environment, in order to continue adapting successfully that system must become increasingly adequate to its environment. There may never be a perfectly adequate system, a body that anticipates all possible affects that could occur, and so could never be surprised. But a system that maintains itself will do so by continually improving its relationship with its environment. When that system is a perceiving organism, improving its relationship means improving its perceptual abilities. To describe in more detail what kind of affects a perceiving organism can detect, Næss' concept of self-as-place, invented for moral and ethical philosophy, is useful. Because an autopoietic body — a perceiving organism — is in continuing and fluctuating relationships with surrounding processes, it exists as an element of a field as well as a body with a self-defined physical boundary. It is constituted by the turning inward that separates its body from its environment, but an organism is also integrated with its environment as each constantly affects the other. As well as being a self, it is also a place.

Næss introduces his concept of self-as-place to aid an ethical attitude central to deep ecology: identification. Identification is a moral principle in its design and effect on one who holds to it. But it is also an ethical and ontological matter. When one thinks of oneself, one thinks of the universe, with the unity of self and universe at the forefront of one's consciousness. Næss develops the concept of identification as an attempt to change contemporary consumerist attitudes that, in placing one's ecosystem, or place, at the forefront of one's care, have spurred widespread ecological destruction. One need never lose this attitude of caring only for the self in Næss' utopian vision. Instead, one comes to understand oneself as the entire universe. The self becomes the Self.<sup>277</sup> The entire universe becomes, for the moral considerations of deep ecologist philosophy, a single body, the Self, the highest possible step in a progression of reflexive self-knowledge. This concept of self-as-universe has its problems. But they can be mitigated as the concept of autopoiesis gives technical input on how to constitute a field of affects.

In the environmental philosophy that Næss calls Ecosophy T, identification plays an

<sup>276</sup> Steven D. Brown and Ian Tucker, "Eff the Ineffable: Affect, Somatic Management, and Mental Health Service Users," in *The Affect Reader*, 234-237.

<sup>277</sup> Arne Næss, *Ecology, Community, and Lifestyle*, trans. David Rothenberg (New York: Cambridge University Press, 1989), 85.

important role as an ethical attitude with moral implications.<sup>278</sup> The role of this concept is for “connecting the individual’s unfolding to that of the whole planet,”<sup>279</sup> and ultimately the entire universe. The concept of identification articulates in systematic philosophy what Næss calls the “oceanic feeling” generated in the experience of the interdependence, integration, and oneness of all existence.<sup>280</sup> I critiqued this feeling in earlier chapters, on the grounds that this intuition does not have the universality that Næss supposes. However, my current task is to understand identification as an ethical attitude, a conception of selfhood for everyday life, in the context of a systematic ecological philosophy. I understand the concept as a combination of a lifestyle guide and a theoretical scientific investigation. Næss describes identification as a key element of a personal ecosophy, ecosophy being a set of presuppositions for an ecologically mindful lifestyle, a blend of philosophy, religion, and science.<sup>281</sup> He purposely does not set up his paradigm of ecosophy as if it were an internally consistent philosophical system. He dismisses such systems as mere weapons of academic jousting.<sup>282</sup> He advocates ecosophy as a broad field of colloquially-defined attitudes and tendencies of behaviour, a guide for living whose principles bridge traditional disciplinary boundaries.<sup>283</sup> Such a dismissive attitude to systematicity and argumentation he takes as a sign of wisdom and humility.<sup>284</sup> In this way, ecosophy is Næss’ challenge to philosophy, an accusation of its arrogance and irrelevance to everyday life.

The attitude of identification calls on one to understand all individual lives to be tied together in the unity of nature as a whole. Næss calls the process through which one understands all beings as such a unity self-realization. Self-realization is one way worldly activity (lifestyle) and individual thought (philosophy) constitute one’s own personality. He describes three ways to carry out self-realization broadly speaking (denoted in his logic of preciseness as  $T_0$ ), which he labels ego-realization ( $T_1$ ), self-realization ( $T_2$ ), and Self-realization ( $T_3$ ). Ego-realization results in a personality Næss considers egocentric, embodying a partisan us-against-them attitude that

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<sup>278</sup> Næss, *Ecology, Community, and Lifestyle*, 163. Ecosophy T is a blend of systematic philosophy, personal introspection, and religious contemplation that Næss calls his personal philosophy. Each person develops her own ecosophy, one of a plurality of ways in which individuals build their environmentally conscious philosophies and sustainable lifestyles. Throughout this chapter, the last in my project where Næss is a significant influence and focus, the tension between the singularity of an individual’s philosophical perspective and the universality of his political goals will be paramount to understanding his ambition and limitations.

<sup>279</sup> Næss, *Ecology, Community, and Lifestyle*, 163.

<sup>280</sup> Arne Næss, “Antifascist Character of the Eight Points of the Deep Ecology Movement,” in *The Selected Works of Arne Næss*, ed. Alan Drengson (Dordrecht: Springer, 2005), 94.

<sup>281</sup> Arne Næss, “A Note on the Prehistory and History of the Deep Ecology Movement,” in *Selected Works*, 89.

<sup>282</sup> Næss, “Deep Ecology and Lifestyle,” in *Selected Works*, 105.

<sup>283</sup> Næss, “Notes on the Methodology of Normative Systems,” in *Selected Works*, 489.

<sup>284</sup> Næss, “Deep Ecology and Lifestyle,” 108. I find Næss’ late-period dismissal of argumentative rigor ironic, given his early-period affiliation with the Vienna Circle.



“stresses the ultimate and extensive incompatibility of the interests of different individuals.”<sup>285</sup> As self-realization develops in a more mature direction, one’s thinking stresses the relationships that an individual must pursue in order to maintain its own life. Næss describes this focus as the perseverance of the self to develop beyond mere conservation, maximizing its existing capacities for action and developing new capacities.<sup>286</sup>

In its worldly activity, the process of self-realization is conativity, the defining activity of autopoietic perception. I understand self-realization as one way to draw ethical applications from the perceptual activity of organic autopoietic systems. The activity of an organism constitutes significance in its relations with surrounding bodies according to the benefits or harm those other bodies afford it.<sup>287</sup> What one can consider epistemically as the creation of significance, one can consider ontologically as the recognition of practical difference. As the perceptual apparatus of an organism increases in complexity, so does the complexity of these relations of benefit, harm, and indifference. Conative self-realization is a development continuous with ego-realization, because one remains focussed on the development and maintenance of one’s own body. Self-realization is a modification of ego-realization to become attentive to one’s interdependence with others.

However, moving to Self-realization ( $T_3$ ) constitutes a comprehensive paradigm shift in attitude to one’s relations with other bodies. Ego-realization understands the individual’s relations with other bodies as confrontational, a continuing struggle without exemption. Self-realization ( $T_2$ ) is a nuanced, open-minded attitude toward other bodies, where the individual is able to examine relations for their benefit, harm, or indifference to him, and act accordingly. This kind of self-realization is optimal for understanding practical difference. Self-realization ( $T_3$ ) is an attitude of love toward all other bodies, such an attitude articulated in an entirely positive and loving environment.<sup>288</sup> This attitude is compatible with understanding absolute difference. One no longer understands oneself as an organism with needs, desires, and vulnerabilities. Instead, one is a component of a whole that “hangs together,”<sup>289</sup> each part dependent on every other for its continued existence and development, and the entire ensemble constituting a home to which each belongs.<sup>290</sup> This conception of self encompasses an entire ecosystem, while preserving its internal differences: self conceived according to an ontology of integration.

As an illustration of this attitude, Næss describes the small communities of indigenous

<sup>285</sup> Næss, *Ecology, Community, and Lifestyle*, 85.

<sup>286</sup> Næss, *Ecology, Community, and Lifestyle*, 85, and “Self-Realization in Mixed Communities of Human Beings, Bears, Sheep, and Wolves,” in *Selected Works*, 292.

<sup>287</sup> Ezequiel DiPaolo “Extended Life,” 14-15.

<sup>288</sup> Arne Næss, “Self-Realization: An Ecological Approach to Being in the World,” in *Selected Works*, 519.

<sup>289</sup> Næss, “Self-Realization: An Ecological Approach to Being in the World,” 520.

<sup>290</sup> Næss, *Ecology, Community, and Lifestyle*, 164.

people and fishermen of Norway, who were forced by government policy to resettle from communities isolated from state services. Although they received many benefits from resettlement, such as health-care, infrastructure, and integration into a diverse society, their identities were diminished because they were removed from the land with which they *identified*. The ecosystem where they lived was part of who they were as much as any cultural heritage.<sup>291</sup> Being themselves part of the whole, when they were removed from that whole, they were no longer themselves. Because one's identity is constituted through identification with a place, I substitute for Næss' terminology of Self-realization (T<sub>3</sub>) the term self-as-place. Deep ecology's concept of identification explicates the attitude that one is the place in which one lives, so its interests are your interests.<sup>292</sup> Increasing maturity in this attitude is constituted by the increasing scope of one's reference to the place where one lives, and so one's enlarged conception of oneself. First there is the site of one's home and its environs, then an entire ecosystem, a planet, a solar system, galaxy, and universe. The most enlightened identification is all-encompassing.<sup>293</sup> Self-as-place is a philosophical concept that, when one believes in it, expresses an attitude shaping one's personality and moral decisions: it is a concept of ethics with political power.

The concept of identification leading to self-as-place cleverly subverts attitudes of self-interest, the egocentricity Næss understands to be endemic to Western consumerist culture. The most difficult task for an egotist is to live by a morality in which one sincerely cares for others. The combative attitude of ego-realization is hostile to all that is different from the ego. It is even more hostile to that which is directly harmful to it, and according to this attitude, deservedly so. It is difficult even for one with a more charitable attitude of self-realization to care for that which harms one but does not have the power to change its activity. In the most highly enlightened versions of the attitude of self-as-place, one even loves and cares for the tornado destroying one's neighbourhood, or for bodies that have no practical effect on one at all, like distant galaxies, and Antarctic soil microbes. These bodies are incredibly different from a human self, making sympathetic identification a difficult task. Næss compares such sympathy to the highest moral law in Kantian tradition of philosophy. He describes the highest moral law as a duty to care for those who are different from oneself. Such a goal is the highest because it is so difficult to achieve. Yet Næss does not want his moral perspective to be the high achievement of a remarkable few, but the standard attitude of all people.<sup>294</sup>

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<sup>291</sup> Næss, "Self-Realization," 521.

<sup>292</sup> Christian Diehm, "Identification: What It Is and Why It Matters," *Ethics and the Environment* 12, no. 2, (2007): 4-6.

<sup>293</sup> Næss, "Self-Realization," 524.

<sup>294</sup> Næss, "Self-Realization," 527. Næss takes significant liberties when comparing his idea of the highest and most difficult moral attitude to the Kantian system.

Popular morality is to be transformed by a bait and switch tactic. Næss thinks that the majority of people in Western industrial societies hold an image of self as an isolated, radically mobile body that has no essential connection to place in its identity. Luc Ferry calls such an uprooted and uprooting self the highest ethical achievement of Western humanism.<sup>295</sup> Luhmann's concept of the human subject as an isolated autopoietic body incapable of communication is one of these philosophies of inherently alienated selfhood.<sup>296</sup> But Næss does not believe that such an isolated self is the only attitude toward oneself that a human can have. Environmental moral philosophers, Næss among them, often use indigenous cultures to illustrate a society in which conceptions of selfhood exist as an alternative model to the consumerism and egocentricity they believe lies at the heart of the destructively short-sighted development of enormous industry. David Abram supplies a very clear example of the benefits and problems of this approach. A benefit is that in his account of indigenous Australian cultures, one can see a functional society of individuals operating with an integrative conception of selfhood. A problem is that such discussion of indigenous groups can easily slip into essentialist caricatures of indigenous persons as Edenic stereotypes.<sup>297</sup> Because Næss presumes that many in his potential audience already accept the humanist conception of selfhood, he belabours the point that an integrative self-image is possible throughout his environmentalist writing. Saying that one's self-conception should include physically separate beings sounds paradoxical only to someone who accepts humanist presumptions.

If one has different ontological or religious presumptions about the nature of the universe, this seeming paradox of a distinct self that nonetheless shares the interests of different bodies can be a mere truism. To take one notable example, the Dalai Lama writes in the public forum of his Twitter account, "Due to the fundamental interconnectedness that lies at the heart of reality, your interest is also my interest."<sup>298</sup> There is practical interest in changing people's habits of thinking and lifestyles to accustom them to an integrative self-understanding. As Næss says:

The greater our comprehension of our togetherness with other beings, the greater the identification, and the greater care we will take. The road is also opened thereby for delight in the well-being of others and sorrow when harm befalls them. We seek what is best for ourselves, but through the extension of the self, our 'own' best is also that of

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<sup>295</sup> Luc Ferry and Alain Renaut, *Heidegger and Modernity*, trans. Franklin Philip (Chicago: University of Chicago Press, 1990), 4.

<sup>296</sup> Niklas Luhmann, *Essays on Self-Reference* (New York: Columbia University Press, 1990), 45.

<sup>297</sup> David Abram, *The Spell of the Sensuous: Perception and Language in a More-Than-Human World* (New York: Pantheon, 1996), 93.

<sup>298</sup> Dalai Lama XIV, *Twitter*, March 28, 2011, accessed March 31, 2011. <http://www.twitter.com/DalaiLama>.

others. The own/not-own distinction survives only in grammar, but not in feeling.<sup>299</sup> By enculturating people to attitudes of self-as-place, where that place is understood to encompass an entire planet, one need not motivate people to the difficult task of caring for the radically different. “If your self . . . embraces another being, you need no moral exhortation to show care,”<sup>300</sup> because this other is already understood as the self. The ontologically very different are cared for because when one follows the path of self-realization that leads to self-as-place, one identifies them as oneself. One is the same substance, the same body, as every other body in the universe.<sup>301</sup> Difference is trivial in the face of the ontological unity of all as whole. Because I have come to think of myself as the entire universe, by caring for myself I care for the entire universe.

Yet Næss’ practical motives for encouraging this lifestyle shift may be inconsistent with his broader vision of how philosophical thinking works. In his earlier work, Næss distinguished vague from rigorous philosophy, endorsing the rigorous as the best philosophy. He began his career as an affiliate of the Vienna Circle, endorsing their vision of philosophy as clarifying and making precise the statements of science.<sup>302</sup> That he analyzes political slogans and normative statements in his later works using the precision tools he developed in his early career shows that he never entirely abandoned those goals. But in pushing his account of self-as-place as a broad attitude of harmony and fellow-feeling, he endorses a vague principle instead of giving it rigorous content. One cannot understand self according to Næss’ holist model of universal identification in self-as-place, while also understanding self as an autopoietic body with a clear distinction of internal and external. In its holism, the ethical concept of self-as-place blurs the distinction of subject and world. Such blurring is incompatible with the ontological concept of the autopoietic body. The structure of this incompatibility of the scientific and the ethical is the same as the general problem of environmental philosophy examined at the start of my project. Environmental philosophy asks us to develop moralities incompatible with the ontologies biological research suggests.

A morality in which self-as-place is a central concept of identity considers the entire universe to be a unity, a single body with interrelated parts. This is not a simple unity, as my earlier arguments against strongly holist interpretations of the concept of the complex whole indicate. But one can still understand a complex whole as a unity. To maintain itself, the physical system of an organism’s body requires a physical boundary delineating an inside and an outside.

<sup>299</sup> Næss, *Ecology, Community, and Lifestyle*, 175.

<sup>300</sup> Næss, “Self-Realization,” 525.

<sup>301</sup> Stacey K. Sowards, “Identification Through Orangutans: Destabilizing the Nature/Culture Dualism,” *Ethics and the Environment* 11, no. 2 (2006): 50.

<sup>302</sup> Benjamin Howe, “Was Arne Næss Recognized as the Founder of Deep Ecology Prematurely? Semantics and Environmental Philosophy,” *Environmental Ethics* 32, no. 4. (Winter 2010): 370.

This boundary constitutes a body's unity. That a unity requires a boundary is easy to understand in an autopoietic biological system. Metabolic activity constitutes a boundary surrounding a nucleus, a physical line that creates the system-environment dualism which pervades the systems theory interpretation of autopoiesis. A system cannot exist without an environment, that from which it distinguishes itself through the constitution of the boundary.<sup>303</sup> The universe has no such other, no environment, because it is literally all that is. It has no boundary because there is no outside. The minimal condition for self-identity is an "invariant dynamic pattern that is produced, maintained, and realized by the system itself."<sup>304</sup> When that basic pattern of internal activity changes, it is enough to change the system irreparably. In some cases, the system is destroyed, as when the activity of metabolism within an autopoietic body shuts down and the body disintegrates.

In other cases, the system's physical integrity may remain while the system's structure and components have completely transformed. A corporation is one example. It is produced and maintained by the activity of its human employees, the physical architecture of buildings it owns, and its communications infrastructure. Later, it may incorporate new buildings, vehicles, and technologies according to previously established patterns, while these acquisitions may interact to transform those old patterns of activity.<sup>305</sup> A company that begins operating frozen banana stands can later build palaces for dictators, replacing its entire employee roster and infrastructure while remaining the same entity as long as there is continuity in those physical transformations, that continuity being a process by which the earlier activity changes to the latter. This changes the conditions for selfhood slightly from the strict autopoietic conditions, because a body can produce and maintain a largely invariant pattern of activity without having a physical boundary. However, even if one understands selfhood as relative invariance instead of strict autopoiesis, the universe does not fit the concept. The dynamic pattern of the universe as a whole is neither variant nor invariant. It consists of all radical creations, destructions, and transformations (huge star-factory nebulae, biospheric planets), but also all practically unchanging stabilities (supermassive black holes, enormous swaths of empty space). All that is, simply is. One can say nothing more about this ultimate totality.

The widest concept of self-as-place, the self as universe, is ontology consciously employed for political means. The goal of Næss' ecological philosophy is the creation of a society which

<sup>303</sup> Hansen, "System-Environment Hybrids," 130.

<sup>304</sup> Thompson, *Mind in Life*, 75.

<sup>305</sup> Manuel DeLanda, *A New Philosophy of Society: Assemblage Theory and Social Complexity* (New York: Continuum, 2006), 44. Legal continuity is also of key importance, but I interpret this as a moral and political continuity rather than ontological. DeLanda leaves legal matters aside in this example, and so will I.

holds religiously the maxim, “Every living being should have the right to live and flourish.”<sup>306</sup> This is the kind of society that will avoid ecological catastrophe and begin to repair damage already done. It is the only way of thinking about reality in which statements like the Dalai Lama’s make sense. Where the ontological discreteness of individuals is paramount, my interest can never be your interest unless I negate myself morally and act solely as another’s vassal. If each individual believes herself to be integrated ontologically with her habitat and with all other living beings, she will see the interest of another as her own. The interests of all are taken seriously by all, and so no interest can be formed in discord with another. If all people think this way, interests will not conflict, because the betterment of us all will be the paramount concern, and egotistical selfishness will have been overcome. Næss understands such a state of mind articulated in the daily lives of individuals to realize Spinoza’s joyful state of existence. The difference is that while Spinoza described joyful existence as an individual concern, Næss conceives of a way for an entire society to experience it.<sup>307</sup> The goal is noble, and the concept of self-as-place is social dogma used to support it.

But as a social dogma, it is a fiction because the two concepts of self in autopoiesis and self-as-place cannot co-exist in one philosophical system. It is not a fiction in the sense of falsity, because it is a concept and not a proposition. It is a concept about the universe, and so ontological, upon which a morality depends. Taking the autopoietic concept of self and system seriously means that the unity of the universe cannot be the unity of a self, because the universe is not an organismic unity, but an aggregative unity. In a moral context, an autopoietic conception of selfhood cannot use belief in holistic harmonious unity to reconcile discordant interests as one reforms one’s norms. There is no necessary harmony to the interactions of autopoietic systems; there is only mutual affectivity, which can be symbiotic, parasitic, resonant, or destructive. This lack of ontological harmony among autopoietic systems constitutes their epistemic discord, where each system is continually catching up to the fluctuations of surrounding affects.<sup>308</sup> The universe, having no surroundings, is not such a self. And the harmony implied by Næss’ concept of self-as-place means that such discord should be exceptional and strange, when it is in fact the minimal condition of life itself.

There is, however, another aspect of the concept of self-as place that permits me to rescue its use for ecological philosophy, a rescue that requires a critical transformation of Næss’ original version. The problem is its holism. I cannot preserve the holism of this concept in the form in which Næss presents it, namely, the unity of all conflicting interests and differences into a single

<sup>306</sup> Næss, “Self-Realization in Mixed Communities,” 292.

<sup>307</sup> Næss, “Self-Realization,” 528-530.

<sup>308</sup> Bruce Clarke, “Heinz von Foerster’s Demons,” 51-52.

being. The deep ecologist's goal of identifying with the entire universe has been dismissed as oversimplified and naive.<sup>309</sup> I agree that *this* holism is naive, because difference becomes unimportant and goes unacknowledged in this mode of thinking.<sup>310</sup> Holism goes against my goal of understanding ecological philosophy as founded upon a conception of difference, where the creative proliferation of difference, not solidarity in that which is common or the same, is a morally important aspect of reality. Næss understands his concept of self-as-place as part of a moral way of thinking that redefines one's self-image so that self-interest corresponds to all-interest. The ontology this moral thinking presupposes is a Spinozist conception of God as Nature. This Spinozist idea can be an ontological organizing principle for understanding the universe as a complex whole constituted through the mutual affectivity of processes. Some of those processes are autopoietic.

The concept of self-as-place can work in a comprehensive ecological philosophy when one understands the oneness of an individual with its place not as a naive unity but as a complex whole. A complex whole may be regarded as a unity, an *x* to which one simply, directly refers. But a complex whole is a plural body, constituted from a singular assemblage of affects and components, each of which is in some manner of flux, or maintains its stability by a continuing activity. So one can understand a body (in this case, an ecosystem or a place) as a unity constituted from a field of dynamic affectivity, and affecting other bodies (or ecosystems or places). Self-as-place understands a human subject, a self, as a place or ecosystem, but the subjectivity of selfhood remains dominant. One acts according to the interests of all bodies in the place, but one is still active according to one's nature as subject. "The free man acts out of virtue, that is, he performs things which can be understood from the laws of man's nature alone. This implies that the free man can be adequately conceived by himself, which in turn makes man . . . a substance. Ultimately, this implies each man is God himself."<sup>311</sup> A self that freely understands itself as a place that includes all that is, the universe, lives with Næss' attitude of the most comprehensive self-realization.

In the context of this discussion, Næss understands freedom as self-consciously acting

<sup>309</sup> Lisa Kretz, "Open Continuity," *Ethics and the Environment* 14, no. 2 (Fall 2009): 128.

<sup>310</sup> Diehm, "Identification," 9.

<sup>311</sup> Arne Næss, *Freedom, Emotion, and Self-Subsistence: The Structure of a Central Part of Spinoza's Ethics* (Oslo: Universitetsforlaget, 1975), 57. Næss is keen to clarify that he does not consider this Spinoza's own meaning, but is his own uptake of a Spinozist understanding of a man's own nature. Such a clarification is very important if one wants to take his conceptual inheritance from Spinoza seriously. Næss would find it much more difficult to get people to listen to his reading of Spinoza if he pitched it as uncovering what Spinoza *really* thought, because he would have to reinterpret the clear text of Book I, Definition 3 as being completely different than what it actually says. Næss is not interested in getting Spinoza right, in the most strict sense, but instead using Spinoza for his own contemporary philosophical problems and inquiries.

according to intentions mindful of the interests of all bodies which constitute a place. All these interactions constitutive of a place converge in a self-conscious body, a subject. The subject subsumes all activities that constitute the ecosystem which is the place or home of that self-conscious subject. Because only a body's action is required to articulate its interests, the activities that constitute an ecosystem are understood to articulate that ecosystem's interests. In deep ecology thinking, interests do not depend on the capacity of an actor to formulate those interests in language-like propositions.<sup>312</sup> One can now see a possibility for convergence between the concepts of self-as-place and autopoiesis. Humans, thanks to their linguistic abilities, articulate their interests as linguistic statements. But bodies without highly developed powers of self-consciousness articulate interests in different ways. Animal organisms without linguistic abilities articulate interests as desires. Other kinds of organisms articulate them as strivings to live. Nonorganic ecosystems articulate their interests as stabilizations. Because interests are rooted in the physical activities of bodies, the norms derived from those interests are immanent to physical existence as well. Næss calls this account of interest his Spinozist ethics.<sup>313</sup> One takes account of these interests by building systems of norms, and more specific political policies and laws based on those norms.<sup>314</sup> The moral attitudes of balancing interests or upholding the interests of another are generalized over all of nature. Entire ecosystems, and nature generally, are held to be moral subjects.<sup>315</sup> Only the human subject can articulate this moral attitude in the most intense degree yet possible, because the human mind is the only power that can, with the science of ecology, observe, analyze, and understand all the interests of every constituent of his place.

The figure Næss calls "the free man," himself being his place, investigates the processes that constitute his place so that he may better know himself. He observes the myriad activities which articulate the interests of an ecosystem's bodies and relations, incorporating those interests into his own intentions.<sup>316</sup> In contrast, a body considered in isolation from that which generates it is understood as determined by all around it, a totally passive body. An isolated body understands

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<sup>312</sup> Elisa Aaltola, "Personhood and Animals," *Environmental Ethics* 30, no. 2 (Summer 2008): 187-188.

<sup>313</sup> Næss, "Self-Realization in Mixed Communities," 300.

<sup>314</sup> Arne Næss and Ivar Mysterud, "Philosophy of Wolf Policies I: General Principles and Preliminary Exploration of Selected Norms," *Conservation Biology* 1, no. 1 (May 1987): 26-29.

<sup>315</sup> Erazim Kohák, *The Embers and the Stars: A Philosophical Inquiry into the Moral Sense of Nature* (Chicago: University of Chicago Press, 1984), 1-6.

<sup>316</sup> Christian Diehm, "Minding Nature: Val Plumwood's Critique of Moral Extensionism," *Environmental Ethics* 32, no. 1 (Spring 2010): 8. As this article refers to Plumwood, understanding a body's activities as the articulation of interests is not a device exclusive to Næss, but occurs in her work as well. I concentrate on Næss because his ecological philosophy examines the concept itself in greater detail, while Plumwood tends to use the concept as a tool for discovering ethical norms. Her practical use of the term coincides enough with Næss' account of it through conceptual analysis that I think I am justified in focussing more on his meditation than on her application.



itself according to the egoistic model of self-realization. So the egoistic self is entirely passive. Meanwhile, a body that understands itself in terms of its relations with what generates it is active, and so free. For Næss, freedom is genuine understanding of oneself. What a body is, its identity, is a process constituted through its affects, including those affects which it generates itself and the affects other bodies have on it. A body that understands itself in this way, how it genuinely is, Næss considers free. Ultimately, a body is generated by all else in the universe, because all bodies are interrelated in their common history.<sup>317</sup>

According to my concept of the constitutive relation, all bodies are active: assemblages of affects interacting as fields whose cascading patterns constitute the universe itself. In the concept of self-as-place, all bodies would be ontologically active in this same way, but Næss still considers most bodies passive. All bodies generate themselves and other bodies through their affects, and in this sense of affectivity, they are active. But only self-conscious bodies can form intentions to shape their affectivity with purpose. Thinking clearly and comprehensively about the fields of affects one generates allows one to control those affects, at least insofar as one understands how one is affected and affecting, instead of being buffeted by them.<sup>318</sup> Self-as-place becomes a means of taking control of one's existence as a self-conscious field instead of an ego closed up on itself in its understanding and moral concern. Egoistic control is control as domination, the instrumental attitude that environmental philosophers decry as the cause of ecological crisis.<sup>319</sup> Alternatively, instead of an isolated unity, one understands oneself as a plural entity: a multiplicity or complex whole. But this plurality is unified within self-consciousness, in which all difference is incorporated into the unidirectionality of intentional consciousness. Intentionality unifies the phenomenal experience of a consciousness into a focussed movement of perception and action that ignores the multiplicity of its ontological origin.<sup>320</sup>

Næss defined the minimal form of the self as a pattern of activity that sustains itself, a definition closely aligned with that of biological autopoiesis. But he wants to achieve his ethical, moral, and political goals by subsuming all the activities of an entire place into the intentional consciousness of a self. Such a subsumption transforms affectivity into an intention that occurs when a self articulates itself as a place, its own phenomenal consciousness being the means by which a place understands itself. Understanding oneself as a place is an ethical thought process

<sup>317</sup> Næss, *Freedom, Emotion, and Self-Subsistence*, 38.

<sup>318</sup> Benedict Spinoza, *The Ethics*, ed. Seymour Feldman, trans. Samuel Shirley (Indianapolis: Hackett, 1992), 204-205, Book V, Propositions 3-4.

<sup>319</sup> Neil Evernden, *The Natural Alien: Humankind and Environment* (Toronto: University of Toronto Press, 1985), 14-20.

<sup>320</sup> Maurice Merleau-Ponty, *The Phenomenology of Perception*, trans. Colin Smith (New York: Routledge, 1962), 115-116.

which has moral implications when one articulates one's self-understanding as a social lifestyle. Intentions become interests, and the self is defined by the imperative, the moral duty, to harmonize conflicting interests. This is the metaphysical movement at the heart of deep ecology linking multiple philosophical domains into a unified, multifaceted vision. It may work as a religious principle on which to organize society (religious doctrines have involved more convoluted metaphysics), but cannot work as an ecological philosophy.

An ontology in which the universe is a complex assemblage of interacting fields of affectivity is faithful to the basic idea of deep ecology: all bodies are fundamentally integrated and interdependent. However, when this complex field called the universe is understood as a plural subject whose diverging interests are considered to be human-style intentions, anthropocentrism, a conceptual bugbear of deep ecology, reappears. When people understand themselves as place, the deep ecology movement works politically, morally, and ethically, because such people will treat the many activities that constitute their place (whether ecosystem, country, planet, or universe) as articulating interests equal in moral standing to those of their own egos. So they will act in a manner that conserves the ecological integrity of their place. But an ontological problem remains. A place cannot be understood to have all the interests of all the bodies in it, as if that place were a self-conscious human. Despite how inconsistent the interests and desires of a single human may be, these are small variations compared to the wide divergence of interests among all the organisms in an ecosystem, let alone a planet. These diverging interests stem from ecological relationships. Many relationships are symbiotic, but others are predatory or otherwise incompatible. One need not even be of different species to have such incompatible interests. An example is the New England white pine. Pine saplings require intense sunlight to grow, so the first generation of pines tends to thrive in brush. But succeeding generations of pines tend to fail because adult pines block the direct sunlight the younger ones need to develop. An older generation of the same species interferes with the interests of its own offspring.<sup>321</sup> Conceiving of a place as a *self-conscious* complex whole may require removing much of the conflict among an ecosystem's constituents from one's consideration, despite these conflicts emerging from their natural activity.

Recall my critique of animal rights morality in the first chapter: the desires of animals not to suffer are understood as the same kind of desire as that of humans not to suffer. Næss himself understands the suffering of a sheep as the same kind of suffering as a human.<sup>322</sup> But each affect of pain is singular, different from every other, and saying that it is all the same pain ignores this

<sup>321</sup> Richard Lewontin, *The Triple Helix: Gene, Organism, and Environment* (Cambridge: Harvard University Press, 2000), 58-59.

<sup>322</sup> Næss and Mysterud, "Philosophy of Wolf Policies I," 29.

difference. For the moral and political problem of alleviating the suffering of animals, one can consider the pain of a human and a sheep to be equally worthy of consideration. But this assessment is restricted to the domain of moral philosophy, not ontology. The degree of difference in comparing pains is greater when we contrast pain affects of different organisms, and greater still contrasting pain affects of different species. The concept of interest developed in deep ecology is intentionally directed activity for the sake of a goal. This is another place where autopoiesis and deep ecology converge, although in ways parallel to some of the problems I discussed in my criticisms of both. Thompson takes the activity of even the simplest organisms to be goal-directed. Varela calls the constitution of interests through worldly activity sense-making, the creation of significance. Sense-making diverges from what is generally understood as human interest. I can have an interest in preventing Arctic ice melt, directed by the goal of preserving humanity's coastal cities for future generations of humans. This is not a worldly action, but a complex desire in thought. The activities of non-linguistic mammals and possibly octopoda approach close to the models of deep ecology and sense-making, but insects, worms, plants, fungi, and the staggering diversity of bacteria and viruses are further from this paradigm. Non-organic assemblages like mountains, oceans, and plastics are active in the sense of affectivity, but diverge even further from the intentional model of interest. Understanding oneself as place can lead one to forget these ontological divergences while all of a place's activity is subsumed under the interests of a universal self.

The deep ecological concept of self-as-place creates a holist vision of the universe in which all activity is articulated through the interests of a subject, in which the true nature of existence is its oneness. But such oneness is a naive unity, which does not exist. My critique of the autopoietic understanding of social systems and ecosystems reveals a parallel error. Even if one grants Thompson's interpretation of an autopoietic body as constituting some manner of self, autopoietic activity alone does not constitute a self-conscious subject. An autopoietic body is a chemical system that creates a physical structure capable of acquiring further fuel for its metabolic activity and preventing destructive interference with it. Insofar as there are any activities of such a body that one can call motor or perceptual, according to Thompson, one can call an autopoietic body a self.<sup>323</sup> It may sound radical when one first hears Thompson's analysis of autopoiesis as minimal selfhood, but his analysis presupposes the definition of selfhood as autopoietic conativity. His investigations of extremely primitive autopoietic systems discover their capacity for motor activity and rudimentary perception. Having already defined conativity as the minimal mechanism to constitute significance in the world, he takes the most primitive autopoietic bodies

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<sup>323</sup> Evan Thompson, *Mind in Life*, 260.

to create significance. Because he understands creating significance as creating linguistic meaning, primitive autopoietic bodies have the same kind of subjectivity as self-conscious humans. But Thompson's equating of all autopoietic subjectivity with human subjectivity is entirely a matter of linked definitions, not the mindful investigation of autopoietic motion itself. His definitions determine his conclusions from the evidence, when the evidence should provide reasons to accept or modify his system of definitions.

Deep ecology is a philosophy whose primary goal is supposed to be political action: radical transformation of the human lifestyle according to ecocentric norms. Such an empowering political philosophy requires activists to join in solidarity with the ecosystems they aim to protect, and there can be no greater solidarity than the belief that person and place are one unified self. But letting one's subjectivity be subsumed into the larger part of this unified body, the ecosystem, can easily lead to an attitude of fatalism. Human concerns become petty compared to the scales of size and time on which Earth, or the universe, exists. In this comparison, humans are insignificant. But the demonstration of humanity's ontological pettiness lays the groundwork for a second demonstration: that there is an immense moral significance in humanity. This significance, arrived through the realization of human pettiness, is achieved thanks to a human model of self-conscious thinking.<sup>324</sup> When a single person comes to understand himself as his place, he assimilates the vastness and diversity of an entire ecology or biosphere into his own self-consciousness, containing Earth's vastness within the momentary time scale of a political agitator's action. When times call for urgency, action must be speedy.<sup>325</sup> Political expediency prevails over philosophical carefulness. Here is a counter-productive paradox in Næss' deep ecology. He intends it to be a philosophy to underlie a political movement. A key goal for this philosophy is to demonstrate the smallness of humanity relative to Earth, to inspire the proper humility in the ecocentric society of the future. But to overcome the fatalism and ineffectual feelings that come with a sense of smallness, the concept of self-as-place contains all the vastness and diversity of Earth in the single human self-consciousness of the political agitator, so the agitator can believe that a human self can take control of its situation. Humanity becomes the measure of all in order to destroy an egotistical society and create a humble humanity.

These problems need not force one to leave behind Næss' ideas altogether. It seems to me that his paramount philosophical value lies in his Spinozist influence. A Spinozist theory can combine the strong unity of holism with the complexity that the constitutive relation requires of it. In this context, a concept of pure difference can co-exist with a concept of unity, while still

<sup>324</sup> Næss, *Freedom, Emotion, and Self-Subsistence*, 53.

<sup>325</sup> Næss, *Ecology, Community, and Lifestyle*, 23-24.

being relevant to ethical and moral thinking. Næss writes:

The nature conceived by field ecologists is not the passive, dead, value-neutral nature of mechanistic science, but akin to the *Deus sive Natura* of Spinoza. All-inclusive, creative (as *natura naturans*), infinitely diverse, and alive in the broad sense of panpsychism, but also manifesting a structure, the so-called laws of nature. . . . The Nature with capital N is intuitively conceived as perfect in a sense that Spinoza and out-door ecologists have more or less in common: It is not narrowly moral, utilitarian or aesthetic perfection. Nature is perfect 'in itself.'<sup>336</sup>

Describing God/Nature in the terms of panpsychism commits the anthropocentric fallacy of understanding a concept designating an alien entity according to human structures, in this case the human mind. There is reason in Spinoza for this anthropocentric account of existence, because the *Ethics* describes the infinity of God/Nature not in the more typical sense of a negation of finitude, but as “unqualified” affirmation without restraint.<sup>337</sup> Insofar as to affirm is an act only within the capacities of self-consciousness, comprehending God/Nature’s infinity as affirmation implies a human element throughout existence as a whole. Næss’ Spinozism understands God/Nature as infinitely virtuous thanks to this anthropocentric interpretation of the concept. He understands the act of affirmation as virtuous, so the infinite self-affirmation of God/Nature constitutes the goodness of the universe.<sup>338</sup> God can also be understood as the word, voice, or face of the universe in Spinozist thinking, which also encourages one to conclude that this concept is anthropocentric.<sup>339</sup> I think the idea that the universe is infinitely virtuous is a source, or at least a justification, of the Edenic character of some deep ecologist discussions of nature, despite the relations of discord and mutual exploitation among organisms. This anthropocentrism of virtue is one flaw of ecological Spinozism.

Another flaw occurs more strictly in the ontology of ecological Spinozism. At first glance, the holism of Næss’ Spinozist-influenced concept of the unity of the universe would undermine an emphasis on difference. There is more than one way to think through this problem, some of which work better than others. Ontologically, all bodies are complex wholes. Because the Spinozist account understands all bodies as unified in God/Nature, all the complexity in the universe is a feature of that unity. Unified God/Nature expresses itself as processes by which the multiplicity of attributes and modes develops. So complexity can come to exist within a unity as a process of complexification, the creation of difference through the interaction of movements.

<sup>336</sup> Næss, “Spinoza and Ecology,” *Philosophia* 7, no. 1 (March 1977): 46.

<sup>337</sup> Spinoza, *The Ethics*, Book I, Proposition 8, Scholium 1, 34.

<sup>338</sup> Næss, *Freedom, Emotion, and Self-Subsistence*, 111.

<sup>339</sup> Gilles Deleuze, *Expressionism in Philosophy: Spinoza*, trans. Martin Joughin (New York: Zone Books, 1990), 123.

Yet even this concept of complexification does not fully embrace difference, because the always-already complete unity of substance is ontologically prior to the complexity of modes or of the finite. Substance expresses itself through the complexity of its modes, but complexification follows from unity. Despite being a process, difference is here understood as the necessary unfolding of a primal unity: that which develops is contained entirely within its starting conditions, the unity that is ontologically prior to it.<sup>330</sup>

This concept of process as unfolding is inadequate to understand difference as a process of becoming, the transformation of structures through time. Næss understands finite existence as a plurality of forces that differ in their kinds and levels of power to affect and change other forces, including themselves.<sup>331</sup> But the affirmative infinitude of God/Nature contains all possibilities of differentiation within itself already, no matter what their particular changes at any one moment may be. That a body has the power it does is a necessary feature of its nature.<sup>332</sup> When the body in question is the entire universe, all the powers of every body constituting it — every body that exists — are necessary features of its nature. The universe is treated as a naive unity, that which simply is. Difference does not disappear from how one understands existence in this kind of Spinozist philosophy, because differentiation occurs on smaller scales than the universal. But difference at local scales is subsumed into the unity of necessary existence at the level of the universe.

The abstract structure of the constitutive relation shows what is missing from this understanding of unity: production. God/Nature is understood as a self-producing being, the only such being there is, but in the Spinozist context, to be self-producing is for existence to be part of a being's nature.<sup>333</sup> For bodies on a smaller scale, Næss conceives of the processes by which they are produced as self-preservation, which is how he interprets Spinoza's concept of *conatus*.<sup>334</sup> Self-preservation is the maintenance and striving toward perfection of a body's own nature. "Levels of perfection are measured in relation to the strivings of each thing, there is no general measure such that man might be termed more perfect than an amoeba or a tree."<sup>335</sup> Næss and Thompson both consider *conatus* as important, but also needlessly anthropomorphize it, either taking all conative bodies to be subjects on the human model, or to strive for perfection with a human-like purposiveness. Environmental moral philosophy warns against anthropomorphizing

<sup>330</sup> Lewontin, *The Triple Helix*, 11. An analogous idea in biology is to conceive of organic development on a pre-formationist model, in which the entire future of an organism is prefigured in its origin.

<sup>331</sup> Næss, *Freedom, Emotion, and Self-Subsistence*, 66-67.

<sup>332</sup> Deleuze, *Expressionism in Philosophy*, 38.

<sup>333</sup> Spinoza, *The Ethics*, Book I, Definition 1, 34.

<sup>334</sup> Næss, *Freedom, Emotion, and Self-Subsistence*, 84.

<sup>335</sup> Næss, *Freedom, Emotion, and Self-Subsistence*, 96.

tendencies in thought because taking humanity as an essential model of all life articulates the arrogance that motivated the short-sighted development of enormous industry.

Despite their never having any formal contact and working on what they conceive as utterly different projects, a similar anthropomorphism appears in both Næss and Thompson's thinking. Thompson is explicitly anthropomorphic in his theory of conativity and mind, and is fine with all life fundamentally resembling humanity. There is no reason for him to be concerned about anthropomorphism, because Thompson is a philosopher of biology and cognitive science, not environmentalism. Næss, however, hints at a possible solution to the problem. Næss understands striving as self-realization, the aspiration of each body to be the best it can be, a process of perfection carried out by interacting with surrounding bodies in a mutually empowering, mutually perfecting, manner.<sup>336</sup> Næss considers his concept of self-as-place to be the highest iteration of self-realization. Mindful of this, one can understand self-as-place as the process of a body's becoming more perfect through aiding the perfection of other bodies with the help of specifically human self-consciousness as a planning tool. This more general conception of perfection moves beyond any overly anthropomorphic connotations of the word. Næss' Spinozist influence on the concept of self-as-place also overcomes the problem of understanding the often brutal relationships of violent consumption in ecosystems as morally harmonious. Ecosystemic harmony can only emerge through conscientious environmentalist humans interjecting to reduce the violence of competition for scarce resources.

According to Næss, in self-realization, the human body, not consciousness or self-consciousness only, undergoes perfection. Deleuze understands this focus on the body in terms of Spinoza's thorough materialism, because in the history of Western philosophy, the idealist ontology that alienates thinking from the physical world takes self-consciousness to be the source of any order or meaning in the universe.<sup>337</sup> Deleuze's analysis of how this alienation arises in the work of Descartes, through the latter's effort to understand the universe mechanistically, is consistent with the rhetorical role Cartesianism plays as whipping boy of environmental philosophers. Deleuze's account, however, is more nuanced historically and conceptually. The stereotype of Cartesianism prevalent in environmental philosophy reduces Descartes' thought to its dualist aspect alone. He is taken to originate the mainstream Western view that human mind and material or physical nature are absolutely separate. Deleuze considers Descartes' biggest problem to be his reliance on mechanistic models of causation. A mechanistic universe does not produce anything, but simply moves according to its structure, the laws of nature, determined to

<sup>336</sup> Næss, *Freedom, Emotion, and Self-Subsistence*, 98. Descartes' image of mechanism articulates a vision of development similar to the biological preformationism Lewontin criticized in *The Triple Helix*.

<sup>337</sup> Gilles Deleuze, *Spinoza: Practical Philosophy*, trans. Robert Hurley (San Francisco: City Lights Books, 1988), 18.

the smallest degree.<sup>338</sup> A clock, historically a powerful image of mechanistic causality, does not grow new springs and gears as it ages, but moves its parts according to their invariant structure. The initial condition of a system contains its entire future development. All that can be is prefigured in what now is, and any apparent production or creativity is just the unfolding of possibilities contained in the actual present. Nothing in the essence of a body ever changes because laws of nature transcendent to bodies entirely determine their essences.

On the Spinozist paradigm, the production of bodies is an ongoing process. What a body can do is not determined exhaustively by the laws of nature alone. Consider, as Næss does, the structure of the necessary existent, God/Nature, to be the laws of nature. The structure of nature, its laws, do not determine necessarily the fields of affects that bodies generate through their mutually constitutive relations. The affective relations that constitute bodies are contingent in that they are not contained in the bodies themselves, considered as isolated individuals. We have here a different kind of Spinozism, a departure from Spinoza himself, who wrote, “From God’s supreme power or infinite nature an infinity of things in infinite ways . . . have necessarily flowed or are always following from that same necessity, just as from the nature of a triangle it follows from eternity to eternity that its three angles are equal to two right angles.”<sup>339</sup> This necessity is evident when all bodies and their relations are considered to be explications of a unitary God/Nature, the primal order immanent to the universe itself. Understanding each individual relation as constitutive means that the order of the entire universe is an aggregate of all the smaller, local orders. When local bodies and relations are ontologically primary, the necessity of explication becomes a contingency of production.

This contingent concept of production enables the creation of singularity in its absolute sense. Genuine singularity of bodies, the singularity that disturbed Roquentin, is a singularity whose identity cannot be exhaustively described using general statements that can apply to past situations. Explicative or mechanistic causality, the unfolding of developments contained entirely in the initial conditions of a system cannot produce such singularity. If one understands the precedent, one understands all that follows it, because to follow a precedent in an order of production is to follow from it in the sense of a logical or mathematical inference. This destroys the existential dilemma of singularity, because there is no genuine singularity in a causal order where all productions are necessary developments of initial conditions. Any understanding of the universe that does not take a God’s-eye-view must be contingent, because all creatures having lesser power than God cannot enumerate exhaustively and with certainty all that a body can do.

<sup>338</sup> Deleuze, *Expressionism in Philosophy*, 227.

<sup>339</sup> Spinoza, *The Ethics*, Book I, Proposition 17, Scholium, 45.



The past development of any non-God body does not include every possible adjustment to every possible change, only those which have occurred, or which one can imagine. The processes of a contingent universe produce singularities, developments to which surrounding bodies must adapt and adjust. Every body in the universe is contingent, and contingent bodies can be surprised, epistemically and ontologically. Any unity in the universe is constituted from the collision and integration of processes, each process itself being an assembly of singular affects. Order does not unfold from a primary unity, but is constituted historically from the relations among events as they occur. Constitutive relations can generate divergences from previously established patterns, thus generating genuine novelty, because the structures of the relations that generated them do not exhaustively determine all that a newly generated relation can do.

There is a kind of agency to this activity of assembling and disassembling constitutive relations, the generation and dissolution of bodies and systems throughout the universe. But it is not the same agency as intentional human self-consciousness. All the parts of a body are mutually affective, in relation with each other and themselves, and the unity they constitute is never completely harmonious. Its constituents are always in tension, which facilitates flux. A body's unity is dynamic because it is always changing or open to change, and its mutability is the reason for its tension. As long as mutual affects among parts strengthen the bonds among each other, the unity holds together. But if any of the affects change in a way that weakens those bonds, it can lead to the dissolution of the body.<sup>340</sup> Deleuze himself calls the mutually strengthening and bonding affects of a body that body's "constitutive relation."<sup>341</sup> However, the agency of assemblages is difficult to understand. Jane Bennett looks to the tradition of vitalism for an answer, with the goal of crafting a vitalism that applies to all matter, not just the organic. But she cannot escape the anthropocentrism of vitalist philosophy, trapped in a vision of vitality's exemption from some order of lesser prestige, the merely mechanical or inert.<sup>342</sup> Instead of conceiving activity as freedom from some mechanism, the ontology of the constitutive relation understands activity as the freedom of those bodies to act. The Spinoza-inspired philosophy I have described in this chapter does not refute mechanism. Motion alone constitutes the generation and dissolution of bodies according to structures and constraints that only motion is required to generate. A place, understood as an assemblage of constitutive relations, is active and never static, but it is not a self. A self, a subject on the human model of self-consciousness, is one peculiar kind of assemblage, and its peculiarities should not be generalized over all active bodies.

In this chapter, I have attempted to defend a critical uptake of the concept of autopoiesis

<sup>340</sup> Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham: Duke University Press, 2010), 23-24.

<sup>341</sup> Deleuze, *Spinoza: Practical Philosophy*, 21.

<sup>342</sup> Bennett, *Vibrant Matter*, 76.

into ecological philosophy, despite some mainstream interpretations that would make it unsuitable for my purposes. Autopoiesis describes the physical assembly of a body that, in some of its more complex forms, can constitute a place. The process constitutes a place, in my thinking, because I do not focus on the closure of autopoietic systems, but how their activity builds a field of affects through its environmental interaction. Those who focus their inquiries on the nature of autopoietic closure perceive a stark separation of system from environment. But I emphasize the interdependence of a system and its environment, which are integrated through the affects their movements generate. This integration permits my critical uptake of Næss' concept of self-as-place into an account that roots the constitution of self in a well-understood physical phenomenon, autopoiesis. Combining these two concepts permits me to describe a physical process by which a self actually constitutes a place in an ecology.

Selfhood does not disappear in an ontology of the constitutive relation. The peculiarity of self-consciousness does not render it trivial, and its peculiarity is the subject of the following chapter. What is most useful for my project in this regard is how the concept of gestalt enters the theory of subjectivity, where subjectivity is not reducible to pure self-consciousness, but is a matter of bodily structure and worldly perceptual activity. Not only does autopoiesis have a use for environmental philosophy as a companion to self-as-place. Conceiving of self as a place shows how a field of perceptual affects is not strictly bound by the physical membrane of an autopoietic body, in contrast to the strong isolationist accounts of Luhmann-influenced systems theory. The next chapter explores a phenomenological account of self-as-place to describe how one would understand self-conscious experience in the context of subjectivity as a pluralized field instead of a unified subject. The two sources of this development are the works of Maurice Merleau-Ponty and Jakob von Uexküll. In the transformation of their phenomenologies into an ontology lies the means of giving subjectivity a pivotal role in an ontology designed to support and complement ethical and political activity. The personalized ontology that Næss sought with his concept of self-realization can be achieved without the problems he encountered, and a basis built for a metaphysical movement in ecological philosophy that links ontology and ethics.

## 6. DISCOVERING ACTIVE NATURE IN THE SUBJECT

A common understanding of agency in philosophical discourse links it essentially with the subject: the subject is an agent, and in order to be an agent one must be a subject. In my critique of Næss' concept of self-as-place, I sketched an alternative understanding of a pluralized agency. But it is still possible for a philosopher to dismiss pluralized agency. The weight of a long philosophical tradition creates assumptions in a community that are not easily overturned. In this case, that presumption is that only human subjects are genuine agents. Martin Heidegger's historical analysis of how philosophy understands nature describes one alternative to this anthropocentric mainstream. He diagnoses the ecological problem of contemporary humanity as having forgotten the ancient Greek understanding of nature as agency. Instead, according to Heidegger, philosophers commonly understand nature as inert, and humanity as the only active bodies, active exceptions to an inert natural order.<sup>343</sup> But Heidegger only ever managed a diagnosis. The more difficult philosophical task of building an alternative was left to others. I find strivings toward that more creative act in the works of Maurice Merleau-Ponty and Jakob von Uexküll, and more fully articulated in the assemblage theory of Gilles Deleuze and Félix Guattari. In this and the next chapter, I will synthesize principles from these works for a philosophical account of both self and place as constituents of active nature.

The most productive aspect of Næss' concept of self-as-place that I discussed in the previous chapter was how one conceived of oneself as integrated with where one lived. Næss' articulation of this idea was hampered by a tendency to anthropomorphize self-as-place for the sake of mobilizing political action directly from his philosophical consideration. In this regard, he fell into the paradox of environmental philosophy's legacy as a political movement, moving too fast from considering abstract concepts to social and political activism. As a result, he articulates his interesting concept in a way that could not stand up to sustained philosophical scrutiny. This chapter develops a conception of how a self constitutes itself as a place in the ordinary activity of its daily life. Merleau-Ponty in his later life developed a conception of self as the activity of reflective consciousness, and the experience of simultaneously perceiving and perceiving one's act of perceiving he takes to be the foundational act of self-consciousness and therefore self. The structure of one's perceptual apparatus, and one's experience along with that, also constitutes the structure of one's environment through worldly activity. All bodies that can perceive structure their environment through their activity in this way, but self-conscious perceivers can become

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<sup>343</sup> Rajiv Kaushik, "Physis and Flesh," in *Phenomenology and Existentialism in the Twentieth Century: Fruition, Cross-Pollination, Dissemination*, ed. A. T. Tymiecinieka (Dordrecht: Springer, 2009), 80.

aware of their role in this process. The concepts that describe this relationship of experience and environment come from the scientific studies of animal ethology in the world of von Uexküll. Deleuze and Guattari, along with their followers, picked up von Uexküll's studies as the empirical groundwork to develop concepts of how the activity of all organisms which share an environment shapes that environment into a ecosystem of overlapping and integrated territories. In constituting territory as the environmental articulation of oneself, the activity of an organism's daily life makes that organism both a self and a place.

When I discuss pluralized agency, I do not intend to discuss the concept of shared intentions. The key developer of this concept in contemporary philosophy, Michael Bratman, has explicitly said that he does not conceive of an intention shared among a group of people as any kind of enlarged or dispersed agency. His reason for avoiding talk of shared agency is because he understands agency according to the model of a self-conscious person forming explicit intentions in thought, and communicating those intentions to fellows so that the intentions become common to all members of a group. That group is then defined by an implicit promise among all members to act according to the same intention.<sup>344</sup> The model for action in the shared intention theory is the human subject making self-conscious decisions. In an ecological ontology, however, self-as-place must be understood as a pluralized agency, where all motion constitutes relations that assemble complex bodies. The human model of the subject is but one case among a vast variety of bodies.

Pluralized agency requires understanding all that exists to be active. Such a principle may seem counter-intuitive. Surely the vast majority of bodies in the universe are passive? Chairs and heaps of dust have no motive power of their own: to move, they must be carried or kicked by some animal, or blown in a breeze. Rocks and clouds of gas in deep space float at the mercy of gravitational fields. I do not intend the term 'active' to be understood as being able to generate its own motion, as organisms are commonly understood to do. By active, I simply mean capable of producing complex bodies, and all bodies assemble themselves by means of their constituents' motion. So any body capable of any kind of motion is an active body. Motion can be generated by a mechanism internal to a discrete body, as in an organism; or external to a body, as when asteroids are pulled into an orbit in the gravitational field of a star, or rocks are carried in a sack by some human. Motion includes the fields of energy — for example, electromagnetism or gravitation — that a body produces. The particular mechanism by which a body moves, and whether that mechanism is internal or external to that body, does not matter to my point. What matters is that all bodies can be set into motion, and so can constitute a system of moving parts.

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<sup>344</sup> Michael E. Bratman, "Shared Intention," *Ethics* 104, no. 1 (October 1993): 98-99.

Set into motion, bodies will interact with each other. This interaction establishes relations among bodies that constitute their identities. Constitutive relations, no matter their diversity and complexity, are articulated through motion alone. Whether the motive mechanisms of each individual body are internal or external to it do not matter, except perhaps for the functional role they may have in the generation of the entire system. The whole system and its properties are produced by the actions of its parts: all the processes that have led to its generation and continue to maintain it. Complex wholes can also consist of overlapping or tangentially connected complex systems. An example would be an enormous ant colony, one region of which burrows through the ground of a forest, across farming fields, and elsewhere tunnels deep beneath and up through the sewers and foundations of a city.<sup>345</sup>

Where relations are ontologically prior to and constitutive of bodies and their properties, complex wholes are best understood as *gestalts*, bodies in which, if I can allow myself a cliché, the whole is more than the sum of its parts. Næss uses this cliché to understand the structure of bodies, and this account of bodies as *gestalts* constitutes his briefly-sketched ontology. He mostly enumerates a series of examples, many of which are perceptual. Entering a room for the first time is experienced as a complex whole, a sonata is a complex assembly of notes in relation to each other articulated over time, a painting is a complex assembly of lines and patches of colours existing concurrently on a canvas.<sup>346</sup> A *gestalt* body comes to be through reciprocal relationships in which no one element takes prominence over any other. One cannot adequately understand the complex body constituted from the relations among its elements (other bodies and forces) without considering these parts. As well, simply considering the parts and the relations among them is inadequate to understand the complex body they constitute, because some activities are only generated at the level of the whole. The self becomes a place in the ontology of *gestalts* because “*Gestalts* bind the I and the not-I together in a whole.”<sup>347</sup> This binding is the integration of an individual perceiving body, a self, with what it perceives, a place. Understood this way, a benefit to oneself is not a benefit enjoyed by a traditionally conceived self: “Joy becomes, not my joy, but something joyful of which the I and something else are interdependent, non-isolatable fragments.”<sup>348</sup>

Næss describes his conception of *gestalt* as bodies that are not permanent and static, but

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<sup>345</sup> Tatiana Geraud, Jes S. Pedersen, and Laurent Keller “Evolution of Supercolonies: The Argentine Ants of Southern Europe,” *Proceedings of the National Academy of Sciences of the United States of America* 99, no. 9 (April 30, 2002): 6075-6079.

<sup>346</sup> Arne Næss, *Ecology, Community, and Lifestyle*, trans. David Rothenberg (New York: Cambridge University Press, 1989), 58-60.

<sup>347</sup> Næss, *Ecology, Community, and Lifestyle*, 60.

<sup>348</sup> Næss, *Ecology, Community, and Lifestyle*, 60-61.

processual. Even so, his formulations often remain purposely paradoxical, rarely making explicit the changes required in one's thinking to make his paradoxes productive. "The individual selves are processes or aspects of processes, always changing, but always showing an important, limited continuity and permanence."<sup>349</sup> The paradoxicality of his formulation is the juxtaposition of continual flux with permanence in the same body, the self. Næss spends the rest of this essay explaining his concept of Self-realization, which I earlier described as self-as-place, in terms of the Buddhist idea of coming to understand oneself no longer as a discrete ego, but as a "great Self."<sup>350</sup> In my previous chapter, I concentrated on developing the ontological conception of self-as-place, how one can understand a self as a place constituted from a field of affects, an autopoietic body in continual interaction with its environment. But Næss developed the concept of self-as-place for a practical political purpose: transforming people's lifestyles to follow and forge ecologically sustainable paths. What he called self-realization is a process of changing how one understands oneself, an ethical dimension of the concept of self-as-place. Insofar as self-realization is a matter of conscious activity, it is important to understand the perspective of one's experience as self-understanding changes. The goal of this chapter is to show how the phenomenological perspective of an individual thinker can be included in the concept of self-as-place.

To build an account of the phenomenological perspective conscious of itself as a place, one must understand the differences and similarities between conscious and non-conscious agencies. Agency is not an exception from a mechanistic material order, but an aspect of materiality itself. One of the central motivations of the phenomenological philosophy of the early twentieth century was to combat the understanding of matter as inert, valueless, mere stuff.<sup>351</sup> The inadequacy of understanding matter as passive stuff to be manipulated at will inspires the ecologically-focussed revival of vital materialist philosophy today.<sup>352</sup> The strict separation of subject and nature that Næss considered a standard philosophical doctrine against which he had to fight was already being overcome in Merleau-Ponty's update of the concept of gestalt decades earlier. He used the concept in his early work, *The Structure of Behaviour*, as a bulwark against reductive materialist accounts of reality that understood all matter, including human thinking

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<sup>349</sup> Arne Næss, "Gestalt Thinking and Buddhism," *The Selected Works of Arne Næss*, ed. Alan Drengson (Dordrecht: Springer, 2005), 335-336.

<sup>350</sup> Næss, "Gestalt Thinking and Buddhism," 336. I have no space in this project to examine the extent and depth of the influence that the tradition of Buddhist scholarship had on Næss.

<sup>351</sup> Stuart Elden, "Contributions to Geography? The Spaces of Heidegger's *Beiträge*," *Environment and Planning* 23 (2005): 817.

<sup>352</sup> Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham: Duke University Press, 2010), 31-32.

and perception, as inert mechanism.<sup>353</sup> Throughout his career, Merleau-Ponty continued to oppose understanding nature as inert mechanism. In his *Nature* lectures of the late 1950s, Merleau-Ponty dismisses the vision of nature as a single unified body that moves solely according to fixed laws, the knowledge of which would permit humans, who with their power to know are an exemption from this deterministic order, to dominate nature.<sup>354</sup> He instead explores a more nuanced concept of nature as active.

The most influential versions of phenomenological philosophy (Edmund Husserl, Heidegger, Jean-Paul Sartre, and their followers) consider freedom as a body's being able to determine itself. This freedom is important for a body to think philosophically at all. No matter the intricacy of its mechanical complexity, an inert mechanism does not possess freedom in this sense. This dichotomy of self-determining and inert is the central duality of Heidegger's *Dasein* and *Vorhanden*, or Sartre's for-itself and in-itself. Husserl described the dichotomy as the difference between that which can and cannot be determined.<sup>355</sup> However, the phenomenological philosophy that includes these dichotomies has a problematic concepts of gestalt. There is an unbridgable difference in kind between the perceived, and that which organizes the material of perception. Only a human (or *Dasein*, or being-for-itself) unifies the accidental aggregations of inert existents into a single perceptual field of qualitative forms. Each potentially sensible quantum in the world is discrete, but perception unifies these discrete elements into a coherent field.<sup>356</sup> Existence itself is an aggregation of quantities, and qualitative features of existence can only be constituted through human perception and action. The same goes for unity. Only in a phenomenological subject's organizing activity do the happenstance processes of an environment become unified into a single perceptual field.<sup>357</sup> The gestalt psychologist Wolfgang Köhler discovered a physical isomorphism between neurological structure and the sensory stimuli that a perceptual apparatus could receive, but there is no correspondence of phenomenal structure in experience to stimuli themselves or inner neural structure.<sup>358</sup>

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<sup>353</sup> Xavier Verley, "Cosmologie et Phénoménologie: Whitehead et Merleau-Ponty," *Revue Philosophique de la France et l'Étranger* 131, no. 1 (2006): 36-37.

<sup>354</sup> Maurice Merleau-Ponty, *Nature: Course Notes From the Collège de France*, trans. Robert Vallier (Evanston: Northwestern University Press, 2003), 113.

<sup>355</sup> Edmund Husserl, *Crisis of the European Sciences and Transcendental Phenomenology: An Introduction to Phenomenological Philosophy*, trans. David Carr (Evanston: Northwestern University Press, 1970), 46-48.

<sup>356</sup> Taylor Carman, "Merleau-Ponty and the Mystery of Perception," *Philosophy Compass* 4 (2009): 631-632.

<sup>357</sup> Mina Sehdev, "Perception, Textual Theory, and Metaphorical Language," in *Phenomenology and Existentialism in the Twentieth Century*, 235.

<sup>358</sup> Gloria Ayob, "The Aspect-Perception Passages: A Critical Investigation of Köhler's Isomorphism Principle," *Philosophical Investigations* 32, no. 3 (July 2009): 267. This converges with the idea in systems theory that the internal structure of a system is idiosyncratic in comparison to its surroundings and other systems.

There are two ways to understand the idea that only perception unifies the world. One way is that perception makes an internal picture of an external environment, but this kind of representationalism has never been acceptable to phenomenological thinking. The other way, which is relevant to my project, is to understand perception as the creation of a gestalt unifying discrete objects in experience renders the perceiving subject the only source of order in the world. All that matter are subjects, the ordering agents, and objects, that which the subject orders; there are no bodies, per se. So one faces another dichotomy, this time between disorder and order. The subject is superior because it can control itself and the world. Objects, in contrast, are inferior because they are entirely passive unless they fall under the control of a perceiving subject. Ultimately, this concept of subjectivity alienates a subject from everything that is not itself, because the subject, thanks to its ability to perceive, is an exemption from a universe otherwise wholly determined and inert.<sup>359</sup> Unable to deviate from an already-established plan of mechanical motion, nature conceived this way is ethically irrelevant.<sup>360</sup> One can still know the world, so it is not an epistemic solipsism. But one is alien to the world, one's own subjectivity being the only reference point by which the world is significant, the embodiment of ethical solipsism.<sup>361</sup>

Yet Merleau-Ponty's philosophy moves beyond this dichotomy of subject and world, active and inert, ordering and determined. The agency of a human organism is not an exemption from the inevitable passivity of non-conscious reality, but begins with motion itself. Each motion, differing from each other motion, is a singular flux whose own activity constitutes its identity. Each motion occurs as the product of a history of many other movements colliding, converging, and diverging. A motion "is not even a trajectory that will be, but a trajectory that is going to follow. It is the grasp of the immanence of what is going to follow in what has already begun."<sup>362</sup> A motion articulates its trajectory according to the power immanent to itself, a power constitutive of the singularity of the motion. Understanding motion this way means that nothing other than the motion itself determines what that motion will eventually become over the course of its trajectory. Constituted from processes, from a complex of interrelated and mutually affective motions, a human organism is free in the same sense as any other process. A human organism produces itself according to its own structure. That structure includes temporal and spatial structures, so an organism is also its history as well as its physically bounded body. This concept of freedom overcomes the ontological dualisms whose ethical articulation entails the

<sup>359</sup> Bonnie Mann, "World Alienation in Feminist Thought: The Sublime Epistemology of Emphatic Anti-Essentialism," *Ethics and the Environment* 10, no. 2 (Fall 2005): 56.

<sup>360</sup> Merleau-Ponty, *Nature*, 9-10.

<sup>361</sup> Neil Evernden, *The Natural Alien: Humankind and Environment* (Toronto: University of Toronto Press, 1985), 127-128.

<sup>362</sup> Merleau-Ponty, *Nature*, 154.



alienation of humanity from nonhumans: mind / world, for-itself / in-itself, or *Dasein* / *Vorhanden*. Each dualistic category of being is alienated from its opposite because membership in one category excludes any possibility of convergence with the other. There can be no overlap among them.<sup>363</sup> Mind is not an ontological category equal in status to a world against which it stands in opposition. A human body has a peculiar ability to think abstractly about itself and its surroundings. Subjectivity is a process just as integrated with the world as with the body whose perception generates that subjectivity.<sup>364</sup>

The only dualism that eventually survives Merleau-Ponty's criticism is mentioned in the title of his last work, *The Visible and the Invisible*. These are not ontological categories, in the fashion of the mind / world dualism in the modern tradition of philosophy. The difference between the visible and the invisible is a matter of epistemic accessibility: what can be perceived, and what must exist in order for there to be perceivers and perceived. The perceivable, perceiver, and the imperceptible conditions of perception are integrated in a single gestalt field, gestalt here understood as a unity constituted from differences.<sup>365</sup> Because of the dynamic nature of this field of processes intersecting and affecting each other, Merleau-Ponty aptly calls the volatile intersections of such complex processes "wild being."<sup>366</sup> One could read environmental philosophy, perhaps even its moral considerations, into Merleau-Ponty's thinking from this turn of phrase alone. Being is wild, properly dynamic, and in continual flux; humanity reduces these patterns to resources to be exploited with its brutal technology.<sup>367</sup> But in my earlier chapters, I have shown that these simple dualisms which villainize humanity and romanticize wilderness are not useful for an ecological philosophy through which humanity justifies its continued existence.

The concept of wild being is better understood ontologically. One can use the concept of wild being to understand existence as a continual collision of a plurality of processes, and these processes constitute all the bodies of the universe. These processes constitute a human subject, and subjects also take part in generating them. The phenomenological tradition from which Merleau-Ponty was departing in his last works provides the conceptual tools for a human subject to describe itself as such a process. A human's experience of its continuing generation is not

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<sup>363</sup> Maurice Merleau-Ponty, *The Visible and the Invisible*, trans. Alphonso Lingis (Evanston: Northwestern University Press, 1968), 47.

<sup>364</sup> Maurice Merleau-Ponty, *The Phenomenology of Perception*, trans. Colin Smith (New York: Routledge Press, 1962), 474-475.

<sup>365</sup> Merleau-Ponty, *The Visible and the Invisible*, 195.

<sup>366</sup> Ian Burkitt, "Psychology in the Field of Being: Merleau-Ponty, Ontology, and Social Constructionism," *Theory and Psychology* 13, no. 3 (2003): 327.

<sup>367</sup> Frank M. Coleman, "Classical Liberalism and American Landscape Representation: The Imperial Self in Nature," *Ethics, Place, and Environment* 13, no. 1 (2010): 84-86.

ontologically prior to the ongoing processes of its generation, and definitely not ontologically prior to the conditions of those generative processes. So a human cannot experience directly the processes of its own generation. But direct experience is the initial means by which a human begins to investigate the processes and conditions of its body's generation. Merleau-Ponty critiques phenomenology in its Husserlian version, according to which experience could be refined to reveal the essence of being itself. This was the idea behind the eidetic reduction.<sup>368</sup> The priority of experience is epistemic, and phenomenology is — ideally at least — a method of overcoming prejudices and presuppositions that become entrenched in understanding reality. The simple experiences which Merleau-Ponty in his late period describes are starting points and guides for a critical consideration of how a plurality of processes constitute a self-conscious body.

A human body is a “sensible sentient” organism, able to perceive itself as well as its surroundings in remarkable detail.<sup>369</sup> Merleau-Ponty's key illustration is the experience of a person's two hands touching each other. This experience indicates that “the human body is, for the human, not the stand-in for or lining of his ‘reflection,’ but rather reflection in figural form (the body touching itself, seeing itself), nor is the world an inaccessible in-itself, but ‘the other side’ of his body.”<sup>370</sup> Perception is a process, involving the epistemic function of coming to know, that physically connects processes that occur inside an organism with processes that occur outside. Perception is literally the touching of the inside of a body with the outside. It is also a reciprocal process. The inside touches the outside, but through the same process the outside touches the inside. Epistemically speaking, knowing and known are inseparable. Both participate in the process of perception. Processes outside a human body produce and alter processes inside that body, and processes inside that body produce and alter processes outside it. The interaction of internal and external by means of physical affectivity is how an autopoietic system interacts with its environment. This continuing interplay of processes moving inside and outside of a perceiving body Merleau-Ponty calls “chiasm,” to indicate the symmetry of this interplay, where no one side of the process gains superiority over the other. Affectivity is mutual, so perception

<sup>368</sup> Merleau-Ponty, *The Visible and the Invisible*, 178-179. In his working notes for the unwritten remainder of the book, never finished thanks to his sudden death in 1961, Merleau-Ponty describes phenomenology as trying “to disclose a non-explicated horizon” of experience, understanding of which requires “taking possession of the world of silence.” He refers to the paradoxical problem of trying to write in a book an element that is not even directly perceivable in experience, let alone articulable in language.

<sup>369</sup> Merleau-Ponty, *The Visible and the Invisible*, 137. Any organism, because of the rudimentary perceptual capacities of all autopoietic systems, can be described as a sensible sentient, in that directional movement requires some rudimentary proprioception: an organism must have some sense of its physical body in order to move itself and interact with its surroundings. This sensible sentience reaches an extremely high level of intensity and complexity in human self-consciousness. Of course, it would be quite hubristic of us to think that human self-consciousness was the highest level possible of intensity and complexity.

<sup>370</sup> Merleau-Ponty, *Nature*, 268.

generates a unified field, a complex whole in which the processes of perceiving and the processes that are perceived are constitutive parts.<sup>371</sup>

A human body's field of perceptual affectivity constitutes this entire lived space. Merleau-Ponty calls this field "flesh," to indicate that the entire field, not simply the organic body itself, is in some fashion alive and active.<sup>372</sup> The word also suggests the physicality of organic life, synthesized not only from acts of perception, but from flows of water and viscera structured into relatively stable patterns by complex articulations of metabolic activity.<sup>373</sup> A subject is understood not only as the physical assemblage of the organism itself, but as a field of perceptual activity. So all bodies with which an organism interacts constitute that organism as visceral material: the ground on which it walks and the air it breathes, trees and buildings which it can explore, whether or not it does.<sup>374</sup> Understanding the integration of subject and world as flesh, an active field of affects, disqualifies a concept of *the* subject, a necessary universal structure of any possible subjecthood, such as a transcendental ego. Concepts of *the* Other are rejected for the same reason. There is no necessary structure to otherhood, or the encounter of two or more subjects. There are processes constitutive of perceptual activity, and bodies integrated into that perceptual field and so perceived, or at least perceivable. Thanks to the concept of the flesh, philosophy need not include any concepts of the essential nature of the subject or the essential nature of the object. Subject and object need not even be strictly demarcated, but in some assemblages can blur together. Always a constitutive element of one's world, one's activity is always worldly.<sup>375</sup> Rather than a dichotomy of the Self and the Other, one instead is a field of selves, or perceivers, and others, or perceiveds. Merleau-Ponty writes, "Les uns pour les autres et non pas seulement l'un pour l'autre," or 'Many ones for many others, and not only the One for the Other.'<sup>376</sup>

Merleau-Ponty's vocabulary is most helpful in understanding how an ecological ontology can understand the peculiar power of reflective self-consciousness unique to human subjectivity. The reason for its usefulness regarding subjectivity is its heritage from phenomenology of a subject-centred focus. Merleau-Ponty tried to overcome this subject-centricity in his last years, as indicated by the concepts he was developing about existence as a field of affectivity, and the

<sup>371</sup> Merleau-Ponty, *The Visible and the Invisible*, 131-133. This, I believe, is why Merleau-Ponty discusses touch in this book with a similar frequency as vision. Vision is the paradigm of perception in general philosophical discourse, but most of the profound insights in the book come from meditations on the nature of touch.

<sup>372</sup> Merleau-Ponty, *The Visible and the Invisible*, 127.

<sup>373</sup> Gilles Deleuze, *Difference and Repetition*, trans. Paul Patton (New York: Columbia University Press, 1994), 73.

<sup>374</sup> Lisa Kretz, "Open Continuity," *Ethics and the Environment* 14, no. 2 (Fall 2009): 124-125.

<sup>375</sup> Gary Brent Madison, *The Phenomenology of Merleau-Ponty: A Search for the Limits of Consciousness* (Athens: Ohio University Press, 1981), 102.

<sup>376</sup> Merleau-Ponty, *The Visible and the Invisible*, 81. My translation; Lingis renders "Some for the others and not only each for the other," which I think misses Merleau-Ponty's developing a concept of perception as a field of multiplicities.

subject as one set of processes among many. But he died before completing the transition, if indeed it was even his goal. The distinction of visible and invisible is one between the daily life and constitution of a subject, and the generation of that subject body itself. This distinction allows us to employ the duality of worldly subject-constitutive processes and the conditions by which those processes can exist in understanding self as place. A body's perceptual activity constitutes a field of motions that interact in the territory within that body and its pedestrian surroundings. This field of affects is the act of perception, or what Merleau-Ponty calls the entire lived space of an organism.<sup>377</sup> The activity of perception is the field of affectivity in which that act is articulated. A field of affects is never static because it requires continual activity to maintain its structural stability. This activity confirms what one learns from studying autopoiesis: even a supposedly stable structure must be maintained through continuing activity. Nowhere in these concepts does one find philosophy's traditional dualism of subject and object. Indeed, traditional subject-object dualism can easily be an obstacle to understanding self as a field.<sup>378</sup>

The dualism of the visible and invisible, or perceiving and what constitutes the perceiver, is better suited to an ecological philosophy than a dualism of subject and object. The relationship of perceiving and the conditions for a perceiver's existence provides a framework for understanding the activity and experiential perspective of a subject, its integration with the world in which it lives, and the processes constitutive of that integrated field. In Merleau-Ponty's words:

The body unites us directly with the things through its own ontogenesis, by welding to one another the two outlines of which it is made, its two laps: the sensible mass it is and the mass of the sensible wherein it is born by segregation and upon which, as seer, it remains open. It is the body and it alone, because it is a two-dimensional being, that can bring us to the things themselves.<sup>379</sup>

His phenomenological heritage leaves him concerned about how a subject can be open to the world. In this regard, he inherited the philosophical problems of the ego's relation with the Other that bedeviled critics of Husserlian phenomenology. The concept of subjectivity in Merleau-Ponty's thinking, and in mine, permits no general epistemic skepticism. The act of perception is the integration of a body, the perceiver, with its surroundings in the constitution (Merleau-Ponty's term is ontogenesis) of a field of perceptual affects through the interaction of processes originating inside and outside a perceiving organism.<sup>380</sup>

The visible and the invisible are the two dimensions of a perceiving body. The visible is

<sup>377</sup> Merleau-Ponty, *The Visible and the Invisible*, 135.

<sup>378</sup> Merleau-Ponty, *The Visible and the Invisible*, 137.

<sup>379</sup> Merleau-Ponty, *The Visible and the Invisible*, 136.

<sup>380</sup> Merleau-Ponty, *The Visible and the Invisible*, 38-39.

what a subject perceives, and the invisible are the processes constitutive of the body, the conditions for there being any perceptual activity at all. In my own account of these concepts, I consider the visible and the invisible to be a little flexible in what processes can and cannot be perceived. In the course of daily life, one rarely perceives one's metabolism or neurological processes, though one can observe them by technological means. But the conditions of one's perceptions are not only invisible in this workaday sense. The visible includes the pedestrian situation of my body in my current surroundings, with a particular phenomenological focus on whatever of my surroundings, thoughts, or memories to which I am paying attention. The companion to this immediacy, the invisible, are all the processes whose activity have constituted my current situation across every level, from the scale of the quarks to that of the cosmos. For every visibility, there is a vast history invisible to it, the material condition of its existence.<sup>381</sup>

Perceptual activity is the only means to constitute a perceiving body, and only such a body can carry out perceptual activity.<sup>382</sup> At first glance, this may seem to be a paradox of self-production: a body cannot produce itself, because it would have to have already been produced in order to do so. However, the concept of autopoiesis shows that self-production is not a genuinely destructive paradox in the case of a perceiving body. A condition for there being a perceptual field is the separation of a perceiving body from what Merleau-Ponty calls “the mass of the sensible,” and what Evan Thompson called the “chemical soup” from which an autopoietic body emerges with the constitution of a boundary.<sup>383</sup> It is better to understand such a constitutive process as auto-production, where the body is not understood as a product of activity that, once produced, can stand separately from it, but is instead a continual and inseparable function of its activity. The arrangement of the parts themselves initiate transformative and generative processes that constitute the physical unity of the parts in a stable relationship.<sup>384</sup> The affects that constitute a perceiving body's boundary are the same affects that constitute its ability to move and its rudimentary perception. Subjectivity, understood as a field of perceptual affects, distinguishes itself from a background that is featureless in comparison, its own constitution being an act of making a difference that had never before existed.<sup>385</sup>

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<sup>381</sup> The relation of visible to invisible is a matter of contention in scholarship on late Merleau-Ponty, which is why I am clear that my own speculations on the matter are about how I, not he, intend to use the concepts. That Merleau-Ponty never spelled out this matter in *The Visible and the Invisible* is an unfortunate casualty of its unfinished nature. I find most frustrating about studying Merleau-Ponty that the awful timing of his sudden death left what I consider his most interesting book a fragment of what it could have been.

<sup>382</sup> Merleau-Ponty, *The Visible and the Invisible*, 9.

<sup>383</sup> Evan Thompson, *Mind in Life: Biology, Phenomenology, and the Sciences of the Mind* (Cambridge: Harvard University Press, 2007), 98-99.

<sup>384</sup> Félix Guattari, *The Three Ecologies*, trans. Ian Pindar and Paul Sutton (New York: Continuum, 2008), 91-92.

<sup>385</sup> Deleuze, *Difference and Repetition*, 28.

Autopoietic structure and its generation provide an ontological basis for subjectivity. But for an ontology of subjectivity to have ethical implications, it should indicate what factors are peculiar to human subjectivity. Human peculiarity, the uniqueness of the species, is concentrated in the brain. It is less a matter of the size or structure of the human brain, and more its process of development, the becoming of the human brain. The process that makes the difference is neonatal neural indeterminacy. When a human is born, many of the synaptic connections of its brain are not yet formed. Interaction between the organism and its environment brings the synaptic nets of a human brain to their densest concentration and complexity. Worldly action, the constitution of a field of perceptual affects, literally builds the human brain.<sup>386</sup> But there is another aspect to this integration of environmental interaction with a human organism's neural development: the role of artifacts in the constitution of humanity's environment. I understand humanity's environment as the field of physical bodies, complex assemblages, and affects surrounding human organisms and institutions, which are shaped in some manner by human worldly action. In this sense, one can understand any species of organism as having an environment of its own, the field of affects their perceptual activity constitutes. So humanity's environment would overlap and integrate with the environments of sparrows, pines, goats, spiders, *Echerechia coli*, and so on.

But the peculiar plasticity of the human brain, the key organ for the constitution of human subjectivity, makes humanity an exception to the usual order of organisms interacting with the world. A human does not develop her plastic brain simply by interacting with her surroundings, but through the creation of technical artifacts: sharpened stones and fires for most of human history, and the highly complex, physically devastating enormous industry of recent centuries. The multifaceted use of tools has developed independently across several non-hominid species such as apes, monkeys, crows, and parrots.<sup>387</sup> But none of these other animals have the neural plasticity that so deeply integrates technology and thought. The natural articulation of brains as plastic as humanity's creates a technological ecology that renders humanity categorically different than all other kinds of organism.<sup>388</sup> The human environment is a specifically technologized ecology, and no other organism transforms its environment through technology so deeply integrated with its neural development. Because humanity is so widespread over Earth, there is little on Earth that has not been enfolded into the human environment. Even the seabeds underneath the Antarctic ice, and the farthest reaches of that continent's mountains and

<sup>386</sup> Barry Allen, *Knowledge and Civilization* (Boulder: Westview Press, 2004), 65.

<sup>387</sup> Simon Conway Morris, *Life's Solution: Inevitable Humans in a Lonely Universe* (New York: Cambridge University Press, 2003), 260-265.

<sup>388</sup> Elizabeth Skakoon, "Nature and Human Identity," *Environmental Ethics* 30, no. 1 (Spring 2008): 46-47.

volcanoes are the subject matter of routine human scientific activity. Barely one hundred years after Shackleton, there is an aerobics studio in Antarctica.<sup>389</sup>

If the human environment is uniquely technological, and the technological is contrasted exclusively with the natural, then only ecosystems free from any human activity can be called natural. There are no more such ecosystems.<sup>390</sup> Here I seem to have arrived at a point disproving my criticism of the mutually exclusive dichotomy of nature and culture in environmental philosophy. Philosophers who are motivated by the romanticized image of wilderness that I criticized earlier may have a point. But where they began from an idealized image of wilderness as Eden, the real distinction of humanity and nature would appear to have been confirmed through the scientific study of our brains. If humanity is one peculiarity among many singular species and bodies, then its difference from other kinds of organisms would not be a categorical separation. However, if humanity's physical development creates an environment that is technologized in contrast to that of literally every other kind of organism, this difference constitutes humanity as a separate and novel category: the technological organism.

However, technology is not an exemption from the natural order because technology is itself a natural development. From the beginning of the *Homo* genus, the brains of the various species are increasingly plastic, developing their complexity through worldly interaction long after birth. At least since the period of *Homo erectus*, hominid worldly interaction has involved the use of tools and inventions. Artifactual activity shapes the territory in which early humans lived, and their bodily comportment, the very shape of how their subjectivity articulates itself. A tool to which one has become habituated is handled as if it were part of the body itself. This is true for a simple tool like a stone blade, or a highly complex tool that requires enormous infrastructure to build, maintain, and use, like a car.<sup>391</sup> Tools for humans, unlike those of chimpanzees, are not simply items picked up, used for some improvised purpose, and discarded. They are minutely manufactured, careful craftsmanship in the construction of stone tools being evident among pre-*sapiens* hominids. Through mindful intentional focus on the complexities of their environment, any facet of that environment can be made into a tool. This intense intentional care with which humans construct their tools is an expression of humanity's process of neural development deeply integrated with the world. The plasticity of the hominid brain is an evolved trait which constitutes the conditions for a peculiar kind of perceptual field. The echolocative organs of bats or the electro-sensitive organs of the elephant-nosed fish are natural traits that constitute their peculiar

<sup>389</sup> Werner Herzog, *Encounters at the End of the World*, DVD, directed by Werner Herzog (Montréal: Seville Pictures, 2007).

<sup>390</sup> Holmes Rolston III, *Conserving Natural Value* (New York: Columbia University Press, 1994), 72.

<sup>391</sup> Tim Dant, "The Driver-Car," *Theory, Culture, Society* 21, no. 4/5 (2004): 73-74.

kinds of perceptual affectivity.<sup>392</sup> The neural plasticity of the hominid is one more peculiarity of perception in a world of diverse peculiarities.

The profound integration of human subjectivity with its tools was not a discovery exclusive to evolutionary investigations of early hominids. Merleau-Ponty's phenomenological and psychological investigations discovered this relationship as well, although he did not communicate with archaeologists of prehistoric humans. An artifact's identity is constituted through its interaction with humans once it is built, and always subject to some degree of flux through human use.<sup>393</sup> An artifact can be used in multiple ways, limited only by the flexibility of a human imagination in the application of its tools.<sup>394</sup> Understanding technology as the worldly articulation of human neural plasticity does not separate humanity from its environment. In addition to the field of affects that every organism constitutes through its worldly action, humanity is integrated with its environment in this further way. This is the integration of human subjectivities with nonhuman bodies through the mutual affectivity of a developing human brain and the tools the organism crafts and uses with careful attention. I call this process of mutual affectivity a field of artifactual affects.

There is another way in which this account of technology as the creation of a field of artifactual affects supports my critical perspective on the absolute dichotomy of nature and culture. I have given an account of humanity as inherently technological thanks to the species' peculiar neural plasticity. Nowhere in that account do I make a moral judgment of human technology. Such moral judgments revolve around the use of technology in the destruction of other species, and industry's catastrophic transformation of many ecosystems. Both processes have reached a much higher intensity in the era of enormous industry, climate change being a major example. The accidental extinction of species thanks to unintended effects of enormous industry is a notable problem for environment-alist moral theories.<sup>395</sup> But humans have been causing the extinction of species since their spread from Africa around the world. The human articulation of technology is a function of the plastic human brain as it has evolved. Mainstream environmentalist thinking associates the techno-logical with a departure from nature, humanity's destructive ways being a consequence of that departure. The morally good path would then be to

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<sup>392</sup> Morris, *Life's Solution*, 184.

<sup>393</sup> Merleau-Ponty, *The Visible and the Invisible*, 75.

<sup>394</sup> Madison, *The Phenomenology of Merleau-Ponty*, 7-13.

<sup>395</sup> Clare Palmer, "Harm to Species? Species, Ethics, and Climate Change: The Case of the Polar Bear," *Notre Dame Journal of Law, Ethics, and Public Policy* 23, no. 2 (2009): 587-603.



renounce technology and return to nature.<sup>396</sup> But if technology is a natural evolutionary development of the plastic hominid brain, then the question is open whether we have ever truly left nature in this Edenic sense, or whether we have simply made widespread practical mistakes in our natural technological development.

A return to nature is usually understood as a shift to activities that enforce ecosystemic stability, the stable being the state of nature in its greatest health. An ecosystem is a complex whole that differentiates itself from surroundings with a clear boundary. One should not understand this boundary in the strict sense of systems theory, but rather as a region of space in which a qualitative shift in types of organisms occurs: an ecotone boundary where, for example, jungle becomes grassland, savannah becomes desert, or desert becomes farmland.<sup>397</sup> An ecosystem develops through the activities of the organisms that constitute it. In an ecosystem, the activities that constitute it also transform it, so that the stability of an ecosystem's organization is produced through processes of fluctuation. For example, the population of a species may grow to the point of outstripping their resources, leading to a catastrophic population crash.<sup>398</sup> But a mainstream line in environmental moral philosophy holds that the ecosystem eventually returns to a natural stability. Such a return may take a long time, perhaps centuries or millennia, but it always moves along a regular pattern.<sup>399</sup> Yet one should not presume that with the end of a destructive technological process, a harmonizing natural process will restore stable patterns of activity after it has been disrupted. There is nothing about the origin of a process in human industry that makes it categorically different from one whose origin is in an ecosystem in which humans have never been involved. There is no feature common to all industrial processes that prevents them from having temporally wide-ranging effects long after stopping. There is no special system-restore switch to correct the aberrant processes of human industry after they stop, because they are processes just like any other, and articulate themselves through ecosystems like any other processes of planetary scale.<sup>400</sup>

The environmentalist moral judgment is often that a technologized ecosystem is

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<sup>396</sup> Mark A. Michael, "Is It Natural to Drive Species to Extinction?" *Ethics and the Environment* 10, no. 1 (Spring 2005), 50-51. Michael argues, and I agree, that the environmentalist concept of good as following nature does no important theoretical work: in terms of practical action in the world, the moral principle to follow nature inevitably amounts to a principle of minimizing or avoiding harm to generally healthy ecosystem-constitutive processes. An ideal image of nature (Gaia, for example) is built with no practical purpose when mindful care does the same job.

<sup>397</sup> Neil W. Browne, *The World in Which We Occur: John Dewey, Pragmatist Ecology, and American Ecological Writing in the Twentieth Century* (Tuscaloosa: University of Alabama Press, 2007), 18.

<sup>398</sup> Manuel DeLanda, *Philosophy and Simulation: The Emergence of Synthetic Reason* (New York: Continuum, 2011), 68.

<sup>399</sup> Rolston, *Conserving Natural Value*, 76.

<sup>400</sup> Peter Ward, *The Medea Hypothesis: Is Life on Earth Ultimately Self-Destructive?* (Princeton: Princeton University Press, 2009), 130-132.

corrupted and no longer natural, that technology converts flourishing, diverse life into resources.<sup>401</sup> But one makes a resource of an organism simply by feeding on it. When one organism eats another, that organism is making a resource of what it consumes. Ecosystems are themselves constituted in part through these activities of consumption, the populations of predator and prey fluctuating depending on how much prey has been eaten. Any predator makes resources of its prey, albeit with less bureaucracy than contemporary enormous industry, but the basic movement is the same. The ecosystemic fluctuation of populations sometimes tends toward stability, but when consumption rates pass a critical threshold, an irreparable catastrophe can occur and after such an event, it is extremely unlikely that the ecosystem would return to its previous state.<sup>402</sup> “We do just what other species do, only much more efficiently,” hunting species to extinction as we make resources of them for food or industry.<sup>403</sup> That efficiency can be recognized with an ironic sense of praise. Human facility with technology has led to the creation of enormous industry, which is incredibly efficient at consuming resources. So great is its efficiency that the Aral Sea, once among the the largest fresh-water bodies on Earth, was transformed into a near desert over mere decades.<sup>404</sup> A population of lynx may hunt their usual prey to extinction through entirely natural behaviour. Humans are much more efficient at this catastrophic consumption. The technologization of its environment is among humanity’s most natural activities. There was never a departure from nature, only a ramped increase in the intensity of consumption through technological organizations that discovered short-term efficiency increased through uniformity and routinization of production.<sup>405</sup> Technology itself should be neither morally damned or exalted. It is a mode of existence that allows humans to thrive within the means available in our territories, or to overtax our resources to the point of catastrophe, just like many other species have done and will continue to do.

I leave aside the moral judgment of whether a field of artifactual affects is good or evil.<sup>406</sup> From the point of view of survival in a harsh world, there is only the question of whether that

<sup>401</sup> Holmes Rolston III, “A Managed Earth and the End of Nature,” in *Research in Philosophy and Technology: Philosophies of the Environment and Technology*, eds. Marina Paolo Banchetti-Robino, Don E. Marietta Jr., and Lester Embree (Stanford: JAI Press, 1999), 146-147.

<sup>402</sup> William M. Schaffer, and M. Kot, “Do Strange Attractors Govern Ecological Systems?” *BioScience* 35, no. 6 (June 1985): 348.

<sup>403</sup> Michael, “Is It Natural to Drive Species to Extinction?” 51.

<sup>404</sup> Norman Precoda, “Requiem for the Aral Sea,” *Ambio* 3, no 4 (May 1991): 109-114.

<sup>405</sup> Manuel DeLanda, *One Thousand Years of Non-Linear History* (New York: Zone Books, 2000), 83-86. Uniformity and routinization of production results in higher short-term efficiency no matter what the sector. DeLanda discusses throughout this book agriculture, market exchanges, and industrial manufacturing, as examples.

<sup>406</sup> If you conclude that humanity is inherently technological, and that technology is an inherently destructive, exploitive, rapacious, and so evil force, then your most morally good action is to commit suicide. I, meanwhile, will be alive, still trying to solve the problem of survival.

field of affects is sustainable. A way of life is sustainable if it can continue without rendering its territory unlivable. Empirical studies of enormous industry have shown it to be self-destructive in this manner. The question remains how one should best understand the way these fields articulate themselves in the world. The human environment, no matter how much human technology may dominate its surroundings, is not separate from the environments of other bodies. If it were, then perception would be an anthropomorphic solipsism in which only the activity constitutive of human subjectivity itself would create the contents of a human's perceptual field.<sup>407</sup> Each body constitutes a different field of subjectivity affects, creating a different environment for each field, but these fields all exist in the same physical region, interacting over a shared plane of space and time. Their interaction is the physical constitution of a gestalt ontology of subjectivity.

How should one understand the way a perceiving body constitutes its environment, while all these perceiver-constituted environments interact with each other? The ideas of Jakob von Uexküll provide a good starting point. The core of this question is whether the inability to share exactly the same act of perceiving constitutes a kind of solipsism. Over the history of philosophy, solipsism has been the term to describe a skeptical view of other minds. This is a problem whose structure cuts across all four domains of philosophy. But the kind of solipsism I have in mind is more strictly epistemic: whether we can know anything about the experiences of other creatures. It parallels the idea I discussed earlier that communication is impossible in cases of strong autopoietic closure. A field of subjectivity is constituted through perception, the activity of an organism in relation to its environment, which Uexküll calls its *Umwelt*. In a field of subjectivity, a perceiving body and its environment are neither isolated from each other, nor inseparable in a simple unity, but two mutually affecting poles in a complex structure of relations and feedback loops.<sup>408</sup> A field of subjectivity is never static or closed, but rather is a process: a body constituting itself and its environment through mutual activity.<sup>409</sup> An organism is an enormously complex body constituted through the integration of far more processes than only the perceptual. However, at issue here is the field of perceptual subjectivity alone, the perception and movement of an organism, how an organism articulates itself in the world, consciously making itself.<sup>410</sup>

The *Umwelt* is a field of affects constituted through the relation of a perceiver and a perceived. But any apparent solipsism problem disappears when the perceiver-perceived relation is

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<sup>407</sup> Ian Burkitt, "Psychology in the Field of Being," 320.

<sup>408</sup> Brett Buchanan, *Onto-Ethologies: The Animal Environments of Uexküll, Heidegger, Merleau-Ponty, and Deleuze* (Albany: State University of New York Press, 2008), 22. Uexküll is a historical precedent for a concept of subjectivity that is not exclusively human.

<sup>409</sup> Merleau-Ponty, *Nature*, 209.

<sup>410</sup> Gilles Deleuze and Félix Guattari, *A Thousand Plateaus*, trans. Brian Massumi (Minneapolis: Minnesota University Press, 1987), 41.

present to a third party: an *Umwelt* itself can be perceived. One can learn the structure of a phenomenological field itself through the careful scientific study of the physiological means by which an organism perceives and moves. The movement of an organism can be studied and its perceptual apparatus examined to discover what kinds of worldly affects it can sense. Sensing is not the same as being affected — I cannot sense ultraviolet light, but it can affect my body, burning my skin and mutating its cells into cancerous melanoma. An affect can be sensed when an organism has a sensory organ like an eye, an ear, or a collection of sensitive neurons that can translate an affect into a neuroelectrical pattern. For example, an eye translates an affect of electromagnetic radiation into an affect of neurochemical activity with a parallel pattern. To sense is to respond in this translative manner to affection. The translative nature of perception is why Luhmann's contention that communication is impossible does not hold, because communication is the preservation of practically important patterns of affects into an environmental and a perceptual field. The media of affection may change, but successful communication occurs when the pattern of affection remains constant.

So one can understand how an organism articulates its *Umwelt* in its phenomenal field. One can measure every environmental field of affects that an organism can detect, allowing one to understand the complete range of possible movements in the structure of its phenomenological experience. *Umwelt* is an ontological concept for the articulation of an organism's epistemic capacities. One does not experience the phenomenological perspective of another organism for oneself — as in Thomas Nagel's famous question of what it is like to be a bat<sup>411</sup> — but one can understand theoretically and measure all the affects that a creature having such a physical apparatus can detect and respond to. Uexküll's central example is the female tick. The perceptual apparatus of a tick is able to detect only three types of stimulus, each to varying degrees of intensity. After mating, she climbs to the highest, least shaded branches of a tree, guided by her skin's photoreceptivity, where it waits motionless for as long as eighteen years for the scent of a particular kind of sweat: the sweat of a mammal having its characteristic butyric acid. When the scent of butyric acid reaches a particular intensity, the tick drops into the hair of the passing mammal, and is then guided to its skin by seeking out the hottest place in its nearby surroundings. The female tick then bores into the mammal's skin to consume its blood. There is no taste to the blood for a tick; all that matters is that the blood be of just the right temperature.<sup>412</sup>

As Uexküll developed the concept of world, the entire world of a tick is “defined by its gravitational energy of falling, its olfactory characteristic of perceiving sweat, and its active

<sup>411</sup> Thomas Nagel, “What Is It Like to Be a Bat?” in *Philosophy of Mind: A Guide and Anthology*, ed. John Heil (Oxford: Oxford University Press, 2004), 530-531.

<sup>412</sup> Buchanan, *Onto-Ethologies*, 24.

characteristic of latching on.”<sup>413</sup> These are the three kinds of perceptual affectivity that constitute a female tick’s entire field of subjectivity. The female tick’s physiological perceptual apparatus has been studied, and this examination has shown that these are the only affects it can detect perceptually. With such a simple perceptual apparatus and so few movements in its possibility structure, Uexküll wonders whether one should understand the tick to be a machine rather than an animal. But there is no difference in kind between the simple subjectivity of a tick and the highly complex and nuanced subjectivity of a human.<sup>414</sup> As a tick integrates itself with its environment, it constitutes a field of perceptual affectivity. The only difference is in the content that can be constituted through such activity. A field of subjectivity constitutes perception. A perceptual apparatus generates that field of subjectivity. The structure of that apparatus conditions what kinds of knowledge an organism can have of its surroundings. In the tick’s case, that knowledge is the proximity of butyric acid, the height it climbs and falls, and the heat of the blood it ingests. Those are all the affects of which it can be aware, because those are all the affects that it generates through its own power. Its activity may, however, generate many affects of which it can never become aware, such as the pain of a bitten animal, or the spread of lyme disease.

The activities of one organism constitute paths for other organisms to follow, as all organisms that share territory tend to become interdependent. One example is a bee and a flower. A bee must find nectar for its hive, and its availability in a flower affects the possibility for a bee’s movement. Bees will tend to interact with flowers, because flowers are the source of nectar. Meanwhile, a flower produces nectar thanks to its interaction with bees, which spread pollen across many flowers, facilitating the plants’ reproduction. Each interaction with a pollen-covered bee constitutes reproductive possibilities for a flowering plant.<sup>415</sup> This is a case of mutual benefit in symbiosis: interaction among organisms that not only constitutes the possibilities for their motion, but is also to the benefit of those organisms directly involved. When a relationship produces a practical difference of mutual benefit to the related bodies, that relationship tends to recur. The repetition of beneficial symbiotic activity constitutes a relationship that tends to optimize that benefit.

All interactions among organisms constitute their possibility structures, whether or not there is mutual benefit in symbiosis. Uexküll discusses a spider and a fly to illustrate this relation between action and interaction. A spider preys on a fly, but in order to achieve this, a spider

<sup>413</sup> Deleuze and Guattari, *A Thousand Plateaus*, 51.

<sup>414</sup> Jakob von Uexküll, *Streifzüge durch die Umwelten von Tieren und Menschen* (Hamburg: Rowohlt Taschenbuch Verlag, 1956), 24-25.

<sup>415</sup> Buchanan, *Onto-Ethologies*, 33.

builds a web that must catastrophically constrict what movements are possible for a fly. To achieve this deadly constriction, the spider must build its web in a manner to facilitate the movement of a fly into it. A spider, in trapping and eating a fly, creates the ultimate negative constriction of a fly's possible movements: once trapped it cannot move, and once eaten it no longer exists. But in order to move the fly into this negative constriction, the spider's activity must constitute more possibilities for a fly to move in the direction of the constriction than away from it.<sup>416</sup> Even in cases of predation, one can understand the interdependence of organisms in constituting the structure of the possibility of their worldly activities.<sup>417</sup> The technical definition of symbiosis in biology, according to Simon Conway Morris, applies to organisms living together, no matter the beneficence of their relationships. It can include mutual benefit, negligible benefit or harm, parasitism of one on the other, or mutual parasitism.<sup>418</sup> Relations constitute not only processes, but possibilities for those processes that, without those relations, would never have existed.

Structuring the possibilities for the movement of bodies is a territorialization process.<sup>419</sup> Understanding an ecosystem as the continuing integration of territories that the activities of organisms constitute foregrounds the role of individuals in ecosystemic wholes. An ecosystem is a complex whole in which the agency of its organisms continually generates a singular assemblage as they constitute their overlapping and colliding environments. The relationship of an organism to its surroundings constitutes that organism's field of subjectivity. Regarding an organism's field of subjectivity as territory implies one kind of possessiveness and rejects another. As I have developed it so far, the concept of an organism's environment was useful for understanding how the structure of a perceptual apparatus constitutes that organism's field of subjectivity affects. Uexküll describes an organism's field of subjectivity, its *Umwelt*, as a bubble surrounding each organism: a field of subjectivity affects is the sole possession of the organism whose perception generates it, excluding all other organisms from the inside of that field.<sup>420</sup> There is a clear parallel with Luhmann's conclusion of the self-referring closure of autopoietic bodies. This image of the bubble suggests the possession of a private sphere of activity and meaning: an organism's perceptual apparatus literally creates a world or *Umwelt* that is the sole possession of itself, isolating it from the *Umwelten* of other organisms, because one restricts one's analysis of how a

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<sup>416</sup> Jakob von Uexküll, "The Theory of Meaning," *Semiotica* 41, no. 1 (1982): 66. What I call a symbiosis of possibility constitution, Uexküll calls the fly becoming spider-like and the spider becoming fly-like.

<sup>417</sup> Buchanan, *Onto-Ethologies*, 34.

<sup>418</sup> Morris, *Life's Solution*, 335, n. 19.

<sup>419</sup> Deleuze and Guattari, *A Thousand Plateaus*, 315.

<sup>420</sup> Buchanan, *Onto-Ethologies*, 22-23.

perceptual apparatus constitutes an environment to the level of a single individual.

In contrast to this isolating kind of possessiveness, I understand the perceptual apparatus and the *Umwelt* it constitutes as a means of territorializing activity. Understanding an ecosystem as the constitution and integration of territories, ecology and ethology merge into a science that Andrea Brighenti calls territorology. Organisms act across lands and populations making marks that communicate how important the organism in question is throughout the physical range of those marks. The marking organism is present through its marks without being physically present. To mark is to constitute territory, which is a sign that the constituting body is a presence to be reckoned with inside its borders.<sup>421</sup> The activity of marking suggests the possession of a private estate, continually subject to the trespass of neighbouring organism. The possessor must manage the comings and goings of organisms through its territorial estate. A commonly recognized example of this marking behaviour in ethology is birdsong, where individual birds produce unique song patterns, their vocal performance establishing dominance over a place, variously constraining the possibilities for movements of potential competitors, mates, and predators within auditory range of the songs. Wren songs warn intruders at high volumes and attract mates at lower intensities; stagemaker birds hide and display bright plumage as a companion motion to elements of their songs. Chaffinches perform a complex interplay of songs and subsongs, articulating a multifaceted personality of changing moods and reactions to wide ranges of circumstances.<sup>422</sup>

The concept of territory, in contrast to the bubble image, lets one better understand how fields of subjectivity mutually affect each other. The concept shows how organisms interact through a kind of semiotic: the mark that defines their territory constitutes the spread of their field of subjectivity affects into their environment, their capacity to affect the world beyond their field of perceptual affects.<sup>423</sup> Yet the concept of territory has its limitations. Understanding an ecosystem as a plurality of overlapping territories means that an ecosystem is considered only in terms of the organisms in it, not the nonliving bodies like the soil or atmospheric gases. To understand all the affects constitutive of an ecosystem, territories must be considered a class of constitutive affectivity in a gestalt ontology. This chapter has developed how perceiving organisms constitute territorial aspects of ecosystems through the activity of their perception itself. Self-conscious bodies are subject to the same process.

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<sup>421</sup> Andrea Mubi Brighenti, "On Territorology: Towards a General Science of Territory," *Theory, Culture, and Society* 27, no. 1 (2010): 55-58.

<sup>422</sup> Deleuze and Guattari, *A Thousand Plateaus*, 323, 331-333.

<sup>423</sup> Félix Guattari, "Ritornellos and Existential Affects," in *The Guattari Reader*, ed. Gary Genosko (Oxford: Blackwell, 1996), 164-165.

An important moral implication of gestalt ontology for the human community is that humanity cannot stand in a position of privilege in the constitution of properties in perception. Properties of a body are not possessions of a discrete, isolatable unity, but are constituted from the continually active relations among bodies. Relations constitute qualitative properties, whether or not those relations involve human, or otherwise self-conscious, perceivers.<sup>424</sup> An ontology of the constitutive relation is a gestalt ontology. But the ontology of my project goes further than Næss to reconcile difficult questions that the relationality of properties raises. Næss discusses properties as constituted through relations when he wants to emphasize the integration of all bodies, one of his important ontological ideas. But when he wants to emphasize the intrinsic value of all bodies, Næss writes as if each body was a discrete entity that possessed properties without any reference to relationality. His moral philosophy is thus incompatible with his ontology. My concept of the constitutive relation, which understands bodies as processes undergoing continual generation, can reconcile a moral principle of valuing a body for its singularity with the ontological principle of its processual nature. A body, understood as a process, is never complete; it maintains a stable structure because the processes generating it continue in the manner required for that stability. If a body's constitutive processes change, the body will transform, sometimes to a point of its destruction. But there really is no destruction. Instead, matter and forces change the pattern of their assembly.

At this point one may wonder: Where is the subject? Subjectivity as understood in the Western tradition of philosophy seems to have disappeared in the continual fluctuations of relations constitutive of assemblages. In any attempt to build a concept of the gestalt subject, what Næss understood as self-as-place, the place, whether understood as territory, perceptual field, or field of affectivity, overwhelms the self. The typical roles of self — exclusive seat of deliberation, will, and free action — are, in a gestalt ontology, one kind of motion among a vast and diverse multiplicity. A self is one kind of agency in a universe constituted from the activities of many agencies. Systems of morality are constructed from a set of principles about what kinds of creatures live in societies: they depend on a concept of self or subject as the instigator of morally relevant action. The most radical element of environmental moral philosophy is that the self or subject is not the centre of morally relevant action. A gestalt structure of action pluralizes agency across all assemblages; agency is the constitutive relation that builds and transforms assemblages of bodies, forces, and histories of generation. The next chapter discusses how to build systems comprehensive of all four domains of philosophy, starting with ontological principles where all motion is a kind of agency, an articulator of action that can be ethically and morally

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<sup>424</sup> Christian Diehm, "Arne Næss and the Task of Gestalt Ontology," *Environmental Ethics* 28, no. 1 (Spring 2006): 26.



relevant.

## 7. SELFHOOD IN ECOLOGICAL PHILOSOPHY

The goal of philosophical thinking, as I understand it, is to create new directions for human thought and open people to the possibility of following those paths. Changing one's way of thinking constitutes a change in one's identity, how one lives and conceives of one's life, as one's answer to the question of why one should bother living changes. This makes philosophy primarily an ethical matter. Ethics is the domain of philosophy with the greatest transformative potential for the philosopher herself. As human thinking transforms the identities of enough people, the character of a society transforms. Such transformation is a political revolution. This final chapter examines how transformations in thinking can lead to transformations in society, and the particular kinds of transformations that ecological philosophy offers. A philosophical inquiry in the domain of ethics begins with questioning as to the constitution of the self.

But a self cannot be understood in a purely ontological, a purely epistemic, or even a purely ethical manner. The four domains of philosophical discourse I defined in my introduction — ontology, epistemology, ethics, and morality — come together at the concept of self. Building a concept adequate to all aspects of the phenomenon of self requires thinking that stretches across all four areas. For this reason, I call self an ultimate metaphysical concept. Self as a concept resists the constraints of technical philosophical definition. For the practical goal of creating and disseminating new moralities, one needs a concept of self to go along with it, even as that concept naturally resists easy conceptualization. One cannot create a system of morality based on a principle that so radically departs from the West's mainstream philosophical tradition as the intrinsic value of all bodies without creating a concept of the self that would articulate moralities based on integration and interdependence.

The inquiry begins from a personal point of view, essentially from the phenomenological perspective, because the central ethical question of what a person is cannot be pursued to its fullest if the person asking the question stands outside the inquiry.<sup>425</sup> For this reason, the best philosophical inquiries into ethics are always risky for the inquiring subject. This makes a metaphysical movement connecting the domain of ethics to any other philosophical domain especially sensitive to misstep. Næss' error in developing his concept of self-as-place was to move too quickly in *Ecology, Community, and Lifestyle* from sketching the ontology of self-as-place to stating its implications in normative moral principles, the rules for organizing an ecologically

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<sup>425</sup> Kwame Anthony Appiah, *Experiments in Ethics* (Cambridge: Harvard University Press, 2008), 175-176.

harmonious society.<sup>426</sup> A philosophy's movement from ontological matters to normative thinking requires a detailed account of the self. This is because normative concepts are the social expression of how one understands oneself as a person.

Care for the self is often taken up as the cultivation of virtue, an aesthetic exercise where one's self is the object of artisanal activity.<sup>427</sup> But the artisanal image of self-care is not appropriate to understanding self as a place. The aesthetics of one's own body and mind lose their priority to the assembly of processes and fields of affects through which one's self is generated. The self understood as one's own body loses its priority in ethical consideration to the whole multifaceted field in which one is always already deeply integrated, because this field generates one's self. The ethical consideration of one's self is subordinated to the health of the whole ecosystem of which it is part. The political articulation of an ethical concept is an important goal of environmental philosophy as a discipline. Environmental philosophy inherited this goal from its genesis as the theoretical wing of a political movement. But if one articulates the concept of self as subordinate to an ecosystem politically, a politics of ecofascism can easily result, where the needs and desires of one component of a group are unimportant and may be dismissed in calculating the good of the whole.<sup>428</sup>

Yet dismissing a holist concept of care as ecofascism ignores the subtle aspects of the concept. Specifically, understanding the self according to a holist ontology changes the concept of self in a manner that challenges democracy's claim to being the superior political system. The holist interpretation of the concept of self-as-place identifies one's ego with the entire assemblage through which one was generated, and in which one participates in a variety of generative processes. One can participate in generation intentionally, for example as in family planning to conceive a child. Phenomenological philosophy's most important insight for my inquiry is that the intentional processes which generate experience also generate affects that constitute the subject's environment. But while understanding intentionality is important for understanding self-consciousness, intentional activity is only one way among many to generate affects. Starting one's philosophical investigation from intentionality makes the intentional subject the locus and generator of action, and a dualism of self and world becomes inevitable. This is the limitation of Husserl's and Merleau-Ponty's approach: the body of a subject is not understood as one body

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<sup>426</sup> This book was Næss' most systematic treatment of the self-as-place concept. In the rest of his ecophilosophy corpus, he writes in essays designed for activist public consumption, or contextually already restricted to moral philosophy proper. In the former, his ideas are oversimplified into motivational exhortations and rallying cries. In the latter, ontological concepts are relegated to the background while the economic and political applications of the normative principles are spelled out.

<sup>427</sup> Christine Swanton, *Virtue Ethics: A Pluralist View* (Oxford: Oxford University Press, 2003), 171.

<sup>428</sup> Michael E. Zimmerman, "The Threat of Ecofascism," *Social Theory and Practice* 21, no. 2 (Summer 1995): 227-230.

among many, an element in many assemblages of affects.<sup>429</sup> So my inquiry after concepts for an ecological ontology of self should not stop with phenomenology.

A strength of ecophenomenological philosophy is in opening the egoistic perspective to the experience of the genuinely different, a valiant effort to help phenomenology escape the gravity of intentionality. Genuine difference in the sense of inexhaustible contingency emerges from those affects which are present around a subject, but not conditioned by the epistemic capacities of that subject, and which resist being fully enclosed in the subject's field of affects, or environment.<sup>430</sup> But subject-centricity also limits ecophenomenological philosophy. The subject does not achieve the complete sublimation into the field of affects that the concept of self-as-place allows. The subject remains ontologically privileged as the I. When the I is the central figure of one's ontological thinking, an oppositional relationship arises to all that is not I. The I cannot be considered part of the greater diversity of the universe because in any kind of phenomenological philosophy, phenomena exist in relation to the subject. Examining questions of ontology from a phenomenological perspective risks according the subject ontological priority over all else, even the conditions of its own existence. No singularity in the world can exhaust all possibilities of the subject, even as the existence of a subject depends on its being situated in a world. Subjects alone among all other bodies are uniquely inexhaustible. In all its variants, the subject in phenomenological philosophy is ultimately mysterious.<sup>431</sup> Phenomenological concepts on their own leave me with a mirror of Roquentin: where for him the mysterious singularity of the world alienated it from him, the mysterious singularity of the phenomenological subject alienates it from the world. Alienation from nature runs to the deepest essence of humanity, a condition for the act of perception itself.<sup>432</sup> The concept of self-as-place, however, and an ontology built upon it, is a principle that can overcome such alienation. With self-as-place, self becomes one element among many in a wild flux of affectivity.

Political freedom for individual humans is not a priority when a philosopher's key problem is overcoming human alienation from nature. If safeguarding the freedom of individuals from oppressive social structures and hierarchical regimes is the goal, then democracy is to be defended. But if safeguarding the harmonious relations of a biosphere from destructive enormous industry is one's goal, then, as I examined at length in chapter two, individual rights will tend to

<sup>429</sup> Angela Ales Bello, "'Brute Being' and Hyletic Phenomenology: The Philosophical Legacy of Merleau-Ponty's *The Visible and the Invisible*," in *Phenomenology and Existentialism in the Twentieth Century: Fruition, Cross-Pollination, Dissemination*, ed. A. T. Tymiecinieka (Dordrecht: Springer Netherlands, 2009), 62-65.

<sup>430</sup> Ted Toadvine, "Ecophenomenology and the Resistance of Nature," in *Advancing Phenomenology: Essays in Honor of Lester Embree*, eds. Thomas Nenon and Phillip Blosser (Dordrecht: Springer Netherlands, 2010), 346-348.

<sup>431</sup> Maurice Merleau-Ponty, *The Phenomenology of Perception*, trans. Colin Smith (New York: Routledge, 1962), 419.

<sup>432</sup> Toadvine, "Ecophenomenology and the Resistance of Nature," 349.

have a low priority. This shift in political priorities motivates James Lovelock's renunciation of democracy.<sup>433</sup> A self receives no special moral and political consideration in ecocentric moralities. So the most important strength of ecophenomenology is to maintain the importance of self in an ecocentric approach to moral philosophy by means of a metaphysical movement from the ontological concept of self-as-place to the debates over normative principles, without denying the moral significance of the self. Because a self entirely is a field of subjective affects and its generation and integration with other fields, such a field has moral significance. As well, because the moral significance of subjective affects is constituted through its activity alone, the ontological language of affectivity carries implicit moral implications. Since all relations constitute processual bodies, then one can understand some manner of moral significance to be implicit in any generative process.

The phenomenological element of ecophenomenology transforms self-as-place from an abstract ontological and ethical concept into a deliberately chosen consciousness of oneself-as-place. An understanding of oneself-as-place that takes the longest possible view of its constitutive relations will extend over the entire universe. Even so, the individual does not disappear within this massive network, as if it were insignificant. No body in the universe is passive, because all movement is understood as affectivity, the mutual give-and-take of colliding and integrating processes. So all individual bodies, including self-conscious subjects, constitute the universe as a whole through their activity.<sup>434</sup> But the cacophonous activity constituting the entire universe does not render its smaller bodies like self-conscious subjects insignificant; they are only small. The peculiar strength of a self-conscious subject is its power to think.

Creatures with reflective perceptual abilities are less complex than a subject comparable to the human model. Minimal selfhood is a physical structure that continually assembles itself through the constitutive relations of many generative processes over a unique history, and is more complex than autopoiesis alone. No body can be present in a field of perceptual affects without having some temporal aspect: it will appear in the field, and pass out of it. The mortality of presence is, however, only so in reference to the field itself, which is the subject. As Ted Toadvine writes, "The experience of the thing is always an *in-itself-for-me*."<sup>435</sup> Presence is a not a function of existence, but of experience. A process can have begun long before intersecting with a field of perceptual affects to become present in experience. And a process can continue without

<sup>433</sup> Leo Hickman, "James Lovelock on the Value of Skeptics and Why Copenhagen Was Doomed," *The Guardian*, March 29, 2010, <http://www.guardian.co.uk/environment/blog/2010/mar/29/james-lovelock>, accessed September 12, 2010.

<sup>434</sup> Arne Næss, *Ecology, Community, and Lifestyle*, trans. David Rothenberg (New York: Cambridge University Press, 1989), 90-91.

<sup>435</sup> Ted Toadvine, "Ecophenomenology and the Resistance of Nature," 348.

dissolution long after passing away from that field. Because the activity of reasoning is peculiar to self-conscious processes, reasoning is only possible within this field of self-attention. Minimal selfhood requires self-consciousness, the reflexive understanding of one's identity. Experience, understood with the vocabulary of affectivity, is a field of perceptual affects from the perspective of the perceptual apparatus itself whose activity generates those affects. A person always experiences phenomenological selfhood in this minimal sense.

To imagine a world without oneself or a world without humanity is to imagine a world that is not only alien, but from which one feels alienated. This alienation is not merely an intuitive strangeness one may feel when reading descriptions of a dilapidated 7th Avenue whose signs are never illuminated, where pavement is cracked with long, jagged invasions of weeds growing without restraint over long-ago-flooded subway tunnels.<sup>436</sup> In all the experience of a self-conscious subject, a minimal phenomenological selfhood is always there in one's experience in a place and a history, the prepersonal or apersonal has never truly been present in experience. There is no possible arrangement of a perceptual apparatus to perceive any kind of prepersonal or apersonal. The only way to conceive of the prepersonal is through abstract reasoning.<sup>437</sup> The prepersonal is one way Merleau-Ponty understood the invisible conditions for the appearance of the visible. One cannot make sense of a world without this minimal self-consciousness, a world without thought, because the act of making sense is itself a matter of thinking. One can lay out propositions of what a world without self-conscious perceivers would be like, but one must always make sense of it as a self-conscious perceiver.<sup>438</sup> Sense-making is an activity generated through a field of perceptual affects, an autopoietic body. So any attempt to understand a world without such perceptual fields will always involve at least one perceptual field: that of the one who understands it.

Here is the reason why some commentators on Merleau-Ponty's work take his ideas to imply an ontological alienation in which the world exists apart from the activity of subjects, and subjects do not take part in it. There are facts of nature in the assembly of bodies without direct relation to a subject.<sup>439</sup> From this, the conclusion is that the world can never be known in itself, because all knowing refers back to that which generates perceptual affects: the self-conscious body. As the locus of all experienced activity, a subject can have no knowledge of nature without

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<sup>436</sup> Alan Weisman, *The World Without Us* (Toronto: HarperCollins, 2008), 25-34.

<sup>437</sup> Merleau-Ponty, *The Phenomenology of Perception*, 241-242.

<sup>438</sup> Renaud Barbaras, "Merleau-Ponty and Nature," *Research in Phenomenology* 31 (2001): 29.

<sup>439</sup> Barbaras, "Merleau-Ponty and Nature," 27.

that knowledge being conditioned by the structure of some field of perceptual affects.<sup>440</sup> A subject's perception inevitably conditions its knowledge of what it perceives. Our perception even conditions abstract propositions describing such simple facts as the atomic composition of compounds because one learns and investigates such facts through self-conscious perception. Because only meanings generated by the subject are accessible to the subject, one cannot understand other bodies without subjective epistemic conditioning.<sup>441</sup>

This entanglement of ontic and epistemic ideas generates an apparent paradox. The concept of self produced from this line of thinking is humble in accepting the limitations of its epistemic ambitions, yet is also necessary to create any coherence in the universe. Humility comes through understanding the very small size of one self-conscious organic body, and humanity generally, in the context of the universe. However, the sole generator of meaning is a self-conscious body, the only kind of self-conscious body we know is humanity. The universe is incomprehensible without the striving of self-conscious bodies like humans to comprehend it. So considering humanity's pivotal role in generating meaning inflates the importance of our species. Humanity's scale is unremarkable but its epistemic activity is essential to ordering the entire assembly. The same paradox occurs in Næss' writing, as I described in chapter three: empowering the ego of the environmentalist activist to build a society whose morals and ethics are defined by humility before nature.

Working through this paradox requires a more nuanced understanding of a self-conscious subject body and its capacities. Self-consciousness is constituted when a field of perceptual affects begins to perceive itself, to think reflexively. An organism is already an extremely complex body, most organisms having enormous numbers of concurrent, mutually affective activities ongoing already before they even develop some idea of selfhood. Reflective thought, a perceptual process coming to understand itself in specific terms, is one more process among that diversity. A human body is constituted from many concurrent processes, self-consciousness being just one among them.<sup>442</sup> If selfhood is constituted through the activity of self-consciousness, and self-consciousness is understood to be a process in which a field of perceptual affects notices its own existence among its perceptions, then selfhood cannot be the same as the autopoietic structure alone. Autopoietic structure is a condition for the possibility of a self, because only an autopoietic

<sup>440</sup> Carey Wolfe, "Meaning as Event-Machine, or Systems Theory and the 'Reconstruction of Deconstruction:' Derrida and Luhmann," in *Emergence and Embodiment: New Essays on Second-Order Systems Theory*, Bruce Clarke, and Mark B. N. Hansen, eds. (Durham: Duke University Press, 2009), 220. This articulates in the vocabulary of affectivity Luhmann's statement that communication among systems is impossible.

<sup>441</sup> Bello, "Brute Being' and Hyletic Phenomenology," 70.

<sup>442</sup> Gilles Deleuze, *The Fold: Leibniz and the Baroque*, trans. Tom Conley (Minneapolis: University of Minnesota Press, 1993), 5-8.

body among all carbon-based assemblages of molecules can generate perceptual affects. But autopoiesis alone is not sufficient for self-consciousness.

This difference between autopoiesis and self-consciousness illustrates another way in which Francisco Varela and Evan Thompson overreach in understanding the autopoietic body as self. The concept of self they develop is too simple to be adequate to all the complex activities that a self can do. For them, selfhood is a matter of ontological individuality, a body standing out from a background, heterogeneity emerging from the homogeneous. “Individuality in this case corresponds to a *formal self-identity* — to an invariant dynamic pattern that is produced, maintained, and realized by the system itself.”<sup>443</sup> Defining the identity of a self as the form of individuality sticks strictly to the ontological domain of philosophy, and does not capture the epistemic powers of a self. Merleau-Ponty’s phenomenological philosophy discusses these epistemic powers in depth, yet despite Thompson and Varela’s admitted influence by Merleau-Ponty, they discount the epistemic aspects of selfhood required to understand it adequately.

Autopoiesis theory is limited in its capacity to understand selfhood and self-consciousness because of its uptake of Merleau-Ponty’s concept of pre-reflective consciousness. In Merleau-Ponty’s work, the concept of pre-reflective consciousness is highly problematic, having been derived from a reading of Henri Bergson that has long been understood as flawed.<sup>444</sup> Thompson writes, “Pre-reflective experience is logically prior to reflection, for reflection presupposes something to reflect upon; and it is temporally prior to reflection, for what one reflects upon is a hitherto unreflected experience.”<sup>445</sup> The argument for the apparent necessity of pre-reflective consciousness runs as follows. Self-consciousness is constituted from a perceiving body reflecting on itself for the first time. In order for there to be any reflective perception at all, there must be something to carry out the act of reflection in the first place. Therefore, there must be a self that exists before self-conscious perception, or else there would be no self to perceive or be perceived. Like the argument against self-producing bodies, this injects a presupposition of the static into a process-oriented philosophy. If activities are understood as ontologically prior to the subjects and objects of those actions, then this argument in favour of a pre-reflective selfhood loses its persuasive force. An autopoietic body is an assemblage of metabolic affects, which generates a perceiving organism. And a perceiving organism is an assemblage of perceptual affects. When those perceptual affects reflect upon their own activity, they constitute a self. The means by

<sup>443</sup> Evan Thompson, *Mind in Life: Biology, Phenomenology, and the Sciences of the Mind* (Cambridge: Harvard University Press, 2007), 75.

<sup>444</sup> Alia Al-Saji, “‘A Past Which Has Never Been Present’: Bergsonian Dimensions in Merleau-Ponty’s Theory of the Prepersonal,” *Research in Phenomenology* 38 (2008): 43.

<sup>445</sup> Thompson, *Mind in Life*, 250.



which this happens is the activity of self-consciousness.

One cannot understand dynamic processes by considering them as static bodies. Self understood as a process is not a subject, and subjecthood is an imposition on the dynamism of the self. Self-consciousness is an ongoing process because each act of reflective thought or perception discovers a body different from the previous reflective act. Time has passed: one's field of perceptual affects has moved and so changed. Understood as a stable entity, a subject is a unity imposed on the continually shifting field of affects that the body generates. Deleuze and Guattari concentrate significant portions of *A Thousand Plateaus* on understanding the relationship between the apparent unity of a subject and the multiplicity of its generation. In this discussion, they continue the inquiry Michel Foucault described as the major project of *Anti-Oedipus*: analyzing any attempt to build a universal and necessary concept of subjectivity — whether in philosophy, psychology, or everyday morality — as a means of oppression, and devising ways of thinking that escape from this oppression of imposed necessity in identity and subjecthood.<sup>446</sup> As they develop these concepts, that purpose forces them to assume the following. 1) Homogeneity or conformity is a needlessly imposed unity that harms the freedom of one's personality; and therefore 2) one becomes free by breaking from accepting unity of any kind.<sup>447</sup> However, I believe unity per se is nothing to be feared necessarily, although one should best approach any kind of conformity with a critical eye. All assemblages are unities of a sort: unities that preserve the multiplicity of the processes that brought them together, as in Aldo Leopold's example of the many creatures living in the husk of a dead tree. But some processes force a destructive, homogenizing unity on its constituents, as in Leopold's example of the monoculture farm: a diverse land is totalized according to a single, exclusive program. I come to Deleuze and Guattari's account of how to liberate subjectivity from conformity to find tools people can use to break away from destructive, homogenizing unities and instead create unities that are multifaceted, diverse, and flexible. Not all unities are destructive, but one must have the tools to break apart a unity that has become destructive.

For Deleuze and Guattari, the subject is a unity that reduces all transformations of a field of perceptual affects to the internal consistency of a unified set of possibilities: the I. Standing against this kind of unity opposes them to phenomenological philosophy. Self-consciousness, in considering itself to be a unified I, prioritizes consistency over internal diversity and flexibility. Becoming consistent homogenizes the transformative dynamism of perceptual affects. In

<sup>446</sup> Michael Foucault, "Preface," in *Anti-Oedipus*, trans. Robert Hurley, Mark Seem, and Helen R. Lane (Minneapolis: University of Minnesota Press, 1983), xi-xiv.

<sup>447</sup> There is a parallel to Ferry's concept of humanism that I discussed in chapter two: Deleuze and Guattari develop ways for a person to detach himself not only from his social milieu and cultural tradition, but from his established identity.

considering oneself to be a unified I, one suppresses the dynamism of one's own body. Deleuze and Guattari call this homogenizing conception of self the phenomenon of faciality: personal and social norms endorsing consistency and authenticity of identity that ignore and suppress the internal diversity of one's personality.<sup>448</sup> The content of one's actual experience is a field of continually fluctuating affects. For the practical matter of maintaining the stability of one's identity in daily life, one must understand oneself as a static personality. One often turns away from the flux of experience to maintain the minimum stability required to survive in the world. In times of danger and chaos, one is able to act only after concentrating on a calm centre in one's thinking.

One might think that because a body totalizes itself by conceiving of itself as a homogeneously unified I, it is easy to extricate oneself from such thinking: "I can stop anytime I want!" But the postulate of a homogeneous I is more powerful an addiction than any mere drug, because it is easy to confuse the minimal stability that is required in most cases to build any kind of sane life with a fear of change that is unhealthy both for subjectivities and ecosystems. For example, a stable focus of perception or thought is required to carry out any kind of intentional action. If one takes stability of any kind to be essentially restrictive or oppressive, and also an inescapable aspect of one's existence, then all one can do is offer promises of escape through transcending existence. But these promises ultimately come up empty.<sup>449</sup> Stability should be treated as a relative concept, because a system that is absolutely stable, that does not change or move in any way, is a dead system, and so not even really a system at all. On even the most conservative definition of autopoiesis, where the stable and constant structure of an autopoietic body's boundary is static, that stasis has as its condition the metabolic chemical reaction continually roiling underneath it.<sup>450</sup> The totalization of a homogenous self-identity is worth escaping because embracing the homogeneity of identity requires imagining oneself as an unchangeable unity, where what one is, is all that one can be. The current crisis of humanity's enormous industry teaches the lesson that reality can throw up problems that cannot be solved with the ideas and philosophies of the past. A homogenous self-identity cannot adapt to novelty.

<sup>448</sup> Gilles Deleuze, and Félix Guattari, *A Thousand Plateaus*, trans. Brian Massumi (Minneapolis: Minnesota University Press, 1987), 170-171. It is also possible, given the convergence this chapter's argument implies of late-period Merleau-Ponty with the work of Deleuze and Guattari, to understand the stable subject presupposed as the possibility condition of all intentional action to be the overcoding of the body by faciality in the context of *A Thousand Plateaus*, and the universality of phenomenology's transcendental ego/I in the context of Merleau-Ponty's Husserlian legacy. But this particular task might be more difficult.

<sup>449</sup> Deleuze and Guattari, *A Thousand Plateaus*, 186. Deleuze gives examples of such empty promises in drawing from the work of Marcel Proust's descriptions of religion and art.

<sup>450</sup> Humberto R. Maturana, and Francisco Varela, *Autopoiesis and Cognition: The Realization of the Living* (Boston: D. Reidel, 1980), 78-80.

Valorizing the stability of one's identity above all other concerns suppresses any dynamisms in those fields of affects on which it can act. If any process diverges from the parameters of one's identity, the force of homogenizing unity shuts it down. Such a unity seeks to make all fields its contacts into copies of its own homogeneity: "It propagates waves of sameness until those who resist identification have been wiped out."<sup>451</sup>

Opposing this kind of homogenization, no matter where it occurs, is an ethical stance, a way of conducting oneself that informs every level of one's self-conscious identity. There has to be some minimal stability to any system to prevent a catastrophic collapse of its dynamic movements. Destabilize a system too quickly or without sufficient care to avoid catastrophe and all is destroyed.<sup>452</sup> This is so whether one considers the destabilization of a single organism's subjectivity or an entire society's economic, political, or ecological order.<sup>453</sup> One way to articulate this ethical stance against homogeneity is in the creation of a moral system whose norms encourage actions to increase and safeguard diversity. Safeguarding diversity is a widespread normative principle in environmental moral philosophy. Examples of such norms include respect for the nonhuman subject-matter of scientific inquiry,<sup>454</sup> experimenting with the different ways cultural traditions regard nature and the nonhuman,<sup>455</sup> or using emotional responses of wonder at the diversity of life to justify moral commands.<sup>456</sup> Næss' norms for his Ecosophy T supply further examples of the moral endorsement of diversity.<sup>457</sup> In the context of this discussion, the moral systems of environmental philosophy have a clear ontological dimension, and so become a perspective that one can articulate across all four domains of philosophy I delineated at the beginning of this work. These and similar attempts to build normative systems that value diversity can be understood as experiments in overcoming the totalizing effects of self-consciousness.

Self-consciousness open to understanding difference must overcome this fear of divergence, and embrace the heterogeneity of its own existence. Key to overcoming the fear of change is understanding that divergence is not inherently destructive or diminishing. The

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<sup>451</sup> Deleuze and Guattari, *A Thousand Plateaus*, 178.

<sup>452</sup> Deleuze and Guattari, *A Thousand Plateaus*, 161.

<sup>453</sup> Manuel DeLanda, *One Thousand Years of Non-Linear History* (New York: Zone Books, 2000), 272-273.

<sup>454</sup> Bob Jickling, and Paul C. Paquet, "Wolf Stories: Reflections on Science, Ethics, and Epistemology," *Environmental Ethics* 27, no. 2 (Summer 2005): 124-125.

<sup>455</sup> David Abram, *The Spell of the Sensuous: Perception and Language in a More-Than-Human World* (New York: Pantheon Books, 1996), 10.

<sup>456</sup> Kathleen Dean Moore, "The Truth of the Barnacles: Rachel Carson and the Moral Significance of Wonder," *Environmental Ethics* 27, no. 3 (Fall 2005): 277.

<sup>457</sup> Arne Næss, "Integration of the 8 Points into Ecosophy T," in *The Selected Works of Arne Næss*, ed. Alan Drengson (Dordrecht: Springer, 2005), 535.

development of new capacities can be a productive divergence from a formerly stable identity, as an individual breaks with old habits of living to move in new ways. Such a break can make a controlled transformation of identity. Even such simple acts as learning to drive, to swim, or to speak a foreign language are experiments in identity creation.<sup>458</sup> Experiments in breaking down and reconstituting oneself can be more easily botched the more they depart from one's usual actions. Deleuze and Guattari discuss experimentation focussed on the disintegration of a subject. Their intention is to spark inspiration, not imitation.<sup>459</sup> Two of their extreme examples: A sexual masochism that forcibly seals all entrance and exit points for the body, and covers or blocks all perceptual organs except touch; and a totalized freezing of the subject, personality annihilated by an all-encompassing heroin addiction and opiate coma as described in the work of William Burroughs.<sup>460</sup> Guattari discovered other examples of the disintegration of the subject in his work as a doctor at La Borde clinic. In treating the severely mentally ill, Guattari came to understand schizophrenic behaviour as an escape from all constraints of identity and society. His patients give in to forces that fragment the subject at amazing degrees of intensity.<sup>461</sup>

“The forces of attraction and repulsion, of soaring ascents and plunging falls, produce a series of intensive states . . . The subject spreads itself out along the entire circumference of the circle, the centre of which has been abandoned by the ego.”<sup>462</sup> In these examples, Deleuze and Guattari seek to show the potential for dynamic affects to disintegrate the totalizing field of the subject. Even if the examples turn out to be caused by entirely different underlying processes, what matters for breaking down a homogenizing subjecthood is what explorations they can inspire in others. Of course, such extreme examples are easy to botch. When that happens, the organism destroys itself and the entire field of perceptual affects along with their totalizing element. Such disasters would appear to justify the fear of any departure from homogeneity whatsoever. But as Deleuze, Guattari, and DeLanda stress, botching can be avoided with processual control appropriate to the transformation.

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<sup>458</sup> Manuel DeLanda, *A New Philosophy of Society: Assemblage Theory and Social Complexity* (New York: Continuum, 2006), 50.

<sup>459</sup> Ronald Bogue, “A Thousand Ecologies,” in *Deleuze/Guattari and Ecology*, ed. Bernd Herzogenrath (New York: Palgrave Macmillan, 2009), 46.

<sup>460</sup> Deleuze and Guattari, *A Thousand Plateaus*, 151-154.

<sup>461</sup> Félix Guattari, “The Divided Laing,” in *The Guattari Reader*, ed. Gary Genosko (Oxford: Blackwell Publishers, 1996), 39-40. While contemporary research provides evidence that the neurological cause of schizophrenic behaviour is a decrease in the activity of important infrastructure of the brain, what is important for my argument is what Guattari was able to think of thanks to the worldly behaviour of schizophrenics, the disinhibited behavioural expression of this inhibition of neurological activity.

<sup>462</sup> Gilles Deleuze, and Félix Guattari, *Anti-Oedipus*, trans. Robert Hurley, Helen R. Lane, and Mark Seem (Minneapolis: Minnesota University Press, 1983), 21.

But one cannot end the transformation of one's subjectivity at the point when it has been broken down. Any homogenizing forces have been purged from the process, but the process will dissipate if some new unity is not constituted. This new unity must not make the old mistakes of conformity and homogenization for their own sake, which would be another way of botching the change. Having removed the destructively totalizing elements of one's personality, one must rebuild a unity that includes diversity, a genuine gestalt body. In the vocabulary developed in *A Thousand Plateaus*, this creative regeneration of subjectivity is called becoming-animal. But even this term is not quite adequate to the work Deleuze and Guattari ask it to do, because the term implies that one is becoming like an animal. Their examples are of people abandoning human identities and places in conformity to human society for what appear to be imitations of the ways of animals. They begin with a description of the film *Willard*, in which the protagonist alienates himself from human society and lives according to the social structures of rats.<sup>463</sup> But these examples taken on their own are too easily understood to imply that they recommend imitating an animal way of life, learning rules of movement and thought by which Willard would live *like* a rat. Such a transformation, becoming like an animal, would simply trade a human mode of totalizing subjectivity for some other totality. Both would require smoothing away diversity into a single way of life. Imitation is no way to escape from totalization into heterogeneity.<sup>464</sup>

A body — any assemblage at all — has a greater range of capacities than it can ever articulate in its lifetime. These possible actions include all articulations which that body's internal processes can generate, all interactions with every other body with which it could ever come into contact, and all the resultant actions those worldly interactions could enable. These limit points of possible motion, described using topological mathematics, constitute a quantifiable phase space for the body in question.<sup>465</sup> Someone open to the heterogeneity of her identity may, when these possibilities are available, consider changing herself. Such a person does not understand herself as a subject in the sense of a totalizing identity. A totalizing identity ignores enormous numbers of possible movements for itself, and if she does notice them, she may convince herself that those movements are impossible. Maintaining that inconceivability is what a totalizing identity does. The social and ecosystemic environment of a subject, and a subject's physical abilities constitute impediments to the divergence of an individual identity from established totalizations. Many of these impediments cannot be overcome: I cannot teach myself to fly, or raze an urban industrial facility to build a nature preserve by myself. But many other impediments are one's own habits of

<sup>463</sup> Deleuze and Guattari, *A Thousand Plateaus*, 233.

<sup>464</sup> Gilles Deleuze, and Félix Guattari, *Kafka: Toward a Minor Literature*, trans. Dana Polan (Minneapolis: Minnesota University Press, 1986), 39-40.

<sup>465</sup> Manuel DeLanda, *Intensive Science and Virtual Philosophy* (New York: Continuum, 2002), 80.

thought that prevent the internal diversification of a personality, which one can overcome through self-conscious thinking. If one believes that some divergence from one's identity is impossible, one will never achieve it. Any kind of homogenization that proceeds through self-conscious thinking produces the subject as a totalizing figure. One can escape one's self-totalizing regime to become a new kind of field of perceptual affects when one begins to think about oneself in a new way.

Such a task looks easy on paper, but is difficult in practice. A therapeutic understanding of Deleuze and Guattari's thought considers concepts like becoming-animal to offer tools to ease that transition into more multifaceted modes of thinking and living. It is not enough to rebel against a totalizing identity, because rebellion and subversion are entirely reactive: one must have something to rebel against, or to subvert. The act of subversion alone leaves one trapped in a relationship with that which one aims to subvert.<sup>466</sup> Ultimately, the process of destabilizing an identity must begin a restabilizing movement with which to constitute a new identity.<sup>467</sup> Their philosophy aims to convince one that a change of identity that one considered impossible is not only possible but can be worth embracing. Understanding what one has always thought impossible to be possible embraces freedom from the constraints of identity itself. Guattari writes, "My question therefore is, Can man become the founder of his own law?"<sup>468</sup> He asks if a person can create a new kind of normality, in the context of the knowledge that one need not be constrained by one's old normality, this new normality, or any kind of stable pattern of existence.

One's activity alone constitutes one's identity. One may change one's identity for practical reasons: the world has changed in such a way that the old normality is counter-productive. Such an activity of change may run against the moral systems of one's community, and as such one's peers may consider it shameful. But with regard solely to the existence of any act, in the absolute conception of its singularity, it needs no more justification for its existence than that it is done.<sup>469</sup> Whether the consequences are ultimately beneficial or destructive to the actor, her community, and her world is an important, but separate, matter. The practical difference an act makes for an organism, community, species, or ecosystem is the measure by which it is justified. The worth of any new normality that begins from some act is determined only by whether this process can survive and thrive. From the absolute conception of singularity,

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<sup>466</sup> Guattari, "The Transference," in *The Guattari Reader*, 62-63.

<sup>467</sup> Edward Kazarian, "Deleuze, Perversion, and Politics," *International Studies in Philosophy* 30, no. 1 (1998): 103.

<sup>468</sup> Guattari, "The Transference," 66.

<sup>469</sup> Jean-Paul Sartre, *Existentialism Is a Humanism*, trans. Carol Macomber (New Haven: Yale University Press, 2007), 24-5.

the Pacific Trash Vortex, for example, is absolutely valuable. As well, in a colloquial sense, it can be beneficial to the world, even though that benefit may be no more than inspiring a bleak comedy routine. Its destructive effects on the ecosystems of the Pacific Ocean would likely outweigh the brief moments of cynical amusement some humans may derive from it. Justification by the measurement of a process's various beneficial and destructive affects assesses value in terms of practical difference, conceived in the Spinoza-inspired sense I described early in this project.

Deleuze and Guattari discuss becoming-animal, becoming-woman, becoming-child, becoming-molecular, and becoming-intensity. In each of these examples, the transformative movement is an exemplar or beacon for plotting in one's daily life a new mode of living. They designed the concept of the transformative exemplar as a guide to escape the totalization of subjecthood: changing one's activities so that they are not bound by a pattern whose structure demands conformity without diversity. In changing one's activities, one changes the field of affects those activities generate, approaching one's guiding example as if it were an attractor in the phase space of one's capacities. One never becomes its duplicate, because duplication is homogenizing imitation. Instead, one incorporates one's role model as the primary influence in one's existence, one's new normality.<sup>470</sup> Each assemblage — each arrangement of bodies, movements, and energy flows — is singular in the absolute sense. Since every body is singular, bodies cannot be distinguished by their singularity alone. But singularity can be measured in two ways. One way is to measure various aspects of the body in question quantitatively, for each aspect designing a dimension for the graph on which the measurements are plotted. "The sum total of the material elements belonging to it under given relations of movement and rest, speed and slowness (longitude); the sum total of the intensive affects it is capable of at a given power of degree of potential (latitude). Nothing but affects and local movements, differential speeds."<sup>471</sup> One measures and plots a body's capacities for movement and affectivity, doing one's best to discover their farthest range of possibility. An account of a body is adequate to its singularity if it achieves such comprehensive mapping.<sup>472</sup> With a computer of sufficient power to map all the possible movements and affects a body can articulate and constitute, the singular identity of a body could perhaps be given a complete quantified account. That account would be incredibly long and complex, but it is still an account.<sup>473</sup>

<sup>470</sup> Deleuze and Guattari, *A Thousand Plateaus*, 274.

<sup>471</sup> Deleuze and Guattari, *A Thousand Plateaus*, 260.

<sup>472</sup> Deleuze and Guattari, *A Thousand Plateaus*, 262.

<sup>473</sup> Such an account would have to be extremely long, if one remembers what Naess discovered about preciseness: the more precise an account of some body or event one wants, the longer that account will be to include the required detail.

The other way to measure singularity is by comparing each of those quantified aspects of the body in question to those bodies from which it developed or which surround it. The degree of contrast is that body's degree of singularity, at least in a local context. That way, one can fix a quantifiable measure for a body's degree of departure from its previous state, or its degree of difference from surrounding and related bodies. These measurements, comparisons, and contrasts develop an account of a body according to the concept that Deleuze and Guattari call haecceity and I call singularity. Deleuze and Guattari are more concerned about the contrastive aspects of the concept of singularity because they concentrate on how to escape the totalization of a homogeneous identity. They are wary of using general propositions to describe the singularity of a body. Their concern is that a body cannot be described adequately in its singularity using a small number of propositions that can be applied to multiple objects. General references focus only on those aspects of a body that are shared among many others, so that one's account of a body makes it an instantiation or token of a type. An account of a body in terms of how it fits into generic taxonomies has its uses, but such an account ignores the singularity of that body.<sup>474</sup> To have the best chance of escaping the totalization of a homogeneous identity, the singularity of one's own body must develop the greatest possible contrast with the other bodies subject to this totalizing identity. This is a rebellious activity, which cannot be sustained indefinitely, but is useful for the task of escaping homogeneity. One can develop this contrast through self-conscious thought by mapping comprehensively the capacities of one's own body. Having gained knowledge of one's constitutive capacities, one can develop those capacities in directions that depart from one's homogenized neighbours.

These two methods of measuring singularity I call constitutive identity and contrastive distinction. They parallel the absolute and singular conceptions of singularity. The constitutive identity of a body articulates ontologically the ethical concept of absolute singularity, which provokes wonder and awe at the singularity of each being. Contrastive distinction measures practical difference, the ways in which a body diverges from the processes that surround it and that generate it, and maps its empowering and destructive affects on other bodies such as myself. The concept of style merges these two ways of measuring singularity. Art becomes an important illustration of singularity, as identity is constituted ontologically as a style, the manner of an expression being just as important for the overall meaning of an activity as the content of what is expressed.<sup>475</sup> A body's style is a whole that is constituted from the relations among all its parts, and cannot be considered separately from them. Any attempt to analyze a body by breaking it

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<sup>474</sup> Deleuze and Guattari, *A Thousand Plateaus*, 264-265.

<sup>475</sup> Merleau-Ponty, *The Phenomenology of Perception*, 174.



down into individual elements and relations will miss the dynamism that exists when all these parts work together processually. No adequate account of a body should conceive of its parts as static bodies in relations not subject to flux. It must include the processes constituted when all a body's parts function to assemble the whole.

Merleau-Ponty writes, "As for the novel, although its plot can be summarized and the 'thought' of the writer lends itself to abstract expression . . . the novelist's task is not to expound ideas or even analyze characters, but to depict an inter-human event. . . . A novel, poem, picture, or musical work are individuals," each having a particular style.<sup>476</sup> In his view, on an artwork's greatest power is not the expression of a general idea, but the depiction of an event, the interaction of many disparate processes to constitute a novel complex whole. He only gestures at this conception of an event, but Deleuze and Guattari describe it in detail as the sudden intersection of processes from multiple levels of analysis at a single meeting place. When many processes of such different characters meet, their interrelations produce a complex whole that could never have been predicted from the analysis of each process' history in isolation from the others.<sup>477</sup> In describing works of art as individuals having a style peculiar to each, Merleau-Ponty shows how general statements about a body can never be adequate to the peculiarities of its singular constitution. Singularity is an event constituted by the activity of the body in question, the generation of that body itself through integration of all the processes constitutive of that complex whole.<sup>478</sup> Art can inspire a trajectory for a person's transformation because an artwork can articulate an idea in a variety of contexts. In this sense, an artwork can achieve implicitly what a philosophical work can achieve explicitly: to articulate a concept that can transform one's thinking, and with it, one's life.

Art, properly speaking, is not the only possible spur, or developmental attractor, for such a singularizing event. A philosophical work that encourages such a creative movement is a singularity of the same kind. When the work is taken up into an individual's thinking, it produces an event that articulates itself over space and time as a process by which an assemblage is transformed.<sup>479</sup> As a subjectivity singularizes itself, it transforms its environment accordingly. This is a moral matter, about the question of what one is to do. The moral aspects of singularization can rectify the problems I described earlier of how environmental philosophy often suffers from its inheritance from the political environmentalist movement. Progress in any

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<sup>476</sup> Merleau-Ponty, *The Phenomenology of Perception*, 175.

<sup>477</sup> Deleuze and Guattari, *A Thousand Plateaus*, 202-203.

<sup>478</sup> Deleuze and Guattari, *A Thousand Plateaus*, 265.

<sup>479</sup> Gilles Deleuze, and Félix Guattari, *What Is Philosophy?* trans. Hugh Tomlinson and Graham Burchell (New York: Columbia University Press, 1994), 21.

field of human endeavour comes from the maintenance of a tradition's continuity that is critical enough of itself to recognize when old ways of thinking are no longer adequate to the world. At such a time, a community's way of writing, speaking, and thinking must depart from tradition, making itself singular in response to novel pressures. A work of philosophy that continues an established tradition of thinking without self-critical consideration homogenizes itself, as it focusses only on conserving its continuity with those texts that have influenced it.<sup>480</sup> In departing from conservative standards of adherence to an obsolete tradition, the work becomes a new model for future writers and works to follow.<sup>481</sup> An experiment in thinking carries out a departure through developing a capacity for thought that has never been explored, or at least that the current mainstream has ignored. This is a public experiment because a work of philosophy is a kind of communication. It can be read and discussed, its influence spreading through texts and conversations.<sup>482</sup> This is one way in which scholars trace the history of philosophy. Historically pivotal works are those that destabilized commonly accepted traditions of thinking, encouraged departure from tradition, and inspired new traditions.<sup>483</sup>

Environmental politics, activism, and the ideas that grew from them constitute the character of environmental philosophy's departure from tradition. This is because the new tradition of environmental philosophy is a public experiment in thinking that not only includes an innovative ontology, but also self-understanding, scientific practice and investigation, and social and political arrangements, institutions, and norms. As I understand it, environmental philosophy's experiment in transforming individuals, societies, industries, and ecologies begins from an ontological concept: that of the constitutive relation. Bodies are constituted through their relations. Relations constitute fields of affectivity, complex wholes that integrate many processes. Sometimes fields integrate in patterns that maintain a field's stability, while some integrate in a manner destructive to that stability. When a metabolic chemical process constitutes an autopoietic body, that body begins producing a field of perceptual affects. When that field of perceptual affects constitutes reflective processes, the body in question becomes self-conscious.

Deleuze and Guattari describe how the reflective processes of self-consciousness tend to become subjects in the totalizing sense I have been discussing, and how an individual organism

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<sup>480</sup> Russell Ford, "Deleuze's Dick," *Philosophy and Rhetoric* 38, no. 1 (2005): 42.

<sup>481</sup> Deleuze and Guattari, *What Is Philosophy?* 67-70. In Deleuze and Guattari's vocabulary, the philosophy of departure deterritorializes the thinking of its readers, who reterritorialize thinking along this new model by thinking and writing according to its problems instead of the old problems. Although the context varies considerably, this parallels the phenomenon that Rorty called the shift in a community's vocabulary, with all the promise and risk any new vocabulary entails. It also parallels Thomas Kuhn's concept of a paradigm shift in a scientific community.

<sup>482</sup> Kazarian, "Deleuze, Perversion, and Politics," 102.

<sup>483</sup> Ford, "Deleuze's Dick," 53-56.

can escape this totalization. Escape from the totalization of identity is desirable because it liberates self-consciousness to explore different possibilities for action.<sup>484</sup> “Life is a work in progress with no goal in sight, only the tireless endeavour to explore new possibilities.”<sup>485</sup> Separate from his work with Deleuze, Félix Guattari’s writings inspire me to apply the lessons on destabilizing subjecthood of *A Thousand Plateaus* to the political problems of environmental philosophy. Guattari understands the fields of affectivity constitutive of Earth as three parallel ecologies: the mental, or individual subjectivity; social assemblages, including political and civic institutions; and the constitution and interaction of ecosystems across Earth’s biosphere.<sup>486</sup> These three ecologies — types of fields of affectivity generated by organisms — should not be arranged in a hierarchy. A society is assembled from many individuals, but the macro is not determined by the micro, or vice versa. Ecosystemic and climatic conditions limit the possibilities of movement for societies and individuals: one cannot grow coffee in the Baltics, or drill for oil year-round at Mount Erebus in Antarctica. But this conditioning relationship does not give the ecosystemic a superiority over society or individual thought.

I consider the individual, social, and ecosystemic to be three venues of affectivity, different settings for processes to appear. But changes in setting do not seriously transform a process’ character. Changes in scale can transform the character of a process. A current of water in a small tank will move very differently than a current of water in motion from the north to the south Atlantic. The transformation of a process across scales of affectivity is an ontological matter. Regarding the three venues of affectivity, a river can flow through a forest, by a village in that forest, and around a swimmer from that village without seriously changing. Guattari distinguishes the individual, social, and ecosystemic venues of affectivity for epistemic reasons. The best possible explanation for a phenomenon depends not only on the goal for which one wants to explain it. In terms of the ontological question of what is happening, the best possible explanation will depend on which venue of affectivity primarily generates the phenomenon in question.<sup>487</sup> Epistemically, the three venues of affectivity must be sorted and contrasted to ease the analysis of multifaceted interactions among complex wholes.

Ontologically, however, the three venues are parallel. Distinguishing by parallel preserves congruence across the delineated venues of being.<sup>488</sup> Activity generated in each of the three

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<sup>484</sup> Deleuze and Guattari, *A Thousand Plateaus*, 291.

<sup>485</sup> Ian Pindar, and Paul Sutton, “Translators’ Introduction,” in Félix Guattari, *The Three Ecologies*, trans. Ian Pindar, and Paul Sutton (New York: Continuum, 2008), 8.

<sup>486</sup> Félix Guattari, *The Three Ecologies*, trans. Ian Pindar and Paul Sutton (New York: Continuum, 2008), 19-20.

<sup>487</sup> Manuel DeLanda, personal correspondence, June 24, 2011.

<sup>488</sup> Gilles Deleuze, *Expressionism in Philosophy: Spinoza*, trans. Martin Joughin (New York: Zone Books, 1990), 109.

venues constitutes complex affects in the other two. Each venue is constituted through the activity of very different bodies and fields, but intimately connected in their mutual affectivity. One can clean up pollution, but one cannot repair an ecology beyond superficial maintenance without repairing in parallel one's own subjectivity, articulating a sustainable and flexible pattern of thinking into a sustainable and flexible pattern of society that articulates itself through the activities of its constituent individuals into a sustainable and flexible technology of global scope.<sup>489</sup> The production of a new way of life begins with a single person breaking down a totalizing identity that conforms with common morals for no other reason than to conform. If others take this person to be a guide for action, she inspires similar productions of new ways of life in others, until one has a social movement that affects a globalized humanity, and controls technologies powerful enough to transform ecosystems on a planetary scale.<sup>490</sup> A global revolution to constitute an ecocentric moral and political social structure might begin when an individual resingularizes herself as a place, according to the ontological concepts I described in the previous two chapters. Unlike previous versions of ecocentrism, such a transformation of social morality and global ecosystemic order would preserve the importance of the individual. A transformation of individual morality begins a process of planetary transformation.<sup>491</sup> A social movement spurred by the simultaneous transformation of individual subjectivities is democracy at its most intense: liberatory people power.

The process of singularization breaks down a normality to constitute a new normal, idiosyncratic to that process. Singularization is a process that constitutes the complex whole that each venue is, remaining stable enough to avoid collapse through its transformation. This stability is, in the most radical transformation, just a small element of the transformed system that is carried into the new assemblage. This old element is itself utterly transformed by its new context of functioning.<sup>492</sup> Because one process is articulated across each of the three venues through their mutual affectivity, one can take control of that process in the venue in which an individual already has the most control: subjectivity. In reconstituting one's own subjectivity through modifying one's self-consciousness, one can articulate a new society through this subjectivity, and that society can constitute a new ecosystemic arrangement on Earth. The three venues of individual thought, social institutions, and ecosystemic assemblages are delineated as they are because that tripartite distinction is the clearest map of what kinds of factors must collide for a

<sup>489</sup> Verena Andermatt Conley, "Artists or 'Little Soldiers'?" Félix Guattari's Ecological Paradigms," in *Deleuze/Guattari and Ecology*, 116-128.

<sup>490</sup> Guattari, *The Three Ecologies*, 23-27.

<sup>491</sup> Charles Starkey, "The Land Ethic, Moral Development, and Ecological Rationality," *Southern Journal of Philosophy* 45, no. 1 (Spring 2007): 154-157.

<sup>492</sup> Guattari, *The Three Ecologies*, 30-32.

singularization to take place. The transformations I have been discussing are contingent in character. A society just happens to find that it has developed in a physical environment offering the freest conditions for individual thought that escapes the status quo.

Deleuze and Guattari discuss the question of why the particular philosophical tradition of the West arose as it did, differently than in China, India, or somewhere else: the conditions of pre-Periclean Greece just happened to be right for this specific kind of thinking.<sup>493</sup> But the same question — Why here rather than there? — can be asked of any process.<sup>494</sup> A philosophical concept can turn an individual, social, or ecosystemic body away from long-established patterns of development into a different direction. I call this turning to novelty singularization, increasing the contrastive difference between one body and those surrounding it or which formerly resembled it. A concept acquires that ability when the individual thinker can connect it with social and environmental milieux in a way that it can change them. Thinking is only at its most powerful when it is already operating in the world, engaged with the process of changing status quo arrangements.<sup>495</sup> Where conditions are not amenable to constituting fields of affects that can foster this engaged, revolutionary thought, revolution does not happen. One's physical and social environment constitute the places where revolutionary thinking can happen, but such places only condition it. Revolutionary thinking requires an individual thinker to begin. Revolution begins in thought, where self-conscious affectivity can experiment privately. Private experimentation can proceed without the major risks of the social, ecosystemic, and ideological experiments of, in Deleuze and Guattari's examples, the American and Russian revolutions.<sup>496</sup> The danger of such large-scale experiments in revolutionary thought indicates the challenge of a philosophy that begins as a politics, of which environmental philosophy is one of the most intense contemporary examples. Utopian political revolutions, the translation of a singularization of thought into the singularization of a society and the ecosystems where it lives, promise so much, but never in their actual history do they deliver.<sup>497</sup> Political revolution is one place where the tripartite parallelism of thought, society, and ecosystem breaks down, and movement from one to the other is impossible. Yet the goal of environmental philosophy is a successful social and

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<sup>493</sup> Richard Rorty, *Contingency, Irony, and Solidarity* (New York: Cambridge University Press, 1989), 61. Because historical developments are contingent on contextual circumstances — because they “just happened that way,” in Rorty's words — they are divested of any importance. His contingency is deflationary, while Deleuze and Guattari take contingency as empowering: with no force of necessity dictating historical development, all bodies constitutive of Earth share responsibility for the events of history.

<sup>494</sup> Deleuze and Guattari, *What Is Philosophy?* 95-97.

<sup>495</sup> Deleuze and Guattari, *What Is Philosophy?* 92.

<sup>496</sup> Deleuze and Guattari, *What Is Philosophy?* 100.

<sup>497</sup> Deleuze and Guattari, *What Is Philosophy?* 103.

political revolution, and had been that before the philosophical community even codified it as a goal.<sup>498</sup>

The process of self-consciousness constitutes the subject matter of ethical philosophy: subjectivity. A self-conscious body that has participated in the activities of many other self-conscious bodies working together to build scientific systems that measure perceptual affects, affects constitutive of ecosystems, and the affects of technology and theatrical enormous industry, has all the conceptual and linguistic tools to become an environmental philosopher. I do not mean that every environmental philosopher thinks using these concepts. I use the language of affectivity and difference as singularity to inspire my ethical and moral thinking in the context of environmental and ecological problems. With these ideas, I have developed an account of an ideal environmental philosopher and the path to become one. This account surpasses previous accounts of such an ideal because it avoids the problematic concepts of ontological dichotomies, naive holism, and utopias typically used in the discourse of environmental philosophy.

A good illustration of such problematic language is Michel Serres' concept of Le Tiers-Instruit, his version of a contemporary ecological scientific sage. Serres calls him "Knowledge's troubador: expert in formal or experimental knowledge, well-versed in the natural sciences of the inanimate and the living . . . lover of rivers, sands, winds, seas, and mountains; walker over the whole Earth . . . thus archaic and contemporary, traditional and futuristic, humanist and scientist, fast and slow, green and seasoned, audacious and prudent."<sup>499</sup> Throughout the passage in which this quotation appears, Serres waxes poetic in his description of such a man. Serres too is limited by the language with which he describes his wizard scientist, depicting him as a union of opposites. He finds himself appealing to an intuitive understanding of "organic truth."<sup>500</sup> I earlier rejected intuitions as indicators of truth because intuitions are individual feelings of obviousness that are in no way intrinsic to universality. The language of intuitive environmentalist truths and the intrinsic value of all things is inconsistent. But the language of the integration of fields of affects through constitutive relations and the singularity of processual assemblages does not suffer

<sup>498</sup> Andrew Light, "Environmental Pragmatism as Philosophy or Metaphilosophy? On the Weston-Katz Debate," in *Environmental Pragmatism*, eds. Andrew Light and Eric Katz (New York: Routledge, 1996), 327.

<sup>499</sup> Michel Serres *The Natural Contract*, trans. Elizabeth MacArthur and William Paulson (Ann Arbor: University of Michigan Press, 1995), 94.

<sup>500</sup> Serres *The Natural Contract*, 94. Serres' account of Le Tiers-Instruit also contains language hostile to social science, whose "critical rather than organic truths and banal commonplace information" he says are inadequate to the attitude of the sage. I disagree here, because although the language of social science writing can often be dry and alienating in its proliferation of -isms, the concepts developed in its greatest work can be of immense value for philosophical production. For an interesting exploration of why writers in the social sciences write such inaccessibly dry prose, see Pierre Bourdieu, *Homo Academicus*, trans. Peter Collier (Stanford: Stanford University Press, 1988), 28-31.

the problems analyzed in my early chapters.

The concept of singularization is better suited for use with concepts like Serres' Tiers-Instruit and other exemplars of environmentalism's ideals. An environmentalist exemplar is an attractor in the phase space of a singularization movement, a role model for an individual to transform how she thinks and, accordingly, who she is. Deleuze and Guattari discuss several figures from literature to illustrate becoming-animal and becoming-woman: the rat-man-protagonist of *Willard*; the wolf-men of Sigmund Freud and Jorge Luis Borges; Herman Melville's Ahab, mapping his life onto that of a whale; H. P. Lovecraft's outsiders; Virginia Woolf's Orlando; and Marcel Proust's reimagining of Albert as Albertine.<sup>501</sup> These are examples from art because ethics, the constitution of subjectivity, is understood as primarily an aesthetic matter. In Guattari's writing, aesthetics is an inspiration for the philosophical creation of concepts, but this inspiration proceeds very carefully, to avoid reducing philosophy to the profusion of novel ideas without direction or aim.

In *Chaosmosis*, his last solo book, Guattari describes the aesthetic as the philosophy of the activity of assembly, the integration of parts in relations that constitute a whole.<sup>502</sup> Freud, the apparent anomaly in my list of artistic inspirations of singularization in *A Thousand Plateaus*, is included because, as Guattari said, "What is best in Freud is his literary dimension."<sup>503</sup> Freud, in crafting his interpretations of dreams, makes himself an artist of psychoanalysis. The title of *Chaosmosis* is itself taken from an artistic inspiration, James Joyce's *Finnegans Wake*: "every person place and thing in the *chaosmos* of Alle anyway connected with the gobblydumped turkery was moving and changing every part of the time."<sup>504</sup> The subtitle of *Chaosmosis* is "An Ethico-Aesthetic Paradigm," which indicates that Guattari intended this book to reconcile aesthetics and philosophy. That reconciliation happens through an ecological understanding of the universe as an assemblage of assemblages whose activity constitutes a constant fluctuation of all relations, and a continual flux even in stable systems.<sup>505</sup> As I quoted Merleau-Ponty writing

<sup>501</sup> Deleuze and Guattari, *A Thousand Plateaus*, 233, 239-242, 244-245, 275-277.

<sup>502</sup> Félix Guattari, *Chaosmosis: An Ethico-Aesthetic Paradigm*, trans. Paul Bains and Julian Pefanis (Indianapolis: Indiana University Press, 1995), 132-134.

<sup>503</sup> Félix Guattari, "Institutional Practice and Politics," in *The Guattari Reader*, 134. I believe this is the central critique of psychoanalysis in *Anti-Oedipus*: Freud was primarily a literary interpreter of human personalities, turning the psychological narratives of his patients into insightful images, just as singular as his patients themselves. The mistake of psychoanalysis as a discipline, eventually including Freud himself, was to mistake his singular interpretations of individual cases for a universally necessary structure of human subjectivity that could be applied without modification to all people. This universalizing mistake was the target of *Anti-Oedipus*.

<sup>504</sup> James Joyce, *Finnegans Wake* (New York: Penguin Classics, 2000), 118. My emphasis. Scientists are also inspired by art, as the name of the fundamental particles whose interactions constitute nucleic particles like protons and neutrons, were named quarks, "Three quarks for Muster Mark!" (383)

<sup>505</sup> Félix Guattari, *Chaosmosis*, 109.

earlier, all singularities, and therefore all bodies, can be understood as artwork. One may object that because all bodies can be described as like art, or as artful, there is no longer any significance to the designation, ‘artful.’ To use the term does not distinguish the artful from the non-artful. However, just because all phenomena can be understood according to a particular theme does not mean that one can learn nothing from analyzing a phenomenon through such a lens. Following Guattari’s idea, an aesthetic analysis focusses on how all the parts of an assemblage fit together. In other words, the aesthetics of an assemblage is the history and structure of its assembly. One can analyze any body in terms of the history and structure of its assembly, but one can learn a great deal from such an analysis.

Historical examples of environmentalist exemplars — guides for a process that Deleuze and Guattari might call becoming-ecology — include Henry David Thoreau, Aldo Leopold, Annie Dillard, and Edward Abbey, among many others.<sup>506</sup> The practice of environmental philosophy often encourages the philosophers themselves to live in closer accordance with their principles than many of their readers. The journals of John Muir describe a wanderer in the rural California Sierra, a lifestyle that in both Muir’s time and today is barely possible for the majority of people.<sup>507</sup> Næss’ cabin situated in a deep valley of Tvergastein Mountain resembles the retreat of a hermit, helping to create his public image as a European eco-guru. The cryptic style of his speech during interviews about his environmentalist lifestyle suggests the Bavarian prophet Mühlhiasl reborn as an ecologist.<sup>508</sup> Through living in a way that gives up so much contemporary technological convenience, an environmentalist exemplar aims to inspire others to change their lives along a more ecologically sustainable trajectory. In this way, an environmentalist makes of her own life a work of art. An environmentalist exemplar shapes her lifestyle and personality according to her philosophical principles, which is an *ethical* process. In crafting her lifestyle, she also carefully crafts her public image, which is an *aesthetic* process, to serve a *political* aim, advancing the environmentalist movement.

The concept of subjectivity that I have developed lets one put these biographies to work as exemplars. However, interpreting the lifestyle of Næss in Tvergastein as a model to be imitated runs into an insoluble problem: the complex singularity of human personalities. Although Scott Aikin never discussed it, this problem underlies his critique of the deep ecologist’s intuition of the

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<sup>506</sup> Nathan Andersen, “Exemplars in Environmental Ethics: Taking Seriously the Lives of Thoreau, Leopold, Dillard, and Abbey,” *Ethics, Place, and Environment* 13, no. 1 (2010): 43-55.

<sup>507</sup> Neil W. Browne, *The World in Which We Occur: John Dewey, Pragmatist Ecology, and American Ecological Writing in the Twentieth Century* (Tuscaloosa: University of Alabama Press, 2007), 21-23.

<sup>508</sup> Arne Næss, *The Call of the Mountain: Arne Næss and the Deep Ecology Movement*, Jan van Boeckel, and Pat van Boeckel, directors (Blankenham, Netherlands: ReRun Productions, 1997).



intrinsic value of all things. A person who “sees a big rock and has an experience”<sup>509</sup> cannot derive a universally applicable principle from that experience alone. The experience and its accompanying stimulus to thinking is peculiar to that singular experiencer. Aikin is right to say that one cannot discover universally necessary moral principles through such moments of intuition. But he, and the environmental philosophers who have endorsed revelatory intuitions, are mistaken to think that such intuitions are all that can be done with exemplary experiences and lifestyles. We cannot all move to a cabin in rural Norway and become mountaineers. One must constitute one’s own path through one’s own thinking and action, laying down a path by walking it.<sup>510</sup>

An exemplar is an inspiration to creative movement, the breakdown and reassembly of a subjecthood into a new subjectivity. Exemplars provide a guide to singularization, not a model. A model is the object of imitation. I earlier described this phenomenon as becoming like a rat or like a woman. One takes on the accoutrements of a model, and with skill and attention can become an indistinguishable double of one’s model. A guide, in contrast, is an object of inspiration for a transformation of one’s lifestyle and subjectivity that can reach every aspect of one’s being within the grasp of self-conscious control. A guide is the first figure to go through a transformation process, and through her action indicates a direction that has never been taken before. With the inspiration of a guide, one can transform oneself without necessarily resembling one’s guide. The difference between becoming based on a model and based on a guide is the same as between John Cleese dressed as a middle-aged woman and a post-operation male-to-female transsexual. Having a model to imitate does not singularize a personality at all, but instead trades one totalizing subject structure for another.

Exemplars make their own lives into artworks which aim to inspire others. Deleuze and Guattari’s ideas of how exemplars can work also does away with the class hierarchy implicit in Næss’ conception of the exemplar that I described in chapter three. Næss understood exemplars to be a kind of benevolent police keeping the masses, who were deemed incapable of thinking with complexity beyond simple slogans, in line with environmentalist norms. But using the concepts I have laid out in this and the previous two chapters, any self-conscious body can break from social norms that have grown obsolete, trying to inspire others to transform themselves according to similar trajectories. The capacity to become an exemplar is part of the structure of subjectivity itself, a point of intersection between its individual and social venues of activity. Those who become noteworthy enough to inspire many people are experiments in creating a new

<sup>509</sup> Scott F. Aikin, “The Dogma of Environmental Revelation,” *Ethics and the Environment* 13, no. 2 (2008): 27.

<sup>510</sup> Francisco J. Varela, Evan Thompson, and Eleanor Rosch, *The Embodied Mind: Cognitive Science and Human Experience* (Cambridge: MIT Press, 1991), 144-145.

kind of subjectivity, and signs that such experimentation can be successful.<sup>511</sup> The guiding activity of environmentalist exemplars indicates how philosophy and art can converge on singularization movements of subjectivities. Old models of thinking are unsettled and overthrown, which has the potential to create a new epoch in thought and society. A social paradigm shift can take place. Even though the shift may happen slowly, sometimes over many generations, a current population can look to its pre-transformation ancestors and find little in common with them. Whether in thought, society and politics, or ecosystemic assemblages, a new paradigm of living is created through the activities of the constituents of a system.<sup>512</sup> Environmentally mindful art and biographical exemplars provide guides for experiments in singularization.

In this chapter, I describe the ethical tools that Deleuze and Guattari create as means to escape conformity. Adapting these tools finishes my rehabilitation of the problematic concepts of the intuition of the value of nature, and makes for my most profound critique of the anti-humanist interpretation of ecocentric moralities. Environmental moral philosophers invested so much in the intuition of intrinsic value because, as I described in my first chapter, there was no better way to appeal to everyday people to value nature. But empirical investigations into what intuitions actually were showed that they were inadequate to discover universal truths. Instead of an appeal to intuition, the environmentalist movement progresses by means of lifestyle guides. Whether an environmentalist guide is followed remains a contingent matter: they can be ignored or ostracized by the people they want to inspire. But just because one can lose a campaign does not mean one should not try.

As for the critique of ecocentrism as ecofascism, Deleuze and Guattari's ideas speak to this as well. The critique of ecocentrism as anti-humanist was that it denied the peculiarly human freedom to break from tradition and live according to one's own reasons. In this chapter, I have adapted tools for radical breaks for conformity to serve as the motor for how environmentalist exemplars work. In this case, the tradition from which one breaks is the tradition that created enormous industry and its theatrical destruction. Valuing the ability to break away from conformity is to value diversity, articulating that valuation on the individual and social venues. Because one can articulate the same concept in parallel across the three venues Guattari distinguishes, a concept that has a coherent meaning in one venue will do work of the same kind in the two others. In the environmental venue, the same principle of breaking from a needless or maladaptive conformity to make oneself a novel kind of life is the valuation of ecological diversity: valuing the constitution of new kinds of life through the activity of ecosystemic

<sup>511</sup> Deleuze and Guattari, *A Thousand Plateaus*, 291.

<sup>512</sup> Isabelle Stengers, "Experimenting with *What Is Philosophy?*" in *Deleuzian Intersections: Science, Technology, Anthropology*, eds. Casper Bruun Jensen, and Kjetil Rødje (New York: Berghahn Books, 2010), 52.

assemblage. My conclusion returns to the existential dilemma, to examine how the concepts collected and developed throughout my project provides a positive answer to the question of whether humanity should bother about its continued existence at all.

CONCLUSION. INTRINSIC VALUE IN ETHICS AND MORALITY

The two central ontological principles of my project are: 1) that all bodies in the universe are integrated through their processes of generation having had a common origin in their histories; and 2) that all bodies are singular in both the absolute sense of their uniqueness, following my interpretation of Leibniz's Law, and in a relative sense of the degree to which the structure of a body diverges from other bodies. If these ontological principles are understood in the context of the political program of environmental philosophy,<sup>513</sup> then these two ontological principles become reasons for a moral imperative of care for the different, justified by the fact of that difference itself. Articulating this moral imperative requires reshaping one's abilities according to the ethical imperative, achieved in transforming one's subjectivity according to the inspiration of environmentalist exemplars. Of course, a transformation of subjectivity will not inevitably generate a personality for whom valuing the creation of the singular and diverse is a key principle of behaviour. As well, not every environmentalist exemplar will succeed in inspiring a social revolution. But the uncertainty of success is no reason never to try.

The political program of environmental philosophy requires one to create a new kind of subject who is capable of caring for an object because it is different. But from the fact of their singularity, each genocidal dictator, each HIV virus, each sludge-spewing chemical plant is valuable, despite their destructiveness. It is impossible to live without some manner of destruction, because processes interfere with each other. These examples of extremely destructive bodies throw the problem into its sharpest relief. Each state of affairs is singular, any change in a state of affairs destroys that state and its absolutely valuable singularity. But such change is process itself, the transformation of states of affairs. In transformation, what once was is destroyed. A new state is created, but the condition of creation is the destruction of the old. Each act permanently forecloses on innumerable other events that might otherwise have been. This is the tragic dimension of process philosophy when it is conceived from an existentialist perspective. All that comes to be is singular, and so is valuable absolutely. Absolute value gives a sense of joy to the most mundane elements of existence. But all that passes away is also singular and valuable absolutely, so that a sense of joy accompanies an attitude of mourning and sadness. One's survival is caught in this double bind, because one must destroy absolutely valuable assemblages in eating and breathing. To stop this destruction, one would have to stop eating and breathing, yet one is also an absolutely valuable process. So ending one's life to prevent the destruction

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<sup>513</sup> Andrew Light, "Environmental Pragmatism as Philosophy or Metaphilosophy? On the Weston-Katz Debate," in *Environmental Pragmatism*, eds. Andrew Light and Eric Katz (New York: Routledge, 1996), 327.

which one's continued existence would cause is also a destruction of an absolutely valuable body.

The practical dimension of difference, the assessment of benefits and harms, introduces another order of morality. Ecology, with its focus on the interdependence of processes in their generation and transformation, supplies the basic framework of a guide to practical action: identifying which processes will empower or harm one. Practicality and survival are different concerns from understanding pure singularity. Investigating the structure and assembly of a body in detail discovers how a singularity can act in relation to oneself, what its potentials are for empowering or harming one. This investigation is the practical understanding of singularity at work in the world. However, one's investigation of practical difference is always partial, limited to one's own arena of action. Focussing solely on the harms and benefits to oneself facilitates the emergence of egotistical thinking. Contemporary enormous industry is a prominent example of the ultimate counter-productivity of egotistical thinking and its short-sightedness.

A key contribution of environmental moral philosophy to contemporary thinking is its detailed analysis of enormous industry. The valuation of absolute difference operates as a bulwark against the counter-productivity of permanent short-sightedness that comes from a focus only on one's own partiality to calculate an entirely self-centric measure of benefit and harm. Valuing singularity in its absolute sense can be a guide to practical action through keeping one mindful of the significance, or weight, of each act. One takes nothing for granted because every body is a variation unlike every other body. Difference is valuable absolutely as an aid in avoiding the short-sighted behaviour that turns technological benefits into fatal harms. From an existential perspective, life is simultaneously and paradoxically joyful and mournful because the activity of processes is both creative and destructive, and what is destroyed is, in the absolute sense of valuation, just as worthy of existence as what comes to be. This paradox of joy and sadness does not disappear because attitudes of absolute valuation have practical benefits. The tension of the paradox's two sides is ultimately productive, creating the means by which one appreciates the significance of change.

The ontological principles I have summarized have consequences for what our capacities are to know about the universe. This metaphysical movement from ontology to epistemology shows how the structure of our perceptual apparatus and linguistic systems shapes and restricts our capacities for sensation, knowledge and communication. Given these limitations of human knowledge, there are ethical and moral implications for how humans should act. The processes that generate the assemblages constitutive of the universe are immensely complex. So any simple statement about some aspect of this vast and complex universe is likely a distortion of the facts in our attempt to understand them easily. This is why Merleau-Ponty wrote that any single

descriptive analysis of Cézanne's artwork, to take his often-discussed example, offered him several Cézannes.<sup>514</sup> Using general propositions to describe a phenomenon can never be fully adequate to its complexity.<sup>515</sup> High degrees of preciseness require immense detail of description.<sup>516</sup> The existential dilemma of Sartre's *Nausea* asks why one should strive for knowledge, given the inadequacy of human language, the vehicle of our scientific knowledge, to an exhaustive account of any matter. Accepting that inadequacy suggests an ethical stance of humility and a moral posture of caution. No matter how comprehensive and precise one's account of a phenomenon is, there is always some possibility that a detail may escape our investigation. That could be the very detail which collapses whatever endeavour depends on that account. It may be possible, at least in theory, to build an account of some phenomenon that is genuinely complete and precise in every detail of how it is and could be. But the folly of those who believe they have succeeded in this perfect knowledge is the stuff of the tragedies of history and literature.

One does not need an experiential intuition of nature's sublime immensity (such as hiking the Andes mountains) or complexity (such as tabulating the possible variations in protein folding) to develop a moral attitude of humility in industrial activity. One need only understand the epistemic principle of language's inability to render the complexity of existence in simpler terms, and how that principle implies a moral conclusion. Such a morality has the principle of humility in social and ecosystemic interaction at its centre. The mystery of nature that is sometimes spoken of as part of the environmentalist intuition is no longer articulated through a mystical or religious experience.<sup>517</sup> One instead understands nature to be mysterious because no matter how well-prepared humanity may be, there can always be some surprises.<sup>518</sup> The concept of autopoiesis implies the surprising nature of existence as well. The bounded physical structure of an autopoietic body constitutes a boundary that segregates internal from external. Internal processes can affect the external, and vice versa, but nothing is ever preserved in one realm exactly as it was in the other.<sup>519</sup> The inside of a bounded physical structure is, in Deleuze's evocative language, an obscure object. A body's inside is a network of relations forming multifarious catacombs, whether

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<sup>514</sup> Maurice Merleau-Ponty, *The Phenomenology of Perception*, trans. Colin Smith (New York: Routledge, 1962), 174.

<sup>515</sup> Alia Al-Saji, "A Past Which Has Never Been Present': Bergsonian Dimensions in Merleau-Ponty's Theory of the Prepersonal," *Research in Phenomenology* 38 (2008): 53.

<sup>516</sup> Arne Næss, *Ecology, Community, and Lifestyle*, trans. David Rothenberg (New York: Cambridge University Press, 1989), 42-43.

<sup>517</sup> Erazim Kohák, *The Embers and the Stars: A Philosophical Inquiry into the Moral Sense of Nature* (Chicago: University of Chicago Press, 1984), 117.

<sup>518</sup> Quentin Meillassoux, *After Finitude: An Essay on the Necessity of Contingency* (New York: Continuum, 2008), 84-86.

<sup>519</sup> Carey Wolfe, "Meaning as Event-Machine, or Systems Theory and the 'Reconstruction of Deconstruction:' Derrida and Luhmann," in *Emergence and Embodiment: New Essays on Second-Order Systems Theory*, Bruce Clarke, and Mark B. N. Hansen, eds. (Durham: Duke University Press, 2009), 220.

they be chemical structures or the complexities of thought and memory in a human personality.<sup>520</sup> The moral articulation of this conclusion is that all bodies are in some manner obscure objects, and should be treated in practical action with requisite caution.

The above moral conclusions achieve the same goal as the dogma Næss maintained with his concept of self-as-place. They overcome the self-destructive stumbling of technologically powerful organisms acting from a short-sighted egoistic self-interest. At the heart of the philosophical exploration of this chapter is a simple platitude that one must always be careful when unexpected events could occur at any time. This is the precautionary principle: ‘Careful, now!’ The seeming obviousness of the precautionary principle is, for Næss, the central reason for adopting it in philosophy. On his thinking, a principle’s having a clear, intuitive basis is required for its uptake by the masses. However, just because it happens to be a platitude is no reason to accept its validity for action: intuitions cannot be trusted to have genuinely universal scope. The precautionary principle is not a moral first principle, but a means to an end: one has decided that it is worthwhile for humanity to continue existing, so the precautionary principle is one means to this end. The actual first principle is the existential dilemma of how one answers the question of whether humanity should continue existing. I begin from this question, and my answer to it is that humanity’s continued existence is worthwhile, to promote the singularization of existence. Ecocentric moralities are best suited to this activity, where singularization is understood as a moral imperative to increase and safeguard diversity.

The precautionary principle that derives from the complexity of practical differences is a principle for moral philosophy. The principle of intrinsic value cannot maintain its coherence in the moral domain; it is relevant to the ethical domain of philosophy. The precautionary principle alone may be motivated entirely by egotistical self-interest, an attitude that is also vulnerable to stumbles like those which constituted enormous industry. The ethical domain of philosophy has to do with matters of identity, how one understands oneself and one’s situation in the world. The existential dilemma of contingency with which I began this project is an ethical matter: will I live as Roquentin, who cannot say if human existence is worthwhile, or Poppy, who does? Expressing the principle of intrinsic value in the context of this ethical problem results in an attitude of paradoxical tragedy. One lives as a witness to the continual becoming and passing away of the intrinsically valuable, simultaneously experiencing joy at its creation and sorrow at its loss. Ecological science, however, shows that creation depends on loss. Darkness accompanies this joy, but need not overpower it, because the destruction of a body does not negate its having existed.

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<sup>520</sup> Gilles Deleuze, *The Fold: Leibniz and the Baroque*, trans. Tom Conley (Minneapolis: University of Minnesota Press, 1993), 85.

Its affects continue indirectly through the processes it influenced during its existence, and insofar as it is related to what currently exists it still exists as part of that assemblage. Relations of part to whole are not limited to temporal simultaneity, but are constituted through affectivity. Even in the abyss after the heat death of the universe, all that has existed remains part of that assemblage because its activity constituted the current state of affairs. Nihilism, the ethical principle of the negative, is the attitude of Roquentin that embraces the abyss. The principle of intrinsic value, the absolute value of singularity, is the attitude that affirms existence.<sup>521</sup> As such, the principle of intrinsic value is the foundational principle of an ecocentric morality and the precautionary principle, because the ontology of interdependence and integration makes singular identity of bodies themselves that which is intrinsically valuable. Those ontological concepts I developed in the first half of the project, when adapted to a theory of subjectivity in the last half, describes a subjectivity uniquely suited to ecocentric morality: a self integrated with its environment in its generation and continuing action.

The concept of self-as-place occupies the hub of this multifaceted philosophy. The central lesson of ecological philosophy is the integration of all bodies, that nothing can exist in genuine isolation. A great deal of philosophical history and inquiry considers bodies as isolated, particularly the self as isolated from the rest of the world. One can easily slip into the habit of taking the isolation of the self to be obvious.<sup>522</sup> But a philosophy of isolated bodies and an isolated self is not as well-suited to the practical problems of contemporary life, especially ecological concerns, as a philosophy of integration and interdependence. All bodies are assemblages of other bodies and fields of force, and their constitutive relations are processes generated from other processes in history. Because of these ontological principles, genuine isolation is impossible and integration is inevitable. If one takes seriously the impossibility of isolation as a universal principle, then one cannot keep the methods for understanding the world separate from each other and expect to understand nature successfully. The world is complex and plural, but also unified because every relation of one process to another constitutes a larger assemblage. The presence of cosmic background radiation from the origin of the universe, for example, is a relation that helps constitute the observable universe as a single assemblage. Understanding the world adequately cannot focus on one aspect of existence and ignore all others.<sup>523</sup>

The problems of building an individual personality, a socio-economic order, and an ecology are so intimately connected that any movement in one of these three venues is likely to

<sup>521</sup> Gilles Deleuze, *Nietzsche and Philosophy*, trans. Hugh Tomlinson (New York: Columbia University Press, 2006),

<sup>522</sup> Félix Guattari, *The Three Ecologies*, trans. Ian Pindar and Paul Sutton (New York: Continuum, 2008), 28.

<sup>523</sup> Félix Guattari, "Institutional Practice and Politics," in *The Guattari Reader*, ed. Gary Genosko (Oxford: Blackwell, 1996), 121.



affect the others. The satisfaction of demands which a class of society has long advocated is not a genuine political revolution, only a concession of one force to another, while the system through which social forces relate is conserved. A genuine political revolution changes the entire framework in which individuals articulate and understand demands, the very identities through which individuals understand themselves, the kinds of physical engagements human habitats make with surrounding structures. Political revolution is the transformation of a way of life.

In an interview from 1985, Guattari uses the example of how to achieve economic security for workers to illustrate the kind of shifts in individual thinking and group organization that constitute a genuine political revolution. It turns out to be a far quieter affair than the phrase ‘genuine political revolution’ suggests. The priorities of the workers he speaks of, in their daily discourse, are not simply about increasing their wages, so that they are paid more according to the old system. European workers in the 1980s, says Guattari, have come instead to speak the language of the guarantee. The specific wage itself is not as important as the security of the place workers occupy in their society, the guarantee that the economic order of their society will continue to support them, and not abandon them for the sake of profit alone, as manufacturing becomes cheaper in regions like East Asia.<sup>524</sup> They transformed how they understood themselves in their political and economic identities as workers. This transformation in self-understanding articulates itself in action as the shift of their political activism from a focus only on wages to social and political guarantees that the company will invest in the health and development of their community. Genuine political change requires different kinds and methods of thinking to proliferate among many people. All revolution — socialist, ecological, or whatever — is a revolution in thought, in understanding first of all.<sup>525</sup>

The revolution in thought that environmental philosophy offers is unlike any political movement in history, insofar as the thinking that would bring about such a revolution is, in a sense, anti-humanist. Ecological thinking is not anti-humanist in the sense of being against humanity. I discussed that interpretation earlier, and dismissed it as ecofascism, a perversion of ecological philosophy into a destructive rather than creative perspective. Ecological philosophy is against the privilege of humanity as a special element of existence. If there were to be a perspective that gave humanity special powers of control or stewardship over all nonhuman existence solely because of human nature, then that perspective could be called humanism.

<sup>524</sup> Guattari, “Institutional Practice and Politics,” 127-130. In his example, the economic order of the world has changed from regionally specific centres of capital connected with a single area and population over generations, to a highly mobile integrated world capitalism without centre. This new form of capitalism is the constantly recurring bugbear of Guattari’s thinking. The main threat to worker prosperity today is not the lowering of wages on a dependent populace, but the outright abandonment of a group of workers for more easily profitable arrangements elsewhere.

<sup>525</sup> Arne Næss, *Gandhi and the Nuclear Age* (Totowa, New Jersey: Bedminster Press, 1965), 20.

Ecological philosophy is a mode of thinking that stands against this hubris.

A reader will find parallels among this final statement of my philosophical investigation and many of the philosophies I have discussed throughout this work. For example, Peter Singer's concept of speciesism attacks humanist moral traditions for the hubris of supposing that human nature bestows special privileges that permit it to inflict suffering on nonhumans. The attack on human hubris has been a theme of environmental moral philosophy ever since writers began to identify themselves as environmental philosophers. But the attack on hubris is not complete until a comprehensive set of philosophical concepts encompassing the ontological, epistemic, moral, and ethical domains of thinking is built and put into action transforming the personalities, and so the lives, of individual humans on Earth. Guattari calls this political transformation of all dimensions of thought an "ecological industry" that remakes technology industrially and politically from a nonhubristic perspective.<sup>526</sup> Philosophy does not generate specific rules for the political and industrial program for a civilization free of hubris. That is the task of policy-makers, businesspeople, tradespeople, and applied scientists. The task of philosophy is to craft a mind free of hubris, so capable of developing a sustainable technological civilization.

Understanding self-as-place as a nonhubristic ethical concept specifies some of what it means to have a personality without hubris. Chapters five through seven explore a positive understanding of self-as-place in ecological and psychological or subject-constitutive articulations, and bridging ecological and psychological contexts. Self-as-place offers a image of human subjectivity as a humble, careful figure whose intelligence works to encourage sustainability and explore the fascinating complexity of existence. Environmental philosophy can use that image as a guide to transform human society. One does not genuinely transform a society through dictatorial measures. Such means result in a self-defeating transformation, as the utopian vision of a future society becomes an oppressive authority against which there is inevitable rebellion. A society is transformed through a much more difficult process, the breakdown and resingularization of each individual person in that society. The concept of self-as-place provides a guide in one's thinking for that singularization process. Because of the peculiar nature of the concept of self as a natural intersection of the four usually separate domains of philosophy, the guidance of self-as-place also provides the potential for a comprehensive approach to a variety of problems. Ecological philosophy therefore is no longer a philosophical sub-discipline, but an approach that, with requisite caution and investigation, can be applied to any philosophical inquiry. Self-as-place relies on an understanding of all bodies as plural that comes

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<sup>526</sup> Félix Guattari, *Chaosmosis: An Ethico-Aesthetic Paradigm*, trans. Paul Bains and Julian Pefanis (Indianapolis: Indiana University Press, 1995), 123-124.

from assemblage theory, so one cannot mistakenly believe that one's own body is a unity that can stand apart from the ecological and social networks of relations in which it is enmeshed and through which its identity is constituted.

The valuation of singularity, which was my initial guide through the diversity of environmental philosophy, is the other concept key to the importance of self-as-place in the environmentalist singularization process. I consider the most productive means of combating humanity's hubris in philosophy to be the primacy of singularity and integration as ontological principles. If one believes that moral consideration or standing hinges on similarity to the agent of valuation, then one cannot genuinely escape the hubris that places humanity in a uniquely privileged place in the universe. Valuing difference and the process of becoming different, singularization, is the ontological articulation of an ethical move away from alienation toward humility, and a moral focus on valuing the alien and unusual. The valuation of singularity is a philosophical justification for the feeling of wonder at the strangeness in nature that diverges from everyday human life. Instead of a baseless intuition, wonder is the result of engaging with a fundamental existential dilemma of why one should continue existing in a universe that continually threatens one with obsolescence. To answer that one should is to accept with joy that the universe is more complex than humans may be able to conceive, but that in existing, even for a while, humanity is integrated with the universe. Humanity's absolute singularity is no more or less noteworthy than that of anything else. To make sense of having accepted a positive answer to that existential dilemma creates a philosophical concept that informs not only one's approach to complex philosophical problems, but also one's everyday personality.

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