

Cascades and Communion: Spiritual Metaphors and Scientific Grounding for Living with
and In the Natural World

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“A trophic cascade is an ecological process which starts at the top of the food chain and tumbles all the way down to the bottom. And the classic example is what happened in the Yellowstone National Park in the United States when wolves were reintroduced in 1995....First, of course, they killed some of the deer but that wasn’t the major thing. Much more significantly, they radically changed the behavior of the deer....Bare valley sides quickly became forests of aspen and willow and cottonwood. And as soon as that happened, the birds started moving in. The number of songbirds and migratory birds started to increase greatly. The number of beavers started to increase because beavers like to eat the trees....

But here’s where it gets really interesting.

The wolves changed the behavior of the rivers. They began to meander less. There was less erosion. The channels narrowed. More pools formed. More riffle sections. All of which were great for wildlife habitats. The rivers changed in response to the wolves.”

-George Monbiot (2014)

Introduction

For the last 12 years I have spent my academic life separated by about 500 yards from my natural habitat in the Politics Department on my campus, having put down roots in the fertile grounds of Environmental and Earth Sciences, like some invasive species. It is a fun place, a welcoming place, and a scholarly home possessing great interest and appreciation of interdisciplinarity. My teaching has changed significantly, as I have hybridized after cross-pollinating with fire ecologists, geologists, historians, and many others, and even spent time back in school. Whereas at the beginning of my career I taught about interest groups and the executive branch alongside my courses in environmental political thought, today its forest disturbance and succession, commensalism, niche construction, trophic cascades, LiDAR, FODAR, photogrammetry, and mycorrhizal fungi. It has been a great journey, and I am nearing that time when I will have been “outside” of political science longer than I was “inside.” I am now more likely to go to geography or forest ecology meetings than to the WPSA.

I start this way not because I feel remorse for a journey I have undertaken quite willingly. Many of us now have voluntarily submitted ourselves to hybridization. Rather, I start this way to provide context for what is about to come, and the query which drives this paper.¹ In teaching both introductory and advanced courses in environmental science I find myself often struck by the impact a particular scientific concept or property has upon the

¹ This paper is part of a larger work on reclaiming the “public space” of environmental ethics and politics. Further expansion of the connection between religious naturalism, ecotheology, ecology, and vision of deliberative politics will be developed in a later section.

imagination and psyche of students, in a way reminiscent of my first encounter with the work of Hannah Arendt or John Rodman. For instance, showing Monbiot's short 5 minute film *On the Wolves of Yellowstone* (Monbiot 2014, script above)², seems to evoke more of a change in disposition and behavior than a semester-long course in environmental ethics or environmental policy. The grasping of—or even confrontation with—these concepts and examples from ecology and environmental science can send chills up the spine of the most inattentive and apathetic student or citizen. It is hard not to be somewhat *awestruck* when one confronts a particularly extensive trophic cascade. While being far from mystical—they are after all, observable, verifiable, and falsifiable phenomena—they often evoke a mystical, even spiritual sense of relation and identity. Could such be the gateway to fundamental individual and collective value change? Could such experiences transform our politics and economy toward living more in and with nature?

Some see this as at least a critical part of the way forward. Consider Yale biologist Ursula Goodenough, linking empirical observations of the world to the significance and insight of the Christian Eucharist, and in so doing inviting a transformation in attitudes towards the natural world:

Finally, we come to communion, the foundation for any ethic. Communion draws us out of our private interiority, compelling as it is, and reminds us of our context and our obligations to that context. And certainly our scientific understandings offer rich resources here. During the course of biological evolution as we now understand it, a common unicellular ancestor served as the founder for the three radiations of life—the bacteria, the archaea, and the eukaryotes. During the post-Cambrian radiation of the eukaryotes, there occurred countless kinds of unicellular, and multicellular, incarnations. ... These data, these numbers, insist that we encounter our deep interrelatedness, our deep genetic homology, and hence our vibrant fellowship, with the rest of the living world (Goodenough 2002 p. 25).

Or consider ecotheologian John B. Cobb, reflecting upon a moment of insight—a Road to Damascus moment-- that finally made him grasp the meaning of the ecological crisis:

“I had not realized how much I loved the woods until I began to notice that they were in decline, realizing that each time I came to them they had died a little. I felt that dying as my dying too. And I have realized that ever since there is a kind of innocent happiness that has become impossible for me, that could be possible again only if I supposed that the dying of the biosphere had been reversed. There is a deep level of my being at which I feel my oneness with the whole system of living things. (1990)”

² Monbiot's film is based upon the research of David Beschta and William Ripple. See Beschta and Ripple 2012.

Aldo Leopold himself knew how to turn an ecclesiastical phrase evoking simultaneously a Genesis story, a narrative of travail, and even rebirth in the following selection from “The Land Pyramid:”

“In the beginning, the pyramid of life was low and squat; the food chains short and simple. Evolution has added layer after layer, link after link. Man is one of thousands of accretions to the height and complexity of the pyramid. Science has given us many doubts, but it has given us at least one certainty: the trend of evolution is to elaborate and diversify the biota...

Land, then, is not merely soil it is a fountain of energy flowing through a circuit of soils, plants, and animals. Food chains are the living channels which conduct energy upward; death and decay return it to the soil. The circuit is not closed; some energy is dissipated in decay, some is added by absorption from the air..but it is a sustained circuit, like a slowly augmented revolving fund of life. (Leopold, 1966, p. 253)”

Could these “spiritual” appeals employing the language and insight of science and ecology lead to fundamental value and political change? After a brief (and selective) review of the complex relationship between spirituality and environmental protection, this paper will examine some initial concerns regarding the trend noted above, and then seek to make connections between these emerging voices and a new, perhaps more productive strain in process theology that evokes a useful means of reconceiving value and relation. I maintain that such a reconception of value and connection is a necessary step for a reimagining of an efficacious and sustainable green politics.

Religion, Spirituality, and the Environment—A Brief Review of a Complicated Relationship

One of the most intriguing and controversial polemics coming out of the first decade of the modern environmental movement was Lynn White’s “The Historic Roots of Our Ecologic Crisis” (1967). Published in *Science* the article suggested that the (however simplistically defined) “Judeo-Christian” tradition’s abstract account of monotheism and historical persecution of animism and theism lay at the heart of our environmental dilemma, by justifying human domination of nature, its spiritual and material devaluation, and the establishment of an anthropocentric spiritual and moral order: “Christianity is the most anthropocentric religion the world has seen ... [It], in absolute contrast to ancient paganism and Asia’s religions . . . not only established a dualism of man and nature but also insisted that it is God’s will that man exploit nature for his proper ends (White 1967, 25).” White of course was less interested in the ecological faults of Judaism than in Christianity, which he argued, had spawned a particular cultural ethos that allied itself with a mechanistic vision of nature. According to White, not only did Christianity make possible the work and worldview of Bacon, Descartes, Leibnitz, and Newton, but also Christianity itself adopted scientific rationalism as a standard of the

divine.³ White's critique resonated with many other writers (see Ehrlich 1970; Singer 1972, 7-8, 19-20, 209), while White himself argued that religion needed to play a restorative role: "Since the roots of our [environmental] trouble are so largely religious, the remedy must also be essentially religious. . . .(White 1967, 1207)."

White's analysis evoked quick and sharp responses from within Christianity and Judaism specifically and within other faith traditions more broadly (see for instance...). Others have suggested that White merely popularized a critique long established by other observers of Christianity (Taylor 2016). Nevertheless, one could say that over the last 41 years, discussion and debate over the relationship between religion and the environment generally has become something of a growth industry (Fowler 1995, Taylor 2016). The toiling in the fields has been diverse both in its images of divinity and the nature of religion, as well as in the extent to which it endorses or amends White's analysis.

Regardless of the reaction and response to White's critique, spiritual and religious beliefs and motivations do play a role in shaping personal and political attitudes towards the environment, even though the connection is often unclear. For instance, nearly 20 years ago a Brookings Institution study found religious affiliations to be "nearly as important as demographic factors in explaining variation in opinion about environmental protection"(Kohut et al., 2000). Yet, the same researcher 10 years later found only a "modest" effect, since all religious respondents expressed strong support for environmental protection and stronger regulation (Kohut, et al., 2010). When looking at specific issues, the Pew Center in 2015 found marked differences between white evangelical Protestants and other religious groups regarding concern for anthropogenic climate change, but the differences evaporated once they controlled for party, race, and ethnicity with white Republicans being the least likely to regard climate change as a serious problem (Funk and Alper, 2015). Nevertheless, a poll conducted in 2014 by the American Academy of Religion *did* find that those with "spiritual experiences" (whether mainline Protestant, Jewish, Latino Roman Catholic, or religiously unaffiliated) were *more* likely to be concerned about climate change, while white evangelical Protestants were least likely to be concerned, and more likely to believe the earth existed solely for human's use (Jones, et. al., 2014).

Moving beyond expressed concern for particular environmental dilemmas, earlier research by Smidt found significant variance among religious traditions (e.g., Evangelical Protestant, Mainline Protestant, Jewish, etc.) and their ideological affinity to environmental organizations (Smidt 2001, 106-107), suggesting religious convictions significantly shape the pluralist politics surrounding environmental and natural resource issues. For decades now numerous religious organizations (ranging from the mainline Protestant National Council of Churches to the conservative Evangelical Environmental Network, to the Zen Buddhist Earth Sangha) have been active in environmental issues, often maintaining a significant environmental presence on the web. Indeed, these "religious environmental movement organizations (REMOs) are proliferating, with

¹ As evidence of science's influence upon religious standards of the divine, White noted the role that technology played in iconic depictions of righteousness in medieval cathedrals and the use of mechanical metaphors in the pulpit. See White 1967, 1205; White 1973, 58-59.

Ellingson, and co-authors identifying more than 80 local and national groups in the US alone, 70 of which have been formed since 1997 (Ellingson, et.al., 2012). Most act relatively independently, focusing primarily on ethically motivating members of faith communities with which they are associated or affiliated, eschewing joint action and even minimizing information sharing with other REMOs, let alone secular environmental organizations (Ellingson, et.al., 2012).

The REMO phenomenon reflects a long tradition in American political movements. Major social and political movements in North America have often accentuated religious appeals and scriptural justifications, from Thomas Paine's *Common Sense* to the civil rights movement of the 1960s. Each in turn has sought to develop what Sallie McFague has described as a new "anthropology," a cohesive narrative based upon religious and spiritual beliefs that can, with the support of redirected social and political institutions, provide a "sacred canopy" endorsing an alternative worldview (McFague 2001, 126), and one perhaps more accessible than the arguments coming from more abstract, less familiar sources (see for instance Callicott 1989; Callicott 1999).

In fact, Lynn White probably should have looked more carefully at the arguments made by some of the earliest voices of the modern American environmental movement. Indeed, from the days of John Muir and other early proponents of conservation, use of religious motifs and analogies has been commonplace. John Muir fought bitterly against Gifford Pinchot's sustained yield exploitation of natural resources, arguing instead for placing "thousands of God's wild blessings" beyond human intervention. Muir described nature as a "window opening into heaven, a mirror reflecting the Creator," and forests as "God's first temples."⁴ In the 1920s and 1930s, Assistant Chief of the Soil Conservation Service Walter C. Lowdermilk drew upon scripture to argue that the nation and its farmers had an obligation to God to be caretakers of the land, not simply to ensure human survival but also as a step toward spiritual fulfillment. He even suggested that had Moses gone to the Mount in the 1930s, God would have delivered an Eleventh Commandment: "Thou shalt inherit the holy earth as a faithful steward . . ." (see Nash 1989, 97-98). In fact, organized religious responses were some of the first attempts at raising environmental consciousness: In the 1930s and 1940s, preachers in North American pulpits invoked images of caretaking and godly stewardship of divine creation in Soil Stewardship Sundays and Rural Life Sundays, at a time when groups such as the Sierra Club were still elite hiking and recreation clubs unconcerned with making broad environmental arguments (Nash 1989, 98). Aldo Leopold himself often found the language and alliteration of scripture much more persuasive than the secular reason of science. After making the rationalist and scientific argument for his famous land pyramid, in which humans are a part of nature and not above it, Leopold reduces it to a familiar scriptural form: "As a land-user thinketh, so is he" (Leopold 1966, 263).⁵

² Muir quoted in Nash 1967, 125, 131. For additional discussion of the import of the distinct arguments of Pinchot and Muir for the environmental movement generally, see Taylor 1992.

³ One could argue that the allusions to religion by the likes of Muir, Lowdermilk, and Leopold are disingenuous and insincere, not reflecting their own spiritual convictions. Indeed Leopold himself found little of personal use in religion generally (see Fowler 1995, 66-67; Meine 1988), and Muir's religious beliefs strayed far from conventional Christianity (Cohen 1984). Yet they demonstrate that even these decidedly secular proponents of reconstructing the human/nature relation understood the broad resonance religion has within North American culture. Perhaps this is part

While much has been written about the “greening of religion” and its implications for environmental politics (see for instance, Fowler 1995, Bowersox 2006, Taylor, et. al., 2016), the focus of this paper is how nature and the environment is changing the way we think about religion and spirituality, and how that in turn is changing the way some make arguments about our place in and with nature.

The extended comments above by Goodenough, Cobb, and Leopold are all illustrative of this reconceptualization of the connection between science, ecology, and spirituality. They are in fact, some of the more accessible versions of this development. Indeed, others have called for a development of a new grand “master narrative” to facilitate a change in human attitudes and foster environmental protection, and often formal religion as well as spiritual engagement are seen as a necessary part (Callicott 2001). Famously, entomologist E.O. Wilson’s *Creation* (2006) is written as an open letter to a Southern Baptist pastor, seeking to find common ground and a shared love of “Creation,” while setting aside more problematic “metaphysical differences.” Biologist Lynn Margulis argued for reconceptualizing the world as Gaia, the self-regulating biosphere upon which we depend. Margulis maintained that Gaia could inspire a sense of spiritual relation and awe—though Gaia itself experiences no sense of meaning or goodness whatsoever (see Sagan and Margulis, 2002). Others advance *religious naturalism*, as Jerome Stone (2017) explains, “a philosophy of life that points out how to lead a robust religious (or spiritual) life while believing that the natural world, including humans, is all there is” (p. 1). Moving beyond the ideas of White or Cobb, religious naturalists like Stone believe that nature as revealed through science can foster “holding nature as sacred,” and hence encourage a fundamental value shift in humanity by evoking images of transcendence and awe (2017, p.121).

Initial Concerns: Marginalizing Voices, Valorizing Science?

There are consequences to this new turn, and some have viewed it with great concern. For instance, Lisa Sideris (2015) raises questions regarding the construction of a new grand narrative rooted in or informed by science—a narrative which she alternately calls “the New Genesis,” “Epic of Evolution,” “The Universe Story,” “Big History,” “The New Story.” Sideris fears that this new narratives and parable (from Big Bang to Conservation Biology) may displace other religious and even secular rationalist narratives of environmental value. Given science’s cultural and ideological prominence, Sideris suggests that this New Genesis narrative “seeks to ground environmental behaviors in a science-based form of spirituality, positing science as the new sacred myth for our times. (p. 137)” Examining the work of Goodenough, Wilson, and others, Sideris finds little circumspection or nuance in their construction of quasi-religious narratives, and suggests that they ultimately endanger science as well as existing religious and spiritual

of the reason White’s thesis has received so much attention: Given the general religiosity (or at least spirituality) of North Americans, religion *may be* a useful vehicle for environmental protection. But the dimensions of the response from *within* Christianity—even during the 1970s when most influential environmental voices were decidedly secular and rationalist (i.e., Ehrlich 1970; Ehrenfeld 1972; Hardin 1972; Heilbroner 1974; Ophuls 1977)—has been quite remarkable, ranging across the theological continuum from conservative evangelical (i.e., Schaeffer 1970) to liberal Protestant (i.e., Santmire 1970; Brockway 1973).

understandings of nature and humanity. She is particularly hard on scientists like Wilson, who over the years has both evoked the language of spirituality, but also rejected spiritual and religious traditions as false and destructive (e.g., Wilson 2014). Indeed, Sideris fingers Wilson at length:

“Science, Wilson (1998:7) suggests, is ‘a continuation on new and better tested ground to attain the same end [as religion]...[I]n that sense, science is religion liberated and writ large’ (1998:7). In this account of truth, a scientific story will, by definition, have the decisive edge” (Sideris, 2015, p. 139)

Sideris suggests the advocates of this Universe Story or New Genesis display an unwarranted arrogance regarding scientific insight: “In fact, it comes perilously close to asserting itself as the one true story for all inhabitants of our planet” (Sideris, 2015, p. 142). Sideris does generally agree with these new mythmakers ultimate objectives, and finds most of them well meaning, seeking to utilize “modern science in order to instill in readers and audiences a profound sense of connection with the universe, and thereby foster environmentally responsible behaviors” (p. 140). However, Sideris fears that this new Epic will seek to be the *only* Epic, supplanting and erasing global and regional faith traditions and those traditions’ capacity to mobilize socially, culturally, and economically diverse groups for environmental protection. Rather this new myth may ultimately undercut its own objective by privileging a particular, highly rationalized and experientially bereft engagement with the natural world, conveying meaning without purpose (2015, p. 136).

Reaction to Sideris’ condemnation has been quick and perhaps justified. While seconding Sideris’ critique of Wilson and others like Richard Dawkins for arrogantly posing science as the *only* legitimate narrative, Holmes Rolston suggests that these new, spiritually engaging yet scientifically informed narratives of nature can *extend* rather than supplant our vision and experience of nature’s significance. Contemporary science has given us the new expanses and epochs full of wonder and ripe with new questions—from the Pleistocene to DNA to quasars to magnetic fields. “To see better what is going on at your local, personal scale requires knowing about what is going on at microscales, at ecosystemic, evolutionary, geological, astronomical scales. (Rolston, 2015, p. 200). Further, Rolston sees benefit in telling a story that is indeed universal, holding sufficiently true and recognizable across cultures and ostensibly generations. For all the celebration of local religious and spiritual insight and activity that Sideris seems to want to valorize, Rolston suggests its impacts upon understanding and consequent behavior change is rather quite limiting: “Try moving Shinto to England. (Rolston, 2015, p. 200)” Finally, Rolston sees benefit in a scientific narrative or “myth” that, in one sense *does* facilitate dismissal of certain faith traditions and spiritualities that are false and unproductive (p. 205), for instance ones that discourage contraception or promote origin stories not compatible with science.

For her part, Ursula Goodenough does note that at times science does display a certain hubris, but, like Rolston, suggests that science can spark enthusiasm and recognition of things not previously seen. Rather than being in opposition to other ways we can

understand and experience the world, or other means (emotional or rational) we may utilize to understand humanity's place in the world and the value of nature, scientific explanation and the wonder it may evoke only "*enhances* the reality, meaning, and beauty of [nature] that I am taking in with my sensory, emotional, and spiritual self. (Goodenough, 2015, p. 179)" She also reminds us that the stories and narratives that we have constructed about the value of nature, our place in the cosmos, and the spiritual implications of nature often reflect a highly anthropomorphized understanding of nature, which science can valuably check (p. 177). Similarly, Goodenough warns us not to conflate the poetic, inspiring, and metaphorical statements of scientists or others in these new narratives with science itself (p. 178).

While Rolston and Goodenough are harsh and dismissive in their general criticism of Sideris, religious naturalist Jerome Stone recognizes other important points in her critique: some seeking to create the New Genesis or Epic of Evolution narrative are selective in their use of science, favoring data and interpretations "that see the universe groping toward purpose and direction," or a depiction of an emergent, globalized, and unitary human family that erases important and meaningful differences in history and culture, and responsibility for ecological devastation (Stone, 2017 p. 28). Similarly, Stone reiterates one of Sideris' main concerns: "the meanings we find in science are not a part of science, yet they should be informed by science." Stone nevertheless suggests, like Rolston, that "while the meanings that individuals may find in this narrative may differ somewhat, this narrative is something that can be a human universal, held in common across cultures" (p. 26). Furthermore, Stone makes clear that science and its insights, no matter how open to interpretation, is *one path* on the way forward, if not *the path*: "We need science, the best science we have. Science is not our only way of engaging the universe. There are other *daos*... To lie on one's back and watch the clouds...to climb a tree in a storm with John Muir are not science, but are valid ways of engaging the world. (p. 27)"

Moving forward, I think that Stone's cautious approach is instructive. As a rather "evangelical" religious naturalist, Stone understands the unique limitations of making even scientifically based spiritual inferences in an era and society where other factors seem to be much more prevalent in defining one's attitudes towards nature than one's spirituality (Kohut et al., 2015). Sideris' criticism, while cogent, reflect at times an almost knee jerk rejection of how confronting the complex world which science reveals to us could be inspiring and awesome.⁶ She is at her strongest when she considers the broader social and political consequences of these new narratives, and worries about their impact upon existing, local, and diverse voices.

But the Insight Remains...

Again reflecting upon experiences that many of us have in class, there is something at least captivating about these new mythic narratives grounded in science and observation, drawing ties between our experience of nature and remnant images of the

⁶ See, for instance, her rather odd defense of the humanities vis-à-vis the natural and social sciences. Sideris, 2015, p. 150.

divine. In the same way that students may react to comprehension of a trophic cascade, religious naturalist Donald Crosby recounts his own moment of immanence one time while encountering a pelican:

Its great wings outstretched, the brown pelican spirals in the thermal air. Scarcely a flicker of those magnificent wings is required for it to soar further and further aloft. Finally reaching an apogee of the spiral, it gently banks and slowly descends, only to be uplifted again in its circling flight. The pelican's course through the air, its feet tucked behind its breast and its giant beak thrust boldly before it, seems effortless. For me, at that moment, this pelican's flight is a compelling symbol of the numinous powers, presences, and wonders of the natural order to which we both miraculously belong (Crosby 2014, p. 3)

Similarly, ecotheologian Matthew Fox expresses the oftenunstated implication of exposure to evolutionary biology, merging the language of a more traditional religious understanding of creation with Darwin, suggesting a new, emergent social and ecological orientation:

[I]t is clear that when an origin story becomes the focus of our common endeavors, the ego does not have to be aggrandized or demolished—it finds its proper place. . . . If the human race can begin to realize a common origin today, then we can also begin to see anew our common destiny and to act accordingly. Our ethics will emerge from our shared [evolutionary] origins and our shared destiny—the alpha and omega of our lives (Fox 1991, 28-29).

For Fox, such recognition—truly a revelation in his mind—motivates us to change not only our relations with nature but also with our fellow humans (see Fox 1991, 29-31). Fox exemplifies the blending of more traditional scriptural statements with scientific insights (see also McFague 2001). But can this really be the way forward?

Moving Forward: Not *The* Narrative, But *a* Narrative, with some Interesting Implications

Sometimes it is hard to figure out what will resonate with a particular audience—or class for that matter. In the end, some students *will* be moved by the trophic cascades Monbiot (2014) depicts or the Eucharistic energy flows of Leopold. The voices that we have looked at briefly here—scientists, ecotheologians, philosophers, and religious naturalists—all seek to inspire immanence via the language of science or observed nature, with the objective of encouraging others to look up, look out, and see a much more populated, much more sacred, much more *valuable* world. All, in one sense, are what Dryzek (1997, 2013) refers to as advocates of a change in environmental consciousness. Such advocates seek first to advance a discourse that reshapes our *understanding* of nature and our relationship with it, which then *in turn* may lead to reconceptualization of our individual and collective behaviors. As List (2015) has noted, such voices employ particular models and metaphors that, while perhaps not empirically

accurate⁷ can be utilized heuristically to promote broader adoption of the change in individual and collective human perception necessary for social change.

While saving the majority of this argument for the following chapter, let me posit here that what is really significant and instructive in these arguments is not the creation of an alternative myth or the valorization of science by scientists and environmentalists. Rather, it is the images themselves, and what they depict. It is not the overarching “meaning” of a cosmic order, once affirmed by religious traditions and now generalized in a scientific story. Instead, it is their tendency to move from a world populated by things (human and non-human, biotic and abiotic), to a world rife with relations, with connections, with ties *between* things. It moves us away from a focus on whether one thing or another has intrinsic or instrumental value (see Regan 1983, Singer 1972), or whether it is possible to extend my understanding of my self to a larger, all encompassing self (for instance, Callicott, 1989). Similarly, it sidesteps questions of foundationalism and objectivity (Norton 2002, Callicott 2002), and instead prods us to move from subjectivity to intersubjectivity. In the process, it returns us to at least one understanding of religion itself—*religāre*— “to bind.”⁸ Religion can be understood in this way as a means of tying ourselves to other things or communities (see DeWitt, 2002, 34).

Greaves and Read (2015) note how ecology can challenge our normal way of locating value—that value can lie in the relation between two things, not simply in the things themselves. Working from as disparate sources as Dewey, Callicott, and Heidegger, Graves and Read take as their starting point the idea that “value is not thought of as attaching to the object valued or located in the subject valuing, but is what comes about and takes place between the two. (Greaves and Read 2015, p. 324).” Greaves and Read postulate that even certain non-human entities (e.g., primates and cetaceans, but maybe even trees and other biota) can perceive these relationships, and be “openly open” to them. But the critical factor for our purposes here are that Greaves and Read suggest that ecology, theology, and philosophy can support a claim that “value is least-problematically said to be found *in the interstices between the ‘valuer(s)’ and the ‘valued.’* Initial appearances notwithstanding, this relationship is *not* one-way or one-sided. (Greaves and Read 2015, p. 334).”

Process theologian Roland Faber echoes Greaves and Read. Working from some of Alfred North Whitehead’s later writings, Faber postulates that there is no “final purpose” to humans, nature, or the divine, but rather a “mutual immanence,” a certain “withness,” which he goes on to describe as a “mutual entanglement through experience and feeling. (Faber 2016, pp. 10-11).” Elsewhere, Faber helps to explain just what is going on with many of the authors and narratives that Sideris finds so problematic. Rather than focusing on the science of ecology, Faber suggests we consider ecology’s “poetic” nature: “‘Nature’ for Whitehead, is always the *experience* of nature of which we—experimenting with this experience—are an *intermezzo*: part, partner, and participant. (Faber 2014, p. 166)”

⁷ Stone’s [2017] caution here about the difference between narratives drawn from science and science itself is instructive here once again.

⁸ Other closely related words are *ligature* and *ligament*.

The insights of Greaves, Read and Faber encourage us to see something different in the statements of the likes of Goodenough, Cobb, Leopold, Stone, and others. Rather than manifestations of some hegemonic grand narrative of ecology and science, they become illustrative flashes of a new way of looking at our connection and value. They do not totalize nature, erase the other(s), nor demand adherence to a particular vision of science. As such, they avoid many of the philosophical and political pitfalls of ecocentrism (see Callicott 1989, Callicott 1999, Callicott 2015) and provide a more accessible bridge between lived experience and a potential democratic politics.⁹

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⁹ This paper is part of a larger work on reclaiming the "public space" of environmental ethics and politics. Further expansion of the connection between religious naturalism, ecotheology, ecology, and a deliberative green politics will be developed in a later section.

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