In this paper I explore some of the ramifications that thinking ecologically has on thinking about the human self, identity, and ethics. Inspired and informed by the work of the late Val Plumwood, I recommend new directions for Plumwood’s application of ecological continuity to human self-concept. I applaud Plumwood’s recognition of continuity as a key theoretical concept. Her work on revising selfhood in ways both 1) consistent with various insights of ecology, and 2) informed by oppression theory, is innovative and a crucial theoretical move. Building on the work of Plumwood, I argue that an ecological self-concept should reflect dimensions of “open continuity” with the environment. Open continuity literally requires opening one’s self-concept in ways that require revising many presumptions of where one’s self leaves off and the other begins. The familiar notion of a clearly bound human self cannot serve as the hub of moral action and theory if it is to reflect key ecological insights. Attending to ecological selfhood reshapes human self-concept and the moral terrain.

Just as important as the origin of plants, animals and soil is the question of how they operate as a community. Darwin lacked time to unravel any more than the beginnings of an answer. That task has fallen to the new science of ecology, which is daily uncovering a web of interdependencies so intricate as to amaze....

One of the anomalies of modern ecology is that it is the creation of two groups, each of which seems barely aware of the existence of the other. The one studies that human community, almost as if
it were a separate entity, and calls its finding sociology, economics,
and history. The other studies the plant and animal community
and comfortably relegates the hodgepodge of politics to the ‘liberal
arts.’ The inevitable fusion of these two lines of thought will,
perhaps, constitute the outstanding advance of the present century.

Aldo Leopold, “Wilderness” (quoted in Bernard and Young 1997, 2)

Today we can see the beginning of a new way of
thinking about the world—as sets of relationships rather
than separated objects—which we call ecology.

David Suzuki and Amanda McConnell (1997, 194)

Aldo Leopold presses us to question the assumed disjunction between
the liberal arts and sciences as it pertains to ecology. On such a view, the
liberal arts address the interactions of the human community through the
lens of sociology, economics, and history, while the “hard sciences” ad-
dress the interactions of the plant and animal community through the lens
of ecology. Leopold’s hope that ecology would bring together the liberal
arts and sciences has yet to be realized. I am interested in exploring some
of the ramifications that thinking ecologically has on thinking about the
human self, identity, and ethics. When David Suzuki and Amanda Mc-
Connell propose ecology as a lens for thinking of the world as sets of
relationships rather than separated objects, I see an opportunity for re-
thinking self concept and exploring the ethical terrain that manifests once
we are thinking in terms of diverse and complex ecological relations.

There are multiple methodological reasons motivating the ecological
reconceptualization of the self that I propose in what follows. I am less
concerned by ontology than I am by ethical and pragmatic considerations.
First, thinking about the nature of ecological relations allows for a moral
landscape that addresses the ecological dimensions of what it is to be
human. The failure of many humans to locate themselves ecologically has
contributed directly to the current ecological crisis. Conceptualizing the
self and the moral landscape ecologically encourages embracing the ma-
terial embeddedness of human embodied selves in a way often neglected
by Western historical accounts of what it is to be a human self. Thinking
ecologically substantiates ways of being in the world that are consistent
with facilitating the health and wellbeing of living entities generally.

I use “moral landscape” as a metaphor for facilitating imagining dif-
ferent ethical dimensions that are manifest when one imagines differently which entities are morally relevant and why. The shape of the moral terrain alters in virtue of the relations among various entities. For example, usually humans are imagined as the morally relevant actors and subjects. The terrain is that of relations between and among humans. Non-human entities do not have a place on the map. They are not relevant reference points. The relations had with them are not morally significant, so do not give any shape to the moral terrain. In terms of developments in early environmental philosophy, Peter Singer’s (1977) and Tom Regan’s (1983) work facilitated the introduction of non-human animals to moral conceptualizations of what relevant entities occupy the moral space. In environmental philosophy, arguments are also given for including living organisms (not limited to animals) within the set of morally relevant entities, as found in the work of Aldo Leopold (1949), Kenneth Goodpaster (1978), and Paul Taylor (1986). The moral terrain shifts depending on whether one is navigating relations among animals, or between living entities generally. Depending on what entities and relations are focused on, the map of the moral terrain alters. If I am correct about the various self-boundaries indicated by ecology, then the moral landscape and moral theorizing will alter to adequately reflect the diverse relations indicated.

Second, thinking about the self ecologically has pragmatic benefits. Acknowledging the roles of humans in ecological contexts situates humans in a way that facilitates our survival and the survival of other organisms. Lastly, the ecological crisis requires new ways of motivating beneficial ecological action. There is a bevy of highly rational arguments and reasons for stopping the destructive ecological path humans are on. The alterations in human behaviors, however, are not keeping pace with what needs doing to provide a future for life as humans know it on this planet. I take part of the problem to be that ecological thinking/feeling needs to be made personal in Western self-concept. A method for doing this is to bring it to the fore of human identities. Western self-concept needs alteration in ways consistent with ecological health and well being. This project, I hope, helps contribute to such a rethinking.

I take as given, consistent with the insights of ecological literature, that humans are in and of the environment. We are embodied and embedded in ways that necessitate addressing the varied relations we inevitably have with non-human others. Such relations are not only necessary
for survival, but have moral dimensions. As such, we must think about the nature of those relations and seek to make them morally appropriate ones. The ecological self I chart highlights dimensions of “open continuity” wherein common self-boundaries are questioned, giving additional impetus for thinking about the moral relations one has in more holistic construals of relevant ecological boundaries. The “catch” is that I do not have an underlying agenda in terms of the ontological priority of some boundaries over others. I want, instead, to get the variety of relevant boundaries on the table for moral consideration. If one has a view of the self as embodied, and self-concept as informed by the contours of that embodiment, psychological and moral commitments follow.

This paper is inspired and informed by the work of the late Val Plumwood. I recommend new directions for Plumwood’s application of ecological continuity to human self-concept. Building on the work of Plumwood, I argue that an ecological self-concept should reflect dimensions of “open continuity” with the environment. Plumwood recommends altering self-concept to better reflect ecological relations. I contend ecological insights can be used to further develop Plumwood’s recommended self-concept. I recommend the inclusion of dimensions of “openness” that prove transformative for self, responsibility, and ethics. Innovative transformations in human self-concept are essential for adequately conceptualizing responsibility and ethics within an ecological framework.

**ECOLOGICAL SELFHOOD, ECOFEMINIST WORRIES, AND BOUNDARY CONSTRUCTION**

To begin, I explain the ecofeminist construal of the ecological self. Ecofeminists understand that moral agents and selves are shaped by mutually constitutive, ever changing, and morally complex relations (Cuomo 2005, 200). Chris Cuomo (in discussing ethics and the ecofeminist self) cites Marilyn Friedman to help explain central features of the ecofeminist ecological self. The self is, on ecofeminist accounts, a relational being:

In its identity, character, interests, and preferences, [the self] is constituted by, and in the course of, relationships to particular others, including the networks of relationships that locate it as a member of certain communities or social groups.... Relationships to others are intrinsic to identity, preferences, and so on, and the self can only reason as the social being she is. (Friedman 1991, 164–65, quoted in Cuomo 2005, 200)
Cuomo highlights that “Ecological and feminist ontologies take identity and selfhood to be fundamentally relational” (2005, 203). Beginning with an awareness that both “ethical agents and objects are fundamentally interdependent,” ecofeminists stress connection and they recommend “developing ethics that acknowledge the importance of relationships and interdependence” (Cuomo 2005, 203-4). Plumwood’s position epitomizes the above commitments.

Plumwood writes that “we must understand the self as essentially related and interdependent, and the development of self as taking place through involvement and interaction with the other” (Plumwood 1993, 135). Relationships are not contingent, instead they are taken to be essential for an account of self (Plumwood 1993, 153-54). Plumwood contends that respect for the other “is an expression of self in relationship,” where the self is “embedded in a network of essential relationships with distinct others [my emphasis]” (1991, 20). She insists that an adequate account of the ecological self does not “require any sort of identity, merger, or loss of boundaries between self and other, as some ways of treating the concept of ecological selfhood imply” (1993, 160). Thus, the human ecological self for Plumwood is importantly both relational and distinct from other entities.

On Plumwood’s account in particular, and in ecofeminist accounts more generally, the self is bound quite tightly in order to respond to concerns about women’s well being in human-to-human relationships. When making a case for a relational self that contrasts with accounts of self that involve self-merger, Plumwood cites Jean Grimshaw’s work.

Grimshaw writes of the related thesis of the indistinctness of persons (the acceptance of the loss of self-boundaries as a feminine ideal): “It is important not merely because certain forms of symbiosis or ‘connection’ with others can lead to damaging failures of personal development, but because care for others, understanding of them, are only possible if one can adequately distinguish oneself from others. If I see myself as ‘indistinct’ from you, or you as not having your own being that is not merged with mine, then I cannot preserve a real sense of your well-being as opposed to mine. Care and understanding require the sort of distance that is needed in order not to see the other as a projection of self, or self as a continuation of the other” (Grimshaw 1986, 182-83, quoted in Plumwood 1991, 13-14).

Grimshaw is speaking here in the context of worries about women lacking
clear self-boundaries (1986, 183–84). Cuomo also notes the importance of ego boundaries for ecofeminist theorizing, postulating that stronger ego boundaries “may enable women to reject roles in oppressive institutions” (1992, 355). More positively, Plumwood maintains that one cannot adequately care for another unless one sees that other as distinct from the self (1991, 14). Care requires attending to and respecting difference. To care for another is to “be present to the other—to be actively attentive to the other, to listen, to learn, to receive from the other—where the other is acknowledged and valued as different from ourselves” (Warren 2000, 202). The risks of not seeing others as different from ourselves include experiencing the other “only in terms of one’s own needs, wants, desires, and expectations”—in other words, perceiving the other arrogantly rather than lovingly (Warren 2000, 202). For ecofeminists, moral life requires the maintenance of clear self/other boundaries between humans, and between human and non-human entities. Yet, further questions remain.

The ecofeminist ecological self is a relationally constituted self. Nonetheless, Plumwood stresses the importance of this relational self as distinct from other members of the ecological community. As elucidated above, her emphasis on distinctness develops from a concern for healthy ego boundaries for oppressed women in particular. Granted, the promotion of a feminine ideal that advocates the loss of self-boundaries in oppressive human-to-human relations so as to better facilitate patriarchal culture is clearly indefensible. It is another question, however, whether rethinking the viability of various notions of self-boundaries, so as to facilitate instances of a felt continuity with non-human entities, will be problematic in the same way. Gender-based worries about self-boundaries in oppressive human-to-human relations are not reason enough for denying theoretical attention to the various ways in which self-boundaries can be questioned ecologically. Ecologically informed boundaries do not necessarily parallel those marked out by the relational sense of self one finds in human-to-human social relations. As such, ecologically relevant boundaries require further theoretical attention. Plumwood recognizes this need, and argues in favor of addressing human continuity with nature.

In attempting to remedy human/nature dualism, Plumwood suggests restructuring the human self in relation to nature, advising a re-conception of what it is to be human and what it is to be a self (1991, 18). The relational notion of self that Plumwood advocates is meant clearly to rec-
ognize "the distinctness of nature but also our relationship and continuity with it" [my emphasis] (1991, 20). What Plumwood means by continuity therefore merits further exploration.

CONTINUITY

Plumwood uses the term "continuity" variously throughout the body of her writing. She sometimes uses the term positively, in the sense of aspiring to have an account of self that recognizes human continuity with nature (1993, 36). At other times, continuity is referred to negatively, as a danger—the self that Plumwood advocates does not fall into what she calls the "Ocean of Continuity" where self-other merger occurs (1993, 159). She maintains that the self must remain a distinct individual, and being distinct is contrasted with being merged (1993, 156). Sometimes it sounds as though Plumwood is referring to a sense of separate but connected entities when she speaks of continuity (1993, 103). However, she also discusses how death is a means of realizing human continuity with the earth, which speaks of a material similarity—or even a oneness—rather than separate but connected entities (1993, 102–3). Continuity often connotes something like sameness (2002, 200), or similarity/likeness in Plumwood’s writing (2002, 107).

My position regarding “open continuity” was developed in dialogue with Plumwood’s work on continuity. I applaud Plumwood’s recognition of continuity as a key theoretical concept. Her work on revising selfhood in ways both 1) consistent with various insights of ecology, and 2) informed by oppression theory, is innovative and a crucial theoretical move. She revived dialogue about ecological selfhood, an area I take to be central to environmental philosophy. I build on her work and recommend that it can be further developed through exploring “open” dimensions of continuity. Relationality continues to play a central role in my position. However, what constitutes ecological selves, others, and ethically relevant relations, take on different dimensions than are found in Plumwood’s account.

OPEN CONTINUITY

Ecology indicates and supports a spectrum of “open continuities,” mapping a diversity of ecologically relevant boundaries. Insofar as these ecological boundaries challenge concepts of the human self as clearly distinct from other ecological entities, the human self must be re-imagined
in new and more open ways. “Open continuity,” as I develop it, involves questioning commonly presumed boundaries between human selves and others. Ecology encourages reconceptualizing relevant boundaries demarcating where a human self ends and another entity begins. I contend that the different boundaries ecology suggests are not all adequately accounted for in Plumwood’s account.

“Open continuity” provides a method for questioning traditional Western notions of human boundaries of the self. For example, questioning the traditional boundary of skin as effectively demarcating the limits of oneself. Relevant boundaries of the self differ depending on context, and some ecological contexts require revising conceptions of self, ethics, and responsibility. In so far as ecology points to different relations than those found in sociology, economics and history, and in so far as one is interested in identifying as ecologically embodied, new philosophical, psychological, and political methods of addressing the many ecological dimensions of selfhood are required.

Plumwood provides an account of continuity that maintains familiar boundaries between self and other. I wish to provide an account of open continuity. I will use examples where what is usually construed as a human self and what is usually construed as other from this self are often ecologically continuous in ways that undercut the viability of the originally presumed self/other construct. It literally requires opening one’s self-concept in ways that require revising many presumptions of where one’s self leaves off and the other begins. What I mean by open continuity is not best conveyed by a tidy definition with necessary and sufficient conditions, indeed such a definition proves elusive. A narrative unfolding is the best method for identifying the contours of the concept. Given the sizable revision required to popular methods of conceptualizing the self and relations to other entities, I ask for the reader’s patience.

I will develop the case for open continuity in two ways; first through looking at material physical open continuity, and second through exploring functional open continuity. Material physical open continuity is illustrated through literary engagement with scientific descriptions of human embodiment. In terms of functional open continuity I offer examples to illustrate how varied observation sets helpfully illuminate different relevant entities and interactions. These examples include what is revealed via an organismic standpoint and nutrient cycling standpoint (Cheney and Warren 1996, 247), and what is illustrated when analysis occurs at the
level of a) species, and b) the biological community. Ecologically speaking, relations are not just between individual organisms. In terms of functional ecological wholes, there are descriptions that challenge commonly accepted human self/other boundaries. Open continuity reflects a more fluid engagement with the world, wherein multiple ecologically relevant boundaries bear on self-concept.

**PUSHING BOUNDARIES: OPEN MATERIAL PHYSICAL CONTINUITY**

What I propose challenges Plumwood’s demand that familiar human self-boundaries marking a distinct human self and other as commonly conceptualized are necessary for moral theorizing. I do so, however, without demanding the absence of self-boundaries in all domains of self-conceptualization. The revision I am advocating calls for a reimagining of the boundaries of the ecological human self. Open continuity, broadly, allows for an ecologically motivated questioning of commonly accepted boundaries between self and other. I do not deny the importance of boundary construction. Nor do I deny the importance of maintaining boundaries in a variety of domains. My position does not require a loss of self to other. Challenging the common self/other divide, however, enables rethinking the self such that one has a far more intimate relationship with what is otherwise construed as an other. There is a merging between (what is normally construed as a) self and other.

David Suzuki and Amanda McConnell provide excellent illustrations of material merging between what is normally construed as a self and other. Suzuki and McConnell point to humans’ open material physical continuity with water and air by providing detailed and concrete examples in *The Sacred Balance* (1997). Part of the reason I chose the examples found in Suzuki and McConnell’s work is that they are not stripped-down, scientific accounts. Suzuki’s background in biology and ecology grounds the scientific dimensions of the account, but McConnell adds what Suzuki calls the “lyrical poetry” to his ideas and thoughts (Suzuki and McConnell 1997, x). Narrative can offer insight regarding moral dimensions of an issue, and Suzuki and McConnell tell a story that reveals humans’ places in, and relations to, the world. Narrative makes explicit the writers’ positioning as situated subjects influenced by context and personal experience.

Suzuki and McConnell’s narrative serves to illuminate new ethical
dimensions of the human story. The ethical imperatives that grow out of Suzuki’s reflections are evident in his desire to knit human self-conceptualization more tightly with ecological others and processes. The book itself grew out of Suzuki’s desire to convey the human relationship with the earth in an emotional way, wherein claims about humans being made up of molecules of air, water and soil turned into talk of how humans are the air, are the water, and are the soil (7). The acknowledgment that “there is no environment ‘out there’ that is separate from us” structures how Suzuki frames environmental issues (7). Suzuki uses science to reaffirm the ancient truth that “we are intimately fused to our surroundings and the notion of separateness or isolation is an illusion” (8).

For example, there is no self to speak of in the absence of air. As such I do not exist in relation to air, rather for me to exist air must exist. This relation is not reciprocal—air can exist without me, but I cannot exist without air. Suzuki and McConnell begin to illustrate what I have identified as open continuity in the following passage.

We are not completely independent and autonomous; when we look carefully at the interactions at every level between our bodies and the elements that surround us, we see how completely we are embedded in air, all of us caught together in the same matrix.

Air is a physical substance; it embraces us so intimately that it is hard to say where we leave off and air begins. Inside as well as outside we are minutely designed for the central activity of our existence—drawing the atmosphere into the centre of our being, deep into the moist, delicate membranous labyrinth within our chests, and putting it to use. (32)

There is no human self without air. Air “keeps the alveolar sacs inflated and prevents them from collapsing. So air always remains within us and is as much a part of our bodies as any tissue or organ” (1997, 37). The presence of air inside the body, in the lungs, makes possible breathing and further oxygen exchange.

One might be tempted to say that the human self is inextricably “linked” to air, but linkage does not adequately describe what is going on here. The common human self/air other divide is brought into question. It is nonsensical to say that “I” exist over here, when “here” denotes a place where there is not adequate air to sustain my physical processes for life. As Suzuki and McConnell note: “The line where air leaves off and our cells begin is questioned. Categories merge here—gaseous and liquid, outside
and inside—as the planet’s atmosphere enters our bloodstream” (1997, 36). The traditionally accepted boundaries of self in Western thought are brought into question here. If the human self cannot be separated from the existence of air, the moral relation human selves have with air needs rethinking. The moral relation needs rethinking because the presumptions regarding the traditional boundaries of the self inform ethics. Differing concepts of self indicate differing moral imperatives. Such rethinking includes reconceptualizing relations between human entities and non-human living entities that are likewise openly continuous with air.

The cycles of which humans are part, as well as how humans are thus openly continuous with each other, are additionally highlighted by a thought experiment pertaining to the exchange of air in a room. Suzuki and McConnell recommend trying a simplified conceptual exercise after sharing space in a room with others:

If you multiply the volume of air in the room by Avogadro’s constant (the number of atoms in one mole of substance: $6.002 \times 10^{23}$), you will get an estimate of the number of atoms of air in that room. (Assume the air is always mixed completely.) Then divide the number of atoms in the air by the volume of air inhaled times the number of breaths per minute times the time spent in the room times the rate at which oxygen and carbon dioxide diffuse across lung cell membranes. Even the crudest calculation reveals that each of us very quickly absorbs atoms into our bodies that were once an integral part of everyone else in the room, and vice versa. (1997, 37)

What composes the self of others is part and parcel of what composes the self of you. This insight once again calls into question the viability of the strict boundaries presumed between what is the human self and what is “other.” Thus, the example of air flags an ecologically relevant instance for questioning the commonly conceptualized boundaries between the human self and environment.

Thinking about the roles and cycling of the material constituents of human beings requires questioning common physical boundaries between self and other. Open continuity indicates that the notion that air is out there as distinct from you fails to recognize the nature of human ecological embodiment. Open ecological continuity indicates that some ecological descriptions illustrate that one cannot treat the human self as distinct from various elements of the environment. What I am proposing runs deeper than the requirements of acknowledging relations of depend-
ency. To say one depends on something is different from saying something constitutes the self; dependency does not indicate identity. The claim that one necessarily depends on air fails to capture the ways in which the self and air are necessarily inseparable. What one depends on is distinct from oneself. Air can exist in the absence of humans. The reciprocal case is not true. More than support or dependency is thus indicated. In terms of what follows ethnically, identifying in openly continuous ways can offer a strong moral imperative to care for and protect what constitutes the self.

The example of water serves further to buttress my claim that human beings are openly continuous entities. Again, "connection to" is not an adequate description. Suzuki and McConnell note that like air,

...water is essential to our survival.... Living beings need this elixir because they are made of it. Protoplasm, the living matter of all plant and animal cells is mostly water. The average human being is roughly 60 percent water by weight, nearly 40 liters of it carried in trillions of cells. (1997, 55)

Once again, there is no human self in the absence of water. More than dependency is indicated: open continuity.

Looking at systems, using the example of water, serves to highlight that humans are—insofar as they exist—necessarily and essentially part of such systems. The hydrologic cycle exemplifies that the water that composes humans is part of a larger process. The basic constituents of human physical being cycle through other larger systems. "Living organisms are active participants in the hydrologic cycle, absorbing and filtering water and breathing it back into the atmosphere" (1997, 55). Further, there is a rapid changing of the specific water molecules. Every single day, "about 3 per cent of the water in our bodies is replenished with new molecules" (1997, 60). Suzuki and McConnell knit humans with a variety of other entities through the example of water. "The water molecules that perfuse every part of our bodies have come from all the oceans of the world, evaporated from prairie grasslands and the canopies of all the world’s great rain forests. Like air, water physically links us to Earth and to all other forms of life" (1997, 60). I make the case that it is more than linkage being described here—it is open continuity. Open continuity indicates a more fluid engagement with the world. Suzuki and McConnell's narrative about how humans are constituted ecologically encourages self-conceptualization that questions boundaries between self and other.
The cycling of core constituents of living entities is beautifully illustrated by the following description of water Suzuki and McConnell give:

Water enters our bodies, circulates through it to the rhythm of the heart, ceaselessly carrying food, fuel, and cellular and molecular detritus to and from various organs of the body. Water seeps through our skin, escapes from our lungs as vapor and exits every opening in the body. It then reenters the hydrologic cycle, trickling into the soil, entering plants, evaporating into the atmosphere, entering bodies of water. In this way, water circulates endlessly from the heavens to the oceans and land, held briefly within all living things before continuing the cycle. (1997, 62)

Given the way that the above ecological descriptions of water encourage questioning the clear boundaries commonly presumed among entities through demarcating points of necessary merger, a notion of distinct entities connected by their dependence on water is not a sufficient description of what is going on. Humans’ physical being is necessarily and essentially constituted of water. This water is part of complex systems and various living entities. Suzuki and McConnell’s ecological narratives illustrate that adequately describing what humans are as ecologically embodied and embedded creatures necessarily requires reference to water and the questioning of boundaries between self and other.

The example of water helps to question common human self/other boundaries. Others have highlighted this as well in their environmental narratives. Greta Gaard, for example, begins her narrative about human relationship to water saying: “In the beginning there was only water, and you were a part of it…. Water knows there are no separations. You too should know this, for water has been teaching you, from the beginning” (Gaard 2003, 71). Suzuki and McConnell’s example of water and its role in human being makes clear that human physical boundaries as normally construed (e.g. the boundary of skin) can be brought into question. They note that humans “are water—the oceans flow through our veins, and our cells are inflated by water, our metabolic reactions mediated in aqueous solution” (1997, 75). This narrative invites imaginings in which you “are water,” the water molecules found in oceans are later part of what flows through your veins, the perpetually cycling water constitutes your very cells. Processes of which one is a part are highlighted, and insofar as one identifies with water the self-other divide blurs. I select the above
passages because they fundamentally question common self/other, human self/water boundaries. Suzuki and McConnell’s examples also question commonly accepted boundaries in terms of air, soil, and sunlight.

Human beings depend on earth and its life forms for every aspect of their survival and life. It is impossible to draw lines that delineate separate categories of air, water, soil and life. You and I don’t end at our fingertips or skin—we are connected through air, water and soil; we are animated by the same energy from the same source in the sky above. We are quite literally air, water, soil, energy and other living creatures. (1997, 130)

Such radical rephrasing is useful for disrupting the notion that the human self is clearly “distinct” from various entities usually construed as “other.” More precision is needed, however, in appropriately conceptualizing here. One must not equivocate between the human self and water, air, soil, or sunlight. Rather, human selves are complexly formed with various contributions to self-constitution. That being said, maintaining a view in which water and the human self, or air and the human self, or air and the human self, or air the human self, must remain distinct when being conceptualized is not a view that can be maintained if one wishes to reflect the ecological reality of humans’ open continuity.

How one ought to identify must be conceptualized with more precision and care. Part of this care involves recognizing that the equivocation between self and water, or self and air, is an overstatement on par with deep ecologists’ oversimplified recommendation that humans ought to identify ideally or primarily as the widest Self—a monistic “one” with the everything of the universe. I suggest this is a chapter of the human story, but need not be the whole book. My view allows for monistic identification, but also creates space for a multiplicity of other sorts of ecological identifications. Acknowledging humans’ ecological embodiedness, embeddedness, and open continuity requires taking into account that there is no human that can be extracted and properly ecologically conceptualized independently from air, water, food, wider functioning systems, and so on.

There are a bevy of ramifications that flow from the dimensions of open continuity outlined above. For instance, there is open continuity between all organisms that likewise have air and water functioning similarly in their self-constitution. The distinction between the human self and other is questionable not just in the instance of self/air, self/water, self/food, self/sunlight, but also in terms of self/community, self/ecosystem,
self/biosphere, and self/universe. Insofar as one identifies as ecologically embodied, one then has to provide for dimensions of open continuity that question common self/other boundaries. This is not to say that boundaries, such as skin, are not important for demarcating a human organism. It is, however, to say that when thinking of the human self as an embedded and embodied material entity, constructed of cycling self-constituting elements in open exchange, then different ways of making sense of self-boundaries are highlighted. This includes ways of making sense of the self where the self/other boundary between the human self and air/water/food/sunlight and so on are deeply questioned. Ecology gives a variety of methods of analysis for providing meaningful explanatory boundaries that challenge the usual conceptions of where the human self ends and other entities begin. Next I turn to ecological cases where humans function as a part of larger wholes, such that self/other boundaries can be questioned in terms of functioning.

**PUSHING BOUNDARIES: OPEN ECOLOGICAL FUNCTIONAL CONTINUITY**

Ecology deals with levels of scientific description ranging from organisms, to populations, to communities, and to the ecosystem (Zabinski 1997, 319). Various interactions, levels, and groupings, can be charted though the science of ecology. The science of ecology indicates numerous ecologically relevant boundaries, therefore self/other distinctions can be questioned through analysis at the level of the organism, population, community, ecosystem, and so on. How boundaries are mapped depends on the nature of the research questions. Ecological “observation set theory” is a particularly useful lens for conceptualization here.

Ecological “observation set theory” is referred to in ecological circles as “hierarchy set theory.” However, given feminist concerns (e.g. the feminist concern for deconstructing problematic value hierarchical thinking) Jim Cheney and Karen Warren chose to refer to it as “observation set theory,” and I follow suit (1996, 246, 259). An observation set includes “the phenomena of interest, the specific measurements taken, and the techniques used to analyze the data” (O’Neill et al. 1986, 7, quoted in Cheney and Warren 1996, 247). Though one observation set is used to study a specific problem, multiple observation sets must be considered for theory creation (1996, 247). Observation set theory can thus account for
an array of ecologically relevant groupings, as well as their interactions and the different boundaries that are substantiated.

I will offer an example to illustrate how varied observation sets helpfully illuminate different relevant entities and interactions. Cheney and Warren note that a forest stand can be viewed from an “organismic standpoint (e.g., as enduring, stable individual trees or populations of trees) or from an energy flow and nutrient cycling standpoint (e.g., as fluxes and flows of carbon and oxygen recycled through photosynthesis)” (1996, 247). Importantly, both views are an accurate analysis of what is going on. “Because the forest stand may accurately be viewed in either way, it is incorrect, in fact impossible, ‘to designate the components of the ecosystem’—the designation depends on the spatiotemporal scale and the [designation] changes as that scale changes” (O’Neill et al. 1986, quoted in Cheney and Warren 1996, 247). A focus on a single observation set overlooks or discounts the complexity of natural systems (Cheney and Warren 1996, 247). Ecological descriptions allow for various observation sets to map the ways entities participate in the world. In particular they provide for ways of mapping interactions that challenge common self/other boundaries.

Now I will turn to some helpful ecological examples illustrating differing levels of function and individuation relevant for a human ecological self-concept. First consider how relations between organisms, and what is revealed about human selves and others, will differ when analyzed in terms of species. When thinking about relations between species, the individual organisms representative of the species play a part in the whole of the species. Analyzing the functioning of the species requires thinking of species as wholes, with individual organisms as parts of such wholes. What I “am,” or my functional role in the world, can be defined (in part) by the species whole of which I am inextricably a part. This recognition can lead to new conceptualizations of the human self wherein one is not just an individual organism but part of larger wholes. Thus, conceptualizing at the level of species gives a new place for the human self to draw relevant ecological boundaries in terms of identification. The story of human selfhood is impoverished and incomplete if one solely construes their functional role in the world as that of an individual human being.

Consider the biological community as well. Here “plants, animals, and microorganisms are linked to one another by their feeding relation-
ships and other interactions, forming a complex whole often referred to as the biological community” (Ricklefs 1993, 407). Within the complex whole of the biological community, interrelationships “govern the flow of energy and cycling of elements within the ecosystem” (Ricklefs 1993, 407). The nature of the biological community is contested—some posit the community is a superorganism in terms of function and organization, while others claim that the community structure and function express interactions of individual species (Ricklefs 1993, 408). The central point, however, is that in either case ecologists are describing community level functioning. Insofar as humans are part of communities, and there are ecological relations between functional communities, we are situated in ecologically relevant wholes of which we are a part. These various levels provide for different self/other distinctions based on how wholes and parts function. What I am stressing is that, ecologically speaking, relevant relations are not just between individual organisms. In terms of functional ecological wholes, there are additional mappings that challenge human self/other boundaries.

Humans can be accurately described as being part of wholes or as individuated organisms. Human acts of identification as ecologically informed selves are better justified through addressing the variety of descriptions ecology provides about how humans are in and of the world. Observation set theory permits meaningful talk of both discrete individuals and whole systems (Cheney and Warren 1996, 253). Discrete individual objects perceived as autonomous in varying degrees and modes, as well as wholes, can be meaningfully discussed and are recognized as being appropriate for some observation sets while not so for others (Cheney and Warren 1996, 253). Opening self-concept to the functional wholes that help constitute the self requires revising Plumwood’s commitment to humans’ being clearly distinct from other ecological entities. On some ecological mappings, the boundary of individual human selves—clearly distinct from other ecological entities—cannot be substantiated.

RECOMMENDATIONS

I recommend taking the insights of observation set theory and applying them more widely to the multiple conceptual apparatuses ecology gives us for successfully mapping the world and the human place therein. Addressing the various ways humans are ecologically in the world requires
attending not only to what ecofeminists recommend in terms of getting an analysis of connection and dependency correct, but also, addressing the ways ecology points to human self/other open continuity. Ecology provides epistemic tools for identifying differing and useful descriptions of the world. Deciphering which descriptions will be pertinent to ecological self-concept first requires taking on the task of correctly situating the human self ecologically. Self-concepts that help us identify and chart moral landscapes ought to reflect ecological dimensions of what it is to be a human being. The familiar notion of a clearly bound human self cannot serve as the hub of moral action and theory if it is to reflect key ecological insights. In so far as an account of the human self and moral theory reflects humans’ ecological place in the world, humans’ open continuity must be addressed. There is thus a need for deciphering which boundaries, and the more complicated relations they point to, are germane. Attending to ecological selfhood reshapes human self-concept and the moral terrain.

I recommend a revised philosophical and practical imagining of the self that offers a possibility of ethical engagement informed by a more fluid picture of self-constitution (Lloyd 2000). Such a view of self must facilitate multiple identifications with entities normally construed as other, while still providing for the importance of caring for individuals as distinct others. This is possible through acknowledging diverse lenses for ecological identification. More open conceptualizations of the self could facilitate extending the strong desire to care for the self to entities usually thought of as other. Given the plurality of boundaries pointed out by ecology, however, entities can also be morally considered as individuals. There is still room for moral concern to be exercised through care for another conceptualized as distinct. My account does, however, require recognizing oneself as inescapably having a role in larger ecological wholes. Responsibility thus takes on new dimensions beyond the relationship between self and other. In so far as one cannot extract oneself from ecological communities, one cannot extract oneself from responsibility for the ramifications of one’s behaviors. One is always already ecologically implicated.

CONCLUSION

I grow an account from Plumwood’s work on selfhood and continuity. I recommend a revision to ecofeminist accounts of the self, a revision that opens the self up to identifications with entities that are usually
construed as other. The usual boundaries between self and other are brought into question by ecological theory. Forms of continuity that are “open” support a radical revision to what potentially counts as relevant self-boundaries.

The account I offer aims to provide a conceptual basis of the ecological self which can form a ground for development of a more complicated ecological ethic wherein multiple ecologically relevant boundaries are attended to. Reorienting human self-concept in ways that take ecological dimensions of open continuity seriously provides new ways of thinking about a) what it is to be a human self, and b) what morally relevant ethical relations exist.

Plumwood’s focus on human continuity with other organisms is a transformative contribution to the environmental philosophical dialogue. Moreover, not since the work of Arne Naess has such a focus been placed on how human self-concept deeply and directly informs how humans relate to non-human entities. Yet, further development of Plumwood’s research program is required. While Plumwood’s feminism may lead her to overemphasize the importance of distinctness to our ethical lives, her reflections on continuity can be used to provide fertile ground for rethinking the various ways humans can be construed as being ecologically continuous. Leopold tells of ecology uncovering a web of interdependencies so intricate as to amaze. The web of these relationships needs further reflection in both self-concept and reimagining the moral landscape.

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NOTES

1. I want to acknowledge that my use of geographical metaphors is inspired by Margaret Urban Walker’s use of them in Moral Understandings: A Feminist Study in Ethics (1998).
2. This is not to say that non-human animals had no place in popular moral paradigms prior to Singer and Regan’s work. For example, concern for non-human animals is manifest on Immanuel Kant’s view because insensitivity to non-human animals can facilitate an extension of such indifference to fellow persons. Utilitarian theories, such as Jeremy Bentham’s and John Stuart Mill’s, give emphasis to the moral relevance of sentience and thereby include non-human animals in the realm of moral concern.

3. It is useful at this juncture to clarify my positioning regarding anthropocentric concerns. I acknowledge that it is valuing as informed by a human perspective that is at issue here. Admission of this human perspective does not lead necessarily to an anthropocentric position or an instrumental view of non-human nature. Anthropocentrism indicates a human centered account. Too often there is an equivocation between human centered accounts, where only humans are morally considered, and accounts where the human perspective is given centrality. Trivially all accounts necessarily will start from a human perspective, even when it is a human attempting to imagine the perspective of an other. My account is no exception. My account does not advocate anthropocentrism or an instrumental use of nature in the sense that human well-being is the only thing morally considerable. My position does, however, acknowledge imaginative limitations regarding the human perspective. My view facilitates a variety of methods for identifying oneself and others, individuals and communities, and parts and wholes. Although this includes the possibility of acknowledging the benefits for humans of treating other ecological entities far better than we have historically, my account also facilitates conceptualizing the good of other organisms as differentiated from the human good insofar as possible.

I do not take it to be problematic that acting in ecologically sustainable ways requires action that often meets both pragmatic concerns for human well-being and concerns for a larger set of entities than humans. A working ethic cannot be solely other-oriented or solely self-oriented. Both orientations need attention. If an ethic is solely other-oriented, there is not enough provision for the sustenance of a self to help others. If an ethic is solely self-oriented, it is not an ethic at all. An ecological ethic must of necessity develop from a human perspective, because that is the perspective from which humans start, but if it is limited to concerns for humans alone it is not an ecological ethic. Moreover, the human perspective is further shaped by specifics of the political and social situation of the particular individual human or group of humans.

4. Plumwood is here primarily referring to deep ecological accounts of the ecological self.

5. What precisely the human ecological self amounts to is what is up for debate, but it is worth noting when this concept made its appearance in environmental philosophy. Deep ecologist Arne Naess introduced the concept of the
ecological self, which is meant to acknowledge that humans’ constitutive relations are not limited to those with other humans (Naess 1987, 35).

6. By “bound quite tightly” I mean there is little permeability of perceived boundaries between self and other and often only one set of self-boundaries is taken to be relevant.

7. Cuomo refers to Nancy Chodorow’s work which argues female ego boundaries are significantly more permeable and flexible than men’s and that “there is a tendency in women toward boundary confusion and a lack of separateness from the world” (Chodorow 1978, 110, quoted in Cuomo 1992, 355).

8. Warren is borrowing from Marilyn Frye here. The distinction between arrogant and loving perception was developed in Frye’s essay “In and Out of Harm’s Way: Arrogance and Love” found in The Politics of Reality: Essays in Feminist Theory (1983).

9. I am not denying that there are aspects of moral life that require clear self/other boundaries between humans, and between human and non-human entities. I am, however, proposing there may be ecological contexts in which the sorts of boundaries between self and other as found in Western philosophical thinking require revision; including the boundaries proposed by ecofeminists.

10. Edward Wilson comments that The Sacred Balance is “the most complete expression to date of an environmental ethic from one of the world’s leading conservation writers, combining science, theology, poetry and philosophy to express a world view toward which the human species must shift in the twenty-first century” (Suzuki and McConnell 1997, back jacket).

11. The proportion of water by weight, however, varies with age and gender (Suzuki and McConnell 1997, 59).

12. Again the reciprocal case is not true; the hydrologic cycle does not require the existence of humans for it to exist.

13. Consider as well the following quotation from Fritjof Capra as further evidence of the constant cycling of constituents of the human self: “...an organism is primarily engaged in renewing itself; cells are breaking down and building up structures, tissues and organs are replacing their cells in continual cycles. Thus the pancreas replaces most of its cells every twenty-four hours, the stomach lining every three days; our white blood cells are renewed in ten days and 98 percent of the protein in the brain is turned over in less than one month” (271–72, quoted in Fox 1990, 170).

14. Water, when construed as “other” might be as rain that falls on you, lakes, oceans, and so on, rather than as momentary instances of wider processes of the cycling of water molecules. Multiple conceptualizations are useful depending on your ends.

15. It is worth repeating that this holds for some ecological reflective self-identifications, I am not claiming or recommending that it is the sole form for iden-
tifying. There is room on my account for multiple politically relevant social identifications that require a sense of self as distinct from others.

16. Observation set theory thus "...not only permits but demands meaningful ecological discussion of 'self' and 'other' on the one hand and of 'whole-system behavior' on the other. Certain ecological observation sets relevant to ethics yield an ontology of autonomous individual organisms interacting with one another. Other observation sets paint a holistic picture of ecosystem function. But there is no a priori or ecological reason (other than a misguided reductionism) to give (ethical or metaphysical) pride of place to the latter" (Cheney and Warren 1996, 254).

17. Moreover, we are not solely ecological selves; there are multiple social and political dimensions of selfhood that may overlap or conflict with ecological dimensions of self.

REFERENCES


