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Integral Agriculture: Taking seriously the mindset of the farmer, the interiority of the beings on the farm, and a metaphysics that connects them

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**Integral agriculture: Taking seriously the mindset of the farmer, the interiority of the
beings on the farm, and a metaphysics that connects them**

by

Travis Cox

A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Major: Sustainable Agriculture

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Iowa State University

Ames, Iowa

2014

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DEDICATION

This dissertation is dedicated to all the beings whose relations have helped to create me and thereby this academic work: my mother and father, Ed and Betty; my wife, Chrissa, and my two daughters, Cora and Adeline; my sister, Amanda, and my niece, Lilly; my sister-in-law, Randee, and my niece, Grace; all my friends and family, both human and More than Human; and the Divine that runs through it all.

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ABSTRACT

With the steady increase in the market share of organic food over the last 30 years, some farmers have switched from “conventional” to “sustainable” agricultural practices in order to capitalize on those new markets. Are the practices the only things that need to change?

Building off of Warwick Fox’s conception of “transpersonal ecology,” transpersonal agroecology (TPAE) is the name given to a proposed alternative mindset of the farmer derived from various alternative agricultural theorists of the last 100 years. These writers oppose the scientism and economism that typify industrial agriculture, subscribe to the notion that experiences of "identification" between the farmer and the beings on the farm are an important component of a truly sustainable agriculture, and suggest that a truly sustainable agriculture requires a radical critique of the metaphysical assumptions that underlie modern agricultural practices. A case is made that a process metaphysics (based on the philosophy of A.N. Whitehead) can productively support a transpersonal agroecological way of being on the farm with its requisite sustainable agricultural practices.

Finally, though many theorists have analyzed both industrial and sustainable agriculture from an ideological perspective, most of them partake of a subtle form of materialism, recapitulating the belief that relationships among beings are exclusively external. This subtle materialism precludes the farmer from ascribing interiority to the majority of the beings she is in relationship with. Revisiting transpersonal agroecology, with an understanding of interiority, yields a truly holistic, integral agriculture that takes seriously the mindset of the farmer and the interiority of the beings on the farm.

CHAPTER 1. GENERAL INTRODUCTION

Agriculture will remain a tragedy so long as it is kept separate from the problem of the human condition. And the human condition will remain a tragic problem as long as it is kept separate from the problem of agriculture. (Jackson, 1984, p. 161)

What does philosophy have to do with sustainable agriculture? I've faced this question, in various forms, many times throughout my career here at Iowa State University.¹ For instance, after taking a course entitled "Pedagogies of Dissent," which was offered by the Educational and Leadership Policy Studies department, I was compelled to bring the knowledge of critical theory to my fellow students. I was afforded the opportunity at one of our "Conviviums," a weekly student social gathering that follows our Graduate Program in Sustainable Agriculture seminar ("Colloquium") every Wednesday. I had a formal presentation planned, along with a handout, but afterward I noticed that most of the people assembled were confused at best. "What does social justice have to do with raising pigs?" asked one of my classmates.

Another example comes from a student screening of the documentary *To Patent a Pig*. In our discussion afterward, I noted that "my heart hurt", which was an attempt to

¹The tone of the introduction and conclusion of this dissertation differs significantly from the chapters contained herein. Let the reader be assured that this is purposeful. This introduction, along with the conclusion, has afforded me the opportunity to make an autoethnographic attempt at scholarship (Spry 2001).

express my (at that time) unstructured moral discomfort with what I perceived to be the numerous instances of unethical human behavior exhibited in the film. Again, this level of inquiry was greeted by apathy, and the closest thing I got to a positive response was from a student colleague who, throughout the rest of our time in GPSA, referenced my comment as an example of the necessity of multiple perspectives for the project of sustainable agriculture, even if no one really seemed to know what that meant.

One final example will segue to this dissertation. “Foundations of Sustainable Agriculture” is the one theory class we students in GPSA are required to take. In this class, the instructors attempt to introduce as many of the philosophical implications of sustainable agriculture as possible. As noted by Teresa Opheim, executive director of Practical Farmers of Iowa (PFI), in our bi-annual program retreat, this is an especially difficult task because we, as a program, are not only focused on “agroecology,” which seems to have fewer implications, but are instead focused on “sustainable agriculture”, which has overt political and social implications, even in the name alone. Studying “sustainable” agriculture necessitates the existence of an “unsustainable” agriculture, thus pitting “us” against “them.”

In their effort to educate GPSA students on the full spectrum of implications, the instructors of “Foundations” directed our attention to the concept of “positivism” in the philosophy of science. To my astonishment (and, to be honest, my horror), there were students in the course, graduate students who were actively involved in research at ISU, who couldn’t differentiate between the work that they did as scientists and the concept of “positivism,” the now debunked belief that science is capable of delivering “value-free” and “objective” “facts” about reality. This experience, coupled with the textbook

for the course, Paul Thompson's *The Spirit of the Soil* (1995), which I found to unrealistically privilege rationality and discredit spirituality (I later found out that this was also a problem for Campbell, 1998), elicited from me an email rant to my professors about the necessary role of love in sustainability. As a result of that email, one of the professors allowed me to have her session the next day in class to talk about love, and I took her up on that offer. Unfortunately, the result was no different than my previous attempts to interject values into the discussion. In my presentation, I used supporting content from Aldo Leopold, Thomas Berry, Martin Luther King Jr., Joseph Campbell, Gregory Bateson, Ervin Laszlo, Joanna Macy, Mircea Eliade, Curtis White, Michael Polanyi, Jean Gebser, Pierre Teilhard de Chardin, and Edgar Morin, to no avail. I got the same blank stares advocating for love as I did when I advocated for social justice and when I talked about my moral feelings.

Therefore, I decided to do research that would consider whether the people involved in the project of sustainable agriculture, the progenitors and practitioners of the extension service, organic agriculture, the land ethic, perennial polyculture, and more, had something to say about the mindset of the farmer. As it turned out, they did. Not only that, but the theorists in each of the fields that I studied for my dissertation, sustainable agriculture, process metaphysics, and environmental philosophy, also took up the larger issue that frames the question opening this dissertation: "Why does philosophy matter at all?" The bulk of this introduction will be an answer to this question from within each of the disciplines discussed herein.

Dissertation Organization

But first, allow me to provide some wholeness. The goal of this dissertation was to develop a philosophy for sustainable agriculture by identifying a coherent tradition from within the writings of a representative selection of key figures within the sustainable agriculture movement. Chapter two is the end result of the first attempt at such a philosophy, explicitly centered on the interiority of the farmer. Transpersonal Agroecology (TPAE) is a theory that asserts that the mindset of the sustainable farmer is just as important as her practices and that the mindset TPAE theorists advocate for is one that is against scientism and economism and supportive of experiences of identification between the farmer and the beings with which the farmer is in relation, supportive of the processes and alternative epistemologies and methodologies whereby those experiences are engendered, and supportive of the conversations about values and spirit that accompany such experiences and practices.

Chapter two drew inspiration, both ideologically and methodologically, from transpersonal ecology, which itself is based on the environmental philosophy known as deep ecology (DE). Here, as a way of elucidating the purpose of chapter three, we will also draw on deep ecology here. DE is articulated as a set of eight basic principles, the belief in which constitutes a person being a “deep ecologist.” However, it is generally accepted that there are many sources for and influences on the platform of deep ecology and that a multitude of actions and decisions can flow from this platform. Similarly, the purpose of chapter three is to put forward process metaphysics as one possible source for a TPAE way of being in the world, not to suggest that it is the *only* source for TPAE. As Arne Naess, the founder of deep ecology, puts it: “the situation reminds us that very

similar or even identical conclusions may be drawn from divergent premises. The principles (or platform) are the same, the fundamental premises differ.” (Session & Devall, 2001, p. 225). As it pertains to sustainable agriculture, TPAE (the similar or even identical conclusions) can be drawn from divergent premises (Fukuoka’s Zen or Bailey’s Christianity). The point of chapter three is to show that TPAE can also be drawn from a process metaphysics, and that in doing so the sustainable agriculturalists are assisted in important ways, such as the ability to adjudicate between competing centers of value (to choose one being over another—the very definition of agriculture) and the revisioning of the human as an ecologically benevolent actor.

Finally, chapter four is a bookend to chapter two. Chapter two is a treatment of the interiority of the farmer. Chapter four is a treatment of the interiority of the non-human beings on the farm. Chapter four flows out of and is informed by TPAE. Whereby most modern philosophical theorists of sustainable agriculture neglect the subjectivity of the more than human world, implicit in many of the TPAE theorists is an awareness of the interiority of the beings on the farm and the necessity of a reciprocal relationship between those beings and the farmer for a truly sustainable agriculture. Taken altogether, chapters two through four articulate the concept of an “integral agriculture,” one that not only takes seriously biology and ecology, but also the mindset of the farmer, the interiority of the beings on the farm, and puts forward process metaphysics as a possible ground from which these integral ways of agricultural being can take root.

Sustainable Agriculture

This section will introduce the second chapter, “Transpersonal Agroecology: The Metaphysics of Alternative Agricultural Theory,” and it will show philosophy’s relevance for agriculture by discussing articles by John Ikerd and Fred Kirschenmann. Both Ikerd and Kirschenmann are global leaders in the field of sustainable agriculture, and both have written about the role of philosophy in sustainable agriculture. Indeed, both find it to be absolutely necessary.

Ikerd wrote a chapter in the book *Sustainable Agroecosystem Management: Integrating Ecology, Economics, and Society* (2009), titled “Rethinking the First Principles of Agroecology: Ecological, Social, and Economic,” in which he challenges “advocates of agroecology” to “answer the questions of *why* designing and managing *sustainable* agroecosystems should be a critical priority and *why* the ecological, social, and economic dimensions of agriculture must be integrated to ensure agricultural sustainability” (Ikerd, 2009, p. 42). Ikerd believes that “most scientists avoid such questions because the answers ultimately depend upon basic beliefs or *first principles*,” which are “inherently philosophical rather than scientific in nature” (ibid.).

Transpersonal agroecology (TPAE), the theory outlined in chapter two, is the outcome of such an effort. Building upon both deep ecology and transpersonal ecology, environmental philosophies that are distinguished by their emphasis on rethinking traditional Western first principles, TPAE not only builds on Ikerd’s work by encouraging a conversation on values and the role of spirit, but also puts forward some practical steps toward fundamental reorientation at the agricultural level using concepts like identification and alternative epistemologies and methodologies. This latter

concept, alternative epistemologies, has significant overlap with Ikerd's understanding of "common sense," which he defines as "our inner sense or intelligent insight" (Ikerd, 2009, p. 43, 44). While Ikerd takes a significantly different course than TPAE to come to his conclusions, he reflexively expresses the principles he is discussing—like diversity and trust—when he states at the end of his work: "Perhaps better ways can be found for defining or explaining these first principles of agroecology" (ibid., p. 51). I am certainly not purporting to have found a "better" way of discussing first principles, but I am suggesting that I have found a different way, one that is based on the collective understanding of various individuals who either helped or are currently helping to define the very field of agroecology. Their collective interest in these philosophical issues surely gives more weight to Ikerd's insistence that a discussion on first principles is necessary.

Similar to Ikerd's call for the revision of the basic axioms of agroecology is Kirschenmann's conclusion that "unless farmers and non-farmers alike recognize their common need to re-think core values, we are not likely to see the evolution of a new ethic for agriculture that reflects our new understanding of how nature works" (Kirschenmann, 2004, p.175). In his chapter from *Agroecosystems Analysis* (2004) titled "Ecological Morality: A New Ethic for Agriculture," Kirschenmann argues that we need both an "enlightenment approach" as well as an "incentives approach" towards shifting our cultures core values (ibid., p. 170, 171). Kirschenmann uses the work of sustainability theorist David Orr to suggest three "enlightenment" strategies to bring about change: the dramatization of our ecological crises, "more accurate and telling metaphors and theories," and political change (ibid., p. 170). However, Kirschenmann

also thinks that more pragmatic “incentives” are necessary, such as policy-driven or market-driven initiatives, like the Conservation Resource Program and the organic foods market, respectively. But what is of utmost importance, in Kirschenmann’s view, is the articulation of an agriculture that resolves the “fundamental human paradox” whereby people are both “part of a web of life” and yet, all too frequently, people’s actions betray that understanding. TPAE is most certainly an “enlightenment” approach in Kirschenmann’s framework, an attempt at a “more accurate theory” that better articulates the mindset of a sustainable farmer. As such, TPAE “internalizes” the “ethical dissonance” (Kirchenmann, 2004, p. 173) of humans as both a part of nature and apart from nature, mainly through the concepts of ‘identification,’ whereby a farmer comes to identify with the farm and the beings on the farm, and ‘process,’ which has the farmer responding to and carrying out changes in themselves and the farm as a result of their identifications. Like Kirschenmann, TPAE is concerned with values, as well as scientism and economism, but it also addresses the role of spirit and alternative epistemologies and methodologies for creating an “ecological morality” as it is related to agriculture. Therefore, the second chapter can be seen as a working out of both Ikerd and Kirschenmann’s insistence that sustainable agriculture be examined from a philosophical level.

Process Metaphysics

Process metaphysicians who write on environmental issues, such as John Cobb, also make a case for the importance of philosophy or, more specifically, metaphysics. In most instances, they link the discussion of metaphysics to solutions for the

environmental crises facing the planet. In this case, sustainable agriculture is used as a specific solution to unsustainable conventional agriculture, the latter having significantly contributed to the environmental crises. Hence, their case for addressing environmental issues at a metaphysical level serves as proof that eco-agricultural issues should also be dealt with at that level.

One way that process metaphysicians argue for the primacy of metaphysics is to highlight the role ideas play in social change. Additionally, if many of the problems of the eco-crises stem from an unsustainable worldview or conception of reality, then simply changing one's metaphysics will cause much of their unsustainable behavior to change. Finally, process metaphysicians will assert that their metaphysics will actually bring order and clarity to an individual's life in ways that the dominant metaphysics doesn't.

This "subject as primary" process metaphysic is contrasted with the dominant metaphysics, described as "the mechanical model" by Cobb, in an article directly addressing the implications of a different metaphysics, or, as he puts it, "global horizon" for agriculture. Cobb wants "to suggest changes in our basic ways of thinking that can undergird our quest for a sustainable agriculture" (Cobb, 1984, p. 206). The mechanical model envisions reality in terms of self-contained substances whose relations are external. The "ecological" model, which is synonymous with process metaphysics, sees substances being constituted by "its relations to other things" (ibid., p. 211).

Conventional agriculture follows the mechanical model, whereas an ecological farmer "prefers to keep herself and other people closer to the plants and animals," eschews making decisions based solely on economic concerns, and values "the richness of

experience of the people involved” (Cobb, 1984, p. 208). Here Cobb reiterates this distinction as it pertains to land:

The idea of land as a resource whose value is what human beings are prepared to pay for it expresses the substantial-mechanical way of thinking. The idea of the land as a community in which human beings can participate destructively or constructively is an ecological way of thinking. In this context the value is found in the life it contains and in its capacity to contribute richness to living experience. (Cobb, 1984, p. 212)

Throughout the essay, Cobb highlights the importance of analyzing fundamental assumptions about reality and the relevance of such an activity for agriculture: “We cannot solve the problem of sustainability in agriculture without looking at the fundamental assumptions on which other aspects of our corporate life are based,” and “[O]nly as there is real conversion of perception by the emergence of a new horizon will the question of this conference, that of a sustainable agriculture, come to command wide attention” (ibid., p. 209, 216). The following three sections further articulate why and how a shift at the metaphysical level needs to be a part of alternative agricultural theory.

Power of Ideas

One presupposition in arguing for a change in metaphysics is the belief that ideas have power and that changing ideas lead to desired effects. Benzoni makes the point that people “not only *live* their lives, but also *lead* them in accord with accepted ideals or possibilities” (Benzoni, 2007, p. 155). Therefore, if one could change people’s ideas of what is possible, especially at such a fundamental level as the metaphysical level, then

an entire set of novel possibilities could arise. This explains Benzoni's assertion that "ideas have efficacy" (Benzoni, 2007, p.2). Other process theorists describe the belief in the power of ideas in other ways. Armstrong-Buck talks about social change being "hastened by the conscious formulation of ideals," and Cobb and Griffin write that "[N]ew ideals can enter history and slowly produce changes that make their embodiment possible... Institutions can be changed by ideas as well as by force" (Cobb & Griffin, 1986, p. 251, 112).

When applied specifically to the environmental crises, Birch and Cobb believe that we need new environmental ethics to counter the current ethics--anthropocentrism and rationalism--that shape our unsustainable relationship to the natural world (Birch & Cobb, p. 143-144, p. 175). They use as an example the animal rights movement, which has been misunderstood as a "sentimental luxury" as opposed to "having fundamental prophetic import for the structure of ideas by which society lived" (ibid., p. 148). Here, they give an example of how process metaphysics would have practical implications:

It has not been wrong to view animals as means to our ends. What has been wrong has been to view them as *only* means. Ethics, law and economics should take account not only of the uses of animals, but also of their rights, which are correlative with their potential for richness of experience. (ibid., p. 154)

Worldview

Another possible analogue between transpersonal agroecology and process thought, emphasized by Griffin, is that just as "environmentalism is a movement seeking

a worldview,” so too does transpersonal agroecology need a metaphysics to ground its beliefs (Griffin, 1994, p. 190). Process theorists have many ways of describing the outcome of adopting their metaphysics, all of them pertinent to the project of sustainable agriculture: ecological attitude, ecological ethic, and ecological worldview (Cobb & Griffin, 1976, p. 63,76; Benzoni, 2007, p. 5; Griffin, 1994, p. 191).

The efficacy of adopting a process metaphysic that results in a more ecological being stems from the fact that “[e]very view of reality has ethical implications” (Birch & Cobb, 1990, p. 141). There is an awareness that, in relationships, treatment follows belief. Birch and Cobb apply this awareness to animal rights again: “other animals will be respected only as they are genuinely experienced in a different way, and that change will involve a change in the way human beings experience themselves as well” (ibid., p. 144). The cyclical and mutually implied nature of change, from worldview to experience to self-awareness (which is constitutive of and affected by worldview), will be addressed in each of the chapters of this dissertation. For now, the quotes serve as illustrations of the connection between a theory about the nature of reality and the subsequent experience of reality as a result of the theory. Cobb makes an additional case for metaphysical change beyond its efficacy; he believes that because unsustainable theory “has both shaped and expressed our dominant perceptions and sensibility, it is necessary to change our vision of reality as well” (Cobb, 1999, p. 322).

Yet another argument for metaphysical change is that people need to be motivated at a sufficient depth to manifest the requisite changes or, to put it another way, people need to act from inclination (Cobb, 2001, p. 113; Birch & Cobb, 1990, p. 144). One of the benefits of marshalling energy from the metaphysical level to tackle

our ecological crises is that, if action is taken as the result of an everyday worldview, then the individual will have a larger set of reserves to draw from in difficult situations compared to the individual who has to constantly make moral decisions contrary to his or her given worldview or metaphysics (Birch & Cobb, 1990, p. 144).

A more specific example will serve this enterprise well here: “Modern science, with its ‘Cartesian scientific doctrine of bits of matter, bare of intrinsic value,’ has had negative consequences, because it fostered ‘the habit of ignoring the intrinsic worth of the environment which must be allowed its weight in any consideration of final ends.’ To abolish the notion of vacuous actuality would be to establish the basis for replacing this bad habit with the habit of reverence: ‘Everything has some value for itself...By reason of this character, constituting reality, the conception of morals arises. We have no right to deface the value experience which is the very essence of the universe’ (Griffin, 1994, p. 194).

Clarity and Order

The third benefit of addressing the issue of sustainable agriculture from the metaphysical level using process metaphysics is that process metaphysics has, as an internal criterion, the requirement that the metaphysics bring order and clarity to a person’s daily experience of reality by affirming and illuminating this experience. Armstrong-Buck gives one of the best summaries for the importance of metaphysics, in general, and, particularly, process metaphysics. She states that metaphysical views can help to “satisfy our need for coherence as we struggle to interpret our lives... [and] offer the possibility of going deeper than common sense or mass consciousness” (Armstrong-

Buck, 1991, p. 31). Process metaphysics marries a belief in the power of reason to interpret some part of reality and the necessity that a metaphysical system have applicable value, all the while understanding that, in Armstrong-Buck's words, "such a system is always a tale spun by a finite being from its own finite perspective... They are not pronouncements of a godlike reason, but rather, adventures of the imagination" (ibid., p. 32).

This feature of metaphysical views can support the project of transpersonal agroecology in two ways: First, it meshes well with the idea of "process" that comes from TPAE, the fact that a practitioner of TPAE will have a worldview that orders her intellectual experience in a way that confirms her agricultural experience, thus further solidifying her worldview. Second, given that farmers are notoriously a practical bunch, the emphasis on order and clarity derived from a coherent metaphysical worldview will assist in their efforts to gain adopters.

There are two ways that process theorists conceive of the clarifying benefits of their metaphysics: theologically and ecologically. Cobb and Griffin (1976) are addressing theological issues in the following quotation, but it is easy to see how it would translate to transpersonal agroecology, "As a convincing notion of deity emerges that illumines human experience and coheres with our understanding of the world, the demand for an isolated and abstract proof [of God] diminishes. A theistic vision of all reality can gain adherence best by displaying its superior adequacy to other visions" (Cobb & Griffin, 1976, p. 43). This could easily read: As a convincing notion of transpersonal agroecology emerges that illumines farmers' experience and coheres with an ecological understanding of the world, the demand for an industrial and monocultural

agriculture diminishes. A transpersonal agroecological vision of the farm, and of all reality, can gain adherence best by displaying its superior adequacy to other agricultures.

Benzoni approaches this concept from an explicitly ecological awareness. He applies Whitehead's criterion of philosophical coherence to the modern western axiom of the separation of humans with nature and finds it lacking: "For Whitehead, any ontological divide between human beings and the rest of creation is untenable because it is finally incoherent" (Benzoni, 2007, p. 131). Armstrong-Buck quotes from Session and Devall's criteria for a deep ecology metaphysics to show how, contrary to the beliefs of many Deep Ecologists, a process metaphysics is deeply ecological: "An appropriate metaphysics for the emerging ecological perennial philosophy would provide a structural account of the basic unity and interrelatedness of the universe while at the same time accounting for the importance and uniqueness of individual beings" (Armstrong-Buck, 1986, p. 241-242) Process metaphysics does both of those things. It accounts for interconnectedness by claiming that everything in a subject's past (keeping in mind that everything in this metaphysic is a subject) participates in constituting that subject in the present, which has implications for the future. It accounts for the worth of individuals by locating value in subjective experience, which is the experience of everything that exists.

However, what is unique about process metaphysics, and why it lends itself well to agriculture, is because it allows for adjudication, or decisions to be made, in situations between competing centers of value. Also, it provides a conception of the human being that properly values humans as ecologically benevolent agents in a world of interrelated subjects. Chapter three will highlight both of these important concepts (adjudication and

proper valuing) while also demonstrating the almost one-to-one overlap between TPAE and process metaphysics, grounding TPAE in a theory of reality that reinforces those ways of being and relating.

Environmental Philosophy

J. Baird Callicott, whose thinking figures prominently in the fourth chapter of this dissertation, tackles the subject of philosophy's relevance head on, starting with the title of his article on the subject, "Environmental Philosophy *Is* Environmental Activism: The Most Radical and Effective Kind" (Callicott, 1999). Callicott begins with two "pictures of philosophy" that mirror my experience at Iowa State, (i) philosophy as irrelevant (the perspective of some of my classmates) and (ii) philosophy as "the most potent force of social change imaginable," (my own perspective) (Callicott, 1999, p. 27). Callicott takes the reader through various "antiphilosophers," such as Kenneth Sayre and Bryan Norton, who dismiss the possibility of the second "picture" being true (ibid., p. 29, 30). Callicott counters their disbelief by arguing that "environmental philosophers, rather, are attempting to articulate a new worldview and a new conception of what it means to be a human being" (ibid., p. 30). He goes on to say, "People come to believe that old norms...should be abandoned, and new ones adopted...only when their most fundamental ideas about themselves and their world undergo radical change" (ibid.). Callicott acknowledges that people don't just come running to philosophers when their culturally given sense of self is challenged, but he also explains, "rather philosophers...give voice to the otherwise inchoate and inarticulate thoughts and feelings in our changing cultural *Zeitgeist*" (ibid., p. 32). Callicott believes that the

environmental philosophers of the 20th and 21st century, such as Leopold, Naess, Rolston, and Plumwood, among others, will have as much effect on a future non-anthropocentric society as 17th and 18th century philosophers, such as Hobbes, Locke, Bentham, and Kant, had on the abolishment of slavery.

Callicott sees the “inescapability of metaphysics” as a result of living “today in a culture undergoing a profound paradigm shift” (Callicott, 1999, p. 34, 36). He, like many of his colleagues cited in the fourth chapter, analyzes the Western worldview, but he does so here in order to show how the structures of thought in the West (as I imagine they do everywhere) have their source in philosophy: “Who could say that this fundamental element of the prevailing Western worldview [mechanism] was not the creation of philosophers?...Look around you at this thoroughly mechanized environment. It didn’t just happen. It isn’t just the result of an inevitable process of blind technical evolution. It is, rather, the direct legacy of Western natural philosophy going all the way back to the pre-Socratics” (ibid., p. 39).

Callicott then echoes Lynn White Jr. by stating that if Western philosophy got us into this mess, then it can surely help to get us out. He quotes White: “The issue is whether a democratized world can survive its own implications. Presumably we cannot unless we *rethink our axioms*” (ibid., p. 40).

Chapter four is an attempt at this enterprise. In reviewing several high-level analyses of the conceptual landscape of sustainable and industrial agriculture, an unfortunate commonality was uncovered, relative to the concerns of Aldo Leopold and Thomas Berry: none of these analyses challenged the materialist aspect of the Western worldview. They all accepted, either explicitly or implicitly, the belief that a

fundamental character of the material world is the absence of a subjective, phenomenological, interior reality. However, through a return to the TPAE theorists of chapter two, it will be shown that interiority is necessary for a truly holistic, integral agriculture. Callicott provides a summary of this effort:

Of course, we philosophers do not simply create new environmental ideas and ideals ex nihilo. Rather, we try to articulate and refine those that the intellectual dialectic of the culture has ripened. To employ a Socratic metaphor, we philosophers are the midwives assisting the birth of new cultural notions and associated norms. In doing so we help to change our culture's worldview and ethos. (Callicott, 1999, p. 43)

Two quick asides will facilitate the transition to the second chapter. First, permit me to exploit a metaphor. Liberty Hyde Bailey, an agricultural theorist whose thought is essential to both TPAE and Integral Agriculture (TPAE combined with an understanding of the interiority of the more than human world), is credited with being the father of the extension service, an idea born through Bailey's efforts, as the dean of Agriculture at Cornell University, to assist a wealthy New York land owner with some problems he was having at his vineyard. Bailey also gave us *The Holy Earth* in 1915, a truly holistic intellectual effort that represents one of the earliest attempts at an Integral Agriculture. Perhaps it has taken 100 years for the ideas he set forth in that book (and others) to finally "ripen," in Callicott's words. Or better yet, perhaps those ideas, ripe at the time, were bottled up and allowed to ferment, so that we people of the 21st century can have our minds altered by the radical ideas that Bailey (and others—Leopold, Steiner,

Jackson, and Wendell Berry) put forward about who we are and what our proper relationship to the more than human world should be.

Finally, I'd like to recount an anecdote about my process of writing the fourth chapter. I first read Callicott's "The Metaphysical Transition in Farming: From the Newtonian-Mechanical to the Eltonian-Ecological," (1999) and I thought that my fourth chapter would just be a critique of that article from the perspective of TP AE and scientism. In following up on Callicott's work, I found the article "The Worldview Concept and Aldo Leopold's Project of 'World View' Remediation" (2011). I was happy to see Callicott accepting more of Leopold's spiritual offerings, but I still found his work to be scientific, in that spirituality was presented in service to science. What was most interesting, though, was that he also put forward Thomas Berry as someone, like Leopold, who understood the relationship between and necessity of spirituality and sustainability. I found this association interesting because, while it is explicit with Berry, I also viewed Leopold as expressing the necessity of interiority as well. For me, this association indicated something that was important for environmental ethics, even if Callicott hadn't pointed it out.

At the same time that I was exploring Callicott's thinking, I was also researching other efforts at analyzing agriculture from an ideological level. I found a dozen or so articles or books in that vein, and all of them neglected to address the implications of the interiority of nonhumans. I thought this would be my fourth chapter: a survey of the paradigmatic agricultural analysis literature in order to highlight the neglect of the issue of interiority. I spent the entire month of August 2014 writing 16,000 words that I thought would be more than enough material to meet the 10,000 word count limit of the

journal to which I was hoping to submit. I sent my first draft out to my major professors in September thinking that I would just have to do some minor editing and cutting, but one of my major professors, Kevin deLaplante, gave me some feedback that changed the trajectory of the chapter.

My characterization of what he told me is as follows: I really didn't say anything. My first thought was, "I wrote 16,000 words, how could I not have said anything?!?" But what he really meant by his feedback was that I didn't provide proof for my concern. So what if they didn't include interiority? Why do they need to? Kevin told me to return to TPAE as a way of making that case. I was hesitant to do so, but I didn't know why. Instead, I thought I could find something in Worster's book, *Nature's Economy*, to articulate why, like the new organicists Worster discusses, the meta-theorists were "constrained" in their effort to "promote a deeper sense of integration between man and nature...and to let all the appended scientific arguments go" (Worster, 1994, p. 337). But I didn't quite find what I needed. Again, Kevin encouraged me to return to TPAE and I finally did, only to discover the reason for my initial hesitation. Love, amongst the other things eventually delineated in chapter four, was an explanation of both the fact that meta-theorists left out an account of interiority and the fact that it matters.

Here I am, yet again, having to talk about love. To be honest, I didn't want to do it. I didn't want to have to stand up in front of a bunch of "hard" scientists and "social" scientists and talk about how love matters in sustainable agriculture. But as I hope to have shown in my fourth chapter, it does matter! As does creatureliness, a realistic appreciation of our interconnectedness with the more than human world, and the sacred.

The concept of interiority plays a fundamental role in these aforementioned endeavors as well. Finally, as Callicott has argued above, these seemingly “esoteric” philosophical ideas have real world implications. In terms of an integral agriculture, through the understandings outlined above, the farmer develops a sensitivity that allows her to have a genuine conversation with nature, the land, and the beings with which she is in relation. I trust that this attempt to show how philosophy is important for sustainable agriculture, my final one at Iowa State as a student, will meet with more success than my previous attempts. I say “trust” here because, with the assistance of my committee and particularly my co-major professors, as well as the assistance of journal editors and anonymous readers, I am more confident that the scholarship contained within this dissertation is ripe and ready to share.

CHAPTER 2. TRANSPERSONAL AGROECOLOGY: THE METAPHYSICS OF ALTERNATIVE AGRICULTURAL THEORY

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Abstract

Industrial agriculture has taken over as the dominant form of food production globally, resulting in alternative production methods converging as a sustainable counter. Unfortunately, the ideological and metaphysical underpinnings of these alternative agricultural philosophies have been ignored as have the metaphysics of industrial agriculture. Using transpersonal ecology as a disciplinary analogue, this paper demonstrates an ideological commonality among alternative agricultural theorists, such that the term *transpersonal agroecology* covers their beliefs like the term *transpersonal ecology* covers the commonality of deep ecologists. The commonality is threefold. First, theorists are united in opposition against the scientism and economism that make up the productionist mentality. Second, there is awareness that in the practice of sustainable agriculture there is a process for and experience of identification with the beings on the farm, and with the farm itself. Finally, theorists contribute to the transpersonal conversation through their emphasis on values, alternative methodologies, and spirit.

Introduction

For most people, sustainable agriculture pertains to the on-farm activities of practitioners, such as cover crops, integrated pest management, and no-till. This is true even for the off-farm activities of consumers, who choose to purchase their food locally

or look for the USDA organic seal. However, a study of the progenitors of sustainable agriculture, people such as Albert Howard, Masanobu Fukuoka, and Rudolf Steiner, who developed organic agriculture, natural farming, and biodynamics, respectively, indicates that there is something more than just practice to sustainable agriculture. There is something deeper at the level of the mind-set of the farmer.

By employing transpersonal ecology (TE) as a disciplinary analogue, including direct quotes from the aforementioned theorists, as well as many others, this article shows that sustainable agriculture has implications for the worldview of its practitioners. These implications include an opposition to the scientism and economism of industrial agriculture, a sense of the process and experience of identification with the farm and the beings on the farm, an awareness of alternative methodologies and epistemologies, and an explicit role for values and spirit. The end result of this study is a theory, transpersonal agroecology (TPAE), that conceptualizes the commonalities of these alternative agricultural theorists and thus opens a discussion about the deeper and more human aspects of sustainable agriculture and provides a framework with which to guide such a discussion.

Methodology

The enterprise of bringing to light the transpersonal aspects of alternative agricultural theory could be undertaken in numerous ways. For the purposes of this article, several seminal texts from the field of sustainable agriculture and from the past 100 years were chosen. Two main criteria were used to select theorists and texts.

First, selected individuals contributed in some way to shaping actual agricultural practices. Steiner has a peculiar place in this group of selected theorists, given that he was not an agriculturalist and that any clarifications about biodynamics practice were thwarted by his death a year after his lectures. Therefore, Koepf, Pettersson, and Schaumann (1976) were used here in order to show a theory in action. Also, Bailey might be a new name to many people, even those aware of some of the history of sustainable agriculture. Bailey, Dean of Agriculture at Cornell University from 1903 to 1913, is credited with being a pioneer of the national Extension Service, and was appointed Chairman of the National Commission on Country Life by president Theodore Roosevelt in 1908 and author of its final report in 1909 (Minteer, 2006; Peters, 2006).

Second, selected individuals were ones representing more contemporary voices, particularly the voices of farmers and leaders in the field of sustainable agriculture. Aldo Leopold appears to be the odd man out in this group. He neither created an alternative agricultural practice nor was he even a farmer. Leopold was included because he discussed farming at length in *A Sand County Almanac*, which fills a gap in the time line of the other selected authors. Also, Leopold is widely recognized as the forerunner of modern environmental ethics, and because TPAE will obviously contribute to that discipline, his inclusion here was necessary. Finally, it should be noted that many of the terms included here were used as synonyms. For instance, *alternative agriculture*, *sustainable agriculture*, and *agroecology* were all used more or less interchangeably.

Transpersonal Ecology

TPAE draws its inspiration from TE as defined by Warwick Fox (1990). Fox quoted various deep ecology (DE) thinkers to show how there is an even deeper level uniting the members of the DE family. Colloquially, DE is “deep” because it asks questions about the assumptions that typify modern thinking. Philosophically, deep ecologists have articulated a set of basic principles and have noted the various sources from which they draw.

However, Fox noticed that many deep ecologists also share similarities of other kinds—similarities not articulated in the literature. He pointed out that most deep ecologists are against issuing moral “oughts” and are for human “self-realization” as a condition of DE. Drawing on the discipline of transpersonal psychology, Fox argued that it would make more sense to call the discipline of DE *transpersonal ecology* because most adherents of DE reveal a transpersonal awareness in articulating a sustainable human relationship to the natural world.

Transpersonal was a better term for Fox for a number of reasons. First, it has explicitly psychological ties, which he thought better expressed the nature of DE because Naess (the DE founder) articulated it as a psychologically, rather than axiologically, based approach to the understanding of the human relationship to the natural world. Second, the term can be used in a number of etymologically appropriate ways: as beyond, as changing thoroughly, and as transcending. Fox’s key concept was identification, through which an individual widens the sense of self through ecological awareness to include more and more of the natural world. Therefore, Fox could say that TE goes beyond other forms of ecophilosophy because it has a different sense of self,

one that is changed thoroughly as a result of the process of identification, and has transcended the limitations associated with a narrower conception of self. This is significant because a major tenet of DE/TE is that it is not anthropocentric, meaning it does not confer upon humans “unwarranted differential treatment” (Fox, 1990, p. 89). Thus, the particularly Western concept of self as a skin-encapsulated ego separate from and superior to the natural world is left behind, and a more inclusive, big self is embodied.

Transpersonal Agroecology

TPAE is similar to TE in several ways. First, the theory is derived by comparing and finding similarities among the quotations of various alternative agricultural theorists. Second, TPAE mirrors TE in that the proponents are united both in opposition and in subscription. Where TE theorists are united in opposition to issuing moral oughts, TPAE theorists are united in opposition to a productionist mentality, and where TE theorists are united in subscription to individuals becoming ecologically self-aware through a process of identification with the natural world, TPAE theorists are focused on farmers becoming ecologically self-aware through the process of identification with the land that they work.

Therefore, to paraphrase the deep ecologist Freya Mathews (Fox, 1990, p. 85, 86), TPAE is concerned with the metaphysics of agriculture. From the point of view of TPAE, the thing that is wrong with industrial agriculture is that it offers the farmer an inaccurate conception of the self. It depicts the personal self of farmers as existing in competition with and in opposition to nature. They thereby fail to realize that if their

farming methods destroy the environment, they are destroying what is in fact their larger selves.

To paraphrase Fox (Fox, 1990, p. 79), who discusses the deep ecologist John Rodman, TPAE is the view that the sense of self of the farmer can be as expansive as the individual's identifications and that a realistic appreciation of the ways in which we are intimately bound up with the world around us, especially with the farm and the beings on the farm, inevitably leads to wider and deeper identification, and hence alternative modes of farming.

For instance, Rudolf Steiner was of the position that the farmer should be conceived of as a meditator:

Oh, it is very much that he meditates in the long winter nights! He does indeed acquire a kind of method—a method of spiritual perception. Only he cannot express it. It suddenly emerges in him. We go through the fields, and all of a sudden the knowledge is there in us. We know it absolutely. Afterwards we put it to the test and find it confirmed.

(Steiner, 1958, p. 51–52)

Masanobu Fukuoka, in *The One-Straw Revolution*, gave his own take on the Buddhist eightfold path:

Unless people become natural people, there can be neither natural farming nor natural food. In one of the huts on the mountain I left the words, “Right Food, Right Action, Right Awareness” inscribed on a pinewood plaque above the fireplace. The three cannot be separated from

one another. If one is missing, none can be realized. If one is realized, all are realized. (Fukuoka, 1978/2009, p. 147)

Liberty Hyde Bailey, in *The Outlook to Nature*, invoked something very similar, noting both action and awareness in the growing of food:

It is all a drama, intense, complex, ever moving, always dying, always re-born. I see a thousand actors moving in and out, always going, always coming. I am part of the drama; I break the earth; I destroy this plant and that, as if I were the arbiter of life and death. I sow the seed. I see the tender things come up and I feel as if I had created something new and fine, that had not been seen on the earth before; and I have a new joy as deep and as intangible as the joy of religion. (Bailey, 1915/2013, p. 79)

In his writing, Wendell Berry directly connected soil and spirit:

It is impossible to contemplate the life of the soil for very long without seeing it as analogous to the life of the spirit. No less than the faithful of religion is the good farmer mindful of the persistence of life through death, the passage of energy through changing forms. (Berry, 1997, p. 86)

Finally, Wes Jackson, in *Becoming Native to This Place*, demonstrated a similar view:

What if we had an ecological worldview as our operating paradigm? An ecological worldview is also an evolutionary worldview. Time-honored arrangements would inform us of what has worked without our running the empirical experiment. Our evolutionary/ecological worldview would inform our decisions, inform our do's and don'ts in scientific investigations. This is another way of saying that we must turn to nature

to inform us, to serve as a reference, must turn our thoughts to building a science of ecology that reflects a consultation of nature. Ecology is the most likely discipline to engage in a courtship with agriculture as we anticipate a marriage. (Jackson, 1996, p. 25)

Transpersonal Agroecology: Opposition

Productionist Mentality

For the purposes of this article, the productionist mentality that the TPAE theorists are united against is the one defined by Keller and Brummer (2002) in “Putting Food Production in Context: Toward a Postmechanistic Agricultural Ethic.” In this article, a productionist way of thinking about agriculture was typified by four components. First, the productionist approach is mechanistic, in that it believes that the natural world can best be understood as a machine. Second, because it views nature as just a complex and complicated machine, it does not ascribe intrinsic value to the natural world. Third, it has an accompanying epistemology that separates facts from values, gives credence to only those aspects of reality that can be quantified, and uses science as the only method to solve agricultural problems. Fourth, its quantitative and mechanistic thinking is easily translated into the realm of economics, thus promulgating “an economic model of human–nature interactions” (Keller & Brummer, 2002, p. 265).²

² Additionally, Paul Thompson (Thompson, 1995) has written a book about agricultural ethics that discusses the productionist paradigm, but he separates out the economics, and his treatment of the issue in general has been actively criticized, with even Thompson

As their direct quotes will demonstrate, for TPAE theorists the problematic scientific and economic aspects of the Keller and Brummer definition are too mild. A more accurate explanation of the productionist mentality is that it comprises economism and scientism to the point that economics and science are given weight beyond what they can be shown to deserve (even according to their own individual theories) such that a productionist belief in science and economics becomes a fundamentalist ideology rather than a theory. For instance, Berry (1997, p. 89) wrote that “the discipline of agriculture—the ‘great subject,’ as Sir Albert Howard called it, ‘of health in soil, plant, animal, and man’—has been reduced to fit first the views of a piecemeal ‘science,’ and then the purposes of corporate commerce.”

Scientism

There are two facets to scientism (Peterson, 2003). One is methodological, in that science is taken as the only true way to acquire knowledge. The other is ideological, in that scientific understanding is believed to have trumped other disciplines such as ethics or religion. Both kinds of scientism are reflected in the objections of TPAE theorists. I quote from the following theorists by way of illustration:

Bailey:

I preach the near-at-hand, however plain and ordinary, -- the cloud and
the sunshine; the green pastures; the bird on its nest and the nest on its

admitting his shortcomings (Campbell, 1998; Raffensperger, 1998; Thompson, 1998).

This paper focuses more on Keller and Brummer’s characterization.

bough; the rough bark of trees; the frost on bare thin twigs; the mouse skittering to its burrow; the insect seeking its crevice; the small of the ground; the sweet wind; the silent stars; the leaf that clings to its twig or that falls when its work is done. Wisdom flows from these as it can never flow from libraries and laboratories. (Bailey, 1915/2013, p. 9–10)

Howard:

The insistence on quantitative results is another of the weaknesses in scientific investigation. It has profoundly influenced agricultural research. . . . Many of the things that matter on the land, such as soil fertility, tith, soil management, the quality of produce, the bloom and health of animals, the general management of livestock, the working relations between master and man, the esprit de corps of the farm as a whole, cannot be weighed or measured. (Howard, 2010, p. 211)

Berry:

But under various suasions of profession and personality, this legitimate faith in scientific methodology seems to veer off into a kind of religious faith in the power of science to know all things and solve all problems. . . . This religification and evangelizing of science, in defiance of scientific principles, is now commonplace and is widely accepted or tolerated by people who are not scientists. (Berry, 2000, p. 19; see also p. 24)

Leopold:

One of the facts hewn to by science is that every river needs more people, and all people need more inventions, and hence more science; the good

life depends on the indefinite extension of this chain of logic. That the good life on any river may likewise depend on the perception of its music, and the preservation of some music to perceive, is a form of doubt not yet entertained by science. (Leopold, 1949, p. 154; see also p. 138)

Steiner described the scientific fixation upon the physical in this way:

You see a magnetic needle. You discern that it always points with one end approximately to the North, and with the other to the South. You think, why is it so? You look for the cause, not in the magnetic needle, but in the whole Earth, inasmuch as you assign to the one end of the Earth the magnetic North Pole, and to the other the magnetic South. Anyone who looked in the magnet-needle itself for the cause of the peculiar position it takes up would be talking nonsense. You can only understand the direction of the magnet-needle if you know how it is related to the whole Earth. Yet the same nonsense (as applied to the magnetic needle) is considered good sense by the men of to-day when applied to other things. . . . The several spheres of modern life have suffered terribly from this, and the effects would be even more evident were it not for the fact that in spite of all the modern sciences a certain instinct still remains over from the times when men were used to work by instinct and not by scientific theory. (Steiner, 1958, pp. 19–20)

Here is some perspective from Fukuoka, who was referred to by Berry as “a scientist who is suspicious of science” (Fukuoka, 1978/2009, p. xiii):

But scientific truth can never reach absolute truth, and philosophies, after all, are nothing more than interpretations of the world. Nature as grasped by scientific knowledge is a nature which has been destroyed; it is a ghost possessing a skeleton, but no soul. Nature as grasped by philosophical knowledge is a theory created out of human speculation, a ghost with a soul, but no structure. (Fukuoka, 1978/2009, p. 125; see also p. 113)

Early on in *Becoming Native to This Place*, Jackson took up the fact–value divide that pervades Western culture, in which science and the facts it discovers are believed to be value free and therefore closer to true knowledge: “But the reality is that our values are able to influence the genotype of our major crops and livestock” (Jackson, 1996, p. 21). He went on to talk about “Chicago Board of Trade genes,” or “fossil fuel wellhead genes,” meaning that the values that have led us to industrialize agriculture and create a food system based on fossil fuels have directly affected the breeding of plants and animals, so that their very genome reflects the ideology that went into their creation. Jackson then contrasted these industrial agriculture values and genes with a story about a Native American woman who saved both the large and small ears of corn because “corn is a gift of the gods and to discriminate against the small in favor of the large would be to show a lack of appreciation for the gift. What she was doing, in genetic terms, was maintaining genetic diversity. Values dictate genotype” (ibid., p. 22).

Where Jackson eventually settled, with the help of Douglas Sloan, was on the idea that there is a “scientific and technological worldview” that is quantitative and mechanistic and that our culture has expanded this worldview beyond its discipline “to the point that it has become our all-encompassing picture of the universe as ultimately

dead, mechanical, meaningless” (Jackson, 1996, p. 38). This is essentially scientism which, when coupled with the institutions of today, “has been thousands of times more ecologically destructive than the church–state alliance ever was” (ibid., p. 109).

However strong his criticism, Jackson made sure to point out that “none of this suggests an end to science so much as an end to our emphasis on science only as we now know it” (ibid., p. 41).

Economism

Economism is analogous to scientism: where scientism believes that the scientific method provides the only recourse to true knowledge, economism is the ideology where “the needs and values of business have come to dominate society” (Uhl, 2004, p. 240).

Though profuse in his opposition to scientism, Fukuoka dealt with economics sparingly. In one place he gave an example of when an economic advantage becomes a social disadvantage for the farmer: “The competition then brings the prices down, and all that is left to the farmer is the burden of hard work and the added costs of supplies and equipment. Now he *must* apply the wax” (Fukuoka, 1978/2009, p. 87).

In *The Holy Earth*, Bailey commented on economics in much the same way that Jackson commented on science—by placing it in proper perspective: “The morals of land management is [sic] more important than the economics of land management” (Bailey, 1915/1988, p. 35).

Bailey also wrote:

We shall learn how to distribute the satisfactions in life rather than merely to assemble them. Before this time comes, we shall have passed the present insistence on so-called commercial efficiency, as if it were the sole measure of a civilization, and higher ends shall come to have control.” (Bailey, 1915/1988, p. 45; see also p. 52)

Jackson, with the gift of historical perspective, had an additional critique to add to the charges against economism. Besides noting that “more modern economists will have to admit that much of what is important to the life-supporting system and culture does not compute” (Jackson, 1996, p. 112), Jackson was acutely aware of “economic imperialism” (ibid., p. 100) operating in agriculture because “economic anxiety has increased and preoccupation with economic issues is higher than ever” (ibid., p. 105). This awareness of the assumptions of economism led him to conclude that “we should not expect sustainable agriculture to exist safely as a satellite in orbit around an extractive economy” (ibid., p. 26).

When reading Howard, it is difficult to divorce his disdain of scientism from his disdain of economism, since he was so aware of the ways that the two work together against what he perceived to be the real goals of agriculture. Consider the following:

Agricultural research has been misused to make the farmer, not a better producer of food, but a more expert bandit. He has been taught how to profiteer at the expense of posterity—how to transfer capital in the shape of soil fertility and the reserves of his live stock to his profit and loss account. (Howard, 2010, p. 213; see also 1947/2006, p. 31–32)

Also:

The slow poisoning of the life of the soil by artificial manures is one of the greatest calamities which has befallen agriculture and mankind. The responsibility for this disaster must be shared equally by the disciples of Liebig and by the economic system under which we are living. (Howard, 2010, p. 236)

And:

However, in some places, the focus of his derision was clear:

But economics has done a much greater disservice to agriculture than the collection of useless data. Farming has come to be looked at as if it were a factory. Agriculture is regarded as a commercial enterprise; far too much emphasis has been laid on profit. . . . The nation's food in the nature of things must always take first place. The financial system, after all, is but a secondary matter. Economics therefore, in failing to insist on these elementary truths, has been guilty of a grave error of judgment.

(Howard, 2010, p. 213)

Leopold wrote:

The "key-log" which must be moved to release the evolutionary process for an ethic is simply this: quit thinking about decent land-use as solely an economic problem. Examine each question in terms of what is ethically and esthetically right, as well as what is economically expedient.

(Leopold, 1949, p. 224)

In that same text Leopold also wrote, “The fallacy the economic determinists have tied around our collective neck, and which we now need to cast off, is the belief that economics determines *all* land-use. This is simply not true” (Leopold, 1949, p. 225).

Berry is similar to Howard in that he sees the negative implications of the mutually reinforcing mentalities of scientism and economism:

The collaboration of boomer science with boomer mentality of the industrial corporations has imposed upon us a state of virtually total economy in which it is the destiny of every creature (humans not excepted) to have a price and to be sold. In a total economy, all materials, creatures, and ideas become commodities, interchangeable and disposable. (Berry, 2000, p. 132)

Finally, Steiner also took exception to economism. He stated it most bluntly when he wrote this passage:

No one can judge of Agriculture who does not derive his judgment from field and forest and the breeding of cattle. All talk of Economics which is not derived from the job itself should really cease. So long as people do not recognize that all talk of Economics—hovering airily over the realities—is merely empty talk, we shall not reach a hopeful prospect, neither in Agriculture nor in any other sphere. (Steiner, 1958, p. 19)

Transpersonal Agroecology: Subscription

Identification

In articulating the theory of TE, Fox expounded upon the idea of identification in his own way, highlighting three ways in which an individual can expand the sense of self—personal, cosmological, and ontological. Critics of Fox find his specific characterization problematic. For instance, Stavely & McNamara feel it is not properly transpersonal, in that it still focuses on an individual's conscious intentions, whereas the transpersonal lies outside of conscious intentions (Stavely & McNamara, 1992).

But even when taking Fox's definition of identification as the sole criterion for justifying TPAE, as opposed to enlarged possibilities, there is still sufficient evidence, and this exercise serves as a good introduction. Again, Fox characterized the three paths to expanding self-identity as personal, cosmological, and ontological. Personal identification "refers to experiences of commonality with other entities that are brought about through personal involvement with these entities" (Fox, 1995, p. 249). Ontological identification "refers to experiences of commonality with all that is[,] that are brought about through deep-seated realization of the fact *that* things are" (ibid., p. 250–251). Cosmological identification "refers to experiences of commonality with all that is that are brought about through deep-seated realization of the fact that we and all other entities are aspects of a single unfolding reality" (ibid., p. 252).

As these three forms of identification pertain to TPAE, both the personal and the ontological match up well with TE. The cosmological, on the other hand, can be delineated into three nuanced sub-categories--a cosmological identification (a) where there is no distinction between self and world, (b) through the realization that all things

are interconnected, and (c) through the understanding that individuals “belong” to the environment.

In his writing, Fukuoka demonstrated a “no-distinction” cosmological identification:

*My thinking on natural food is the same as it is on natural farming. . . . If people will acquire food through “no-mind”** [emphasis added] even though they know nothing at all about yin and yang, they can attain a perfect natural diet. **A Buddhist term which describes the state in which there is no distinction between the individual and the “external” world [emphasis added] (Fukuoka, 1978/2009, pp. 127–128).*

Berry wrote on “interconnected” cosmological identification:

For some time now ecologists have been documenting the principle that “you can’t do one thing”—which means that in a natural system whatever affects one thing ultimately affects everything. . . . The Creation is one; it is a uni-verse, a whole, the parts of which are all “turned into one” (Berry, 1997, p. 46; see also p. 22).

Bailey and Steiner both wrote on “belonging” cosmological identification.

Bailey did so with regard to the “countryman,” as opposed to the “city man,” where the countryman does not think of the qualities, or “features” of the country, because “all the features are his; he escapes neither weather nor season, *since he belongs to the country as much as the trees and fields belong to it* [emphasis added] (Bailey, 1915/2013, p. 69).

Steiner uses similar phrasing but addresses the nature of all humanity:

As human beings we cannot truly say that we are separate. We cannot sever ourselves. *We are united with our surroundings—we belong to our environment* [emphasis added]. As my little finger belongs to me, so do the things that are around us naturally belong to the whole human being (Steiner, 1958, p. 49).

Berry wrote on personal identification:

On the other hand, an agriculture using nature, including human nature, as its measure, would approach the world in the manner of a conversationalist. . . . On all farms, farmers would undertake to know responsibly where they are and to “consult the genius of the place.” . . . *The use of the place would necessarily change, and the response of the place to that use would necessarily change the user. The conversation itself would thus assume a kind of creaturely life, binding the place and its inhabitants together, changing and growing to no end, no final accomplishment, that can be conceived or foreseen* [emphasis added]. (Berry, 1990, pp. 208–209)

Finally, Leopold spoke about ontological identification:

We know now what was unknown to all the preceding caravan of generations: that men are only fellow-voyagers with other creatures in the odyssey of evolution. This new knowledge should have given us, by this time, a *sense of kinship with fellow-creatures*; a wish to live and let live;

a sense of wonder over the magnitude and duration of the biotic enterprise [emphasis added]. (Leopold, 1949, p. 209)

As the field of TP AE is cultivated and begins to bear fruit, it may well turn out that there are many more paths to identification than those laid out above. The purpose here is not to make the claim that the short list above constitutes the definitive role that identification plays in TP AE. Instead, it should be seen for what it is: the use of a previously successful framework applied to a new field in an effort to show a novel finding and to suggest further exploration. Thus, it is enough to say that in TP AE, as it is being first articulated, the alternative agriculture theorists are cognizant of the role that personal, ontological, and cosmological identification play in sustainable agriculture.

Process

When explaining the second component of TE, the subscription to self-realization through identification, Fox used Naess to say that the importance of the concept lies in the process of identification, in which identification is more than a similarity; it is a commonality.³ For TP AE, what is important is not only the concept of commonality, but also the explicit nature of identification being a *process*. This distinction is important because, for farmers, the process is going to be the specific farming practices that engender this awareness of commonality and the feedback loop that this awareness creates. Part of the loop has implications for modifying the farming practices. The other implication is for the farmer. TP AE theorists make explicit the

³ But not to be mistaken for identity, “that I literally am that tree over there, for example” (Fox, 1990, p. 81).

developmental nature of this new way of relating to the natural world, and some go so far as to directly connect the growth of the human individual with the kind of relationship the farmer has with the land. Finally, many theorists make this process of development explicit by noting that it is taking place within the daily activities and existence of the farmer. It is a way of being of in the world that develops over time through a new way of relating and understanding.

Fukuoka was particularly attuned to the role of development in the relationship between farmer and land: “Ultimately, it is not the growing technique which is the most important factor, but rather the state of mind of the farmer” (Fukuoka, 1978/2009, p. 46), and, “The ultimate goal of farming is not the growing of crops, but the cultivation and perfection of human beings” (ibid., p. 119).

Bailey is very similar to Fukuoka when it comes to the role that development plays in his theory—it is huge.⁴ In fact, *The Holy Earth* seems to be written specifically to advocate the moral and spiritual development of the farmer in relationship to the land. He wrote that “one does not act rightly toward one’s fellows if one does not know how to act rightly toward the earth” (Bailey, 1915/1988, p. 2; see also p. 1). He then went on to say:

The living creation is not exclusively man-centered: it is bio-centric. We perceive the essential continuity in nature, *arising from within rather*

⁴ Bailey (as well as the other theorists quoted in the rest of this section) is not unequivocal like Fukuoka, and so italics will be used here (as well as elsewhere in this section).

than from without [emphasis added], the forms of life proceeding upwardly and onwardly in something very like a mighty plan of sequence, *man being one part in the process* [emphasis added]. (Bailey, 1915/1988, p. 23; see also p. 24)

Bailey was also aware that this process occurred through the daily experience of the farmer, where “the reverential attitude is the result of our feeling toward the materials of life,— *toward the little things and the common things that meet us hour by hour*” [emphasis added] (Bailey, 1915/1988, p. 88). In addressing all three aspects of the process of identification—the implications for the farmer and farm, inner development, and the quotidian nature of the process, Bailey could be characterized as holistic in his understanding of just how this process of identification unfolds.

If one were to enumerate all of the philosophical benefits of *A Sand County Almanac*, surely one positive would be Leopold’s capacity to show how the power of human worldviews is manifested through day to day situations. This would put him on par with Bailey in terms of the holistic nature of his thinking. However, Leopold’s emphasis on the everyday is diffuse throughout the work, so the following two quotations focus on his awareness of the implications of worldviews for farmer and land and the developmental process, respectively. Leopold wrote:

The cowman who cleans his range of wolves does not realize that he is taking over the wolf’s job of trimming the herd to fit the range. He has not learned to think like a mountain. Hence we have dustbowls, and rivers washing the future into the sea. (Leopold, 1949, p. 132)

And:

These two farmers have learned from experience that the wholly tamed farm offers not only a slender livelihood but a constricted life. They have caught the idea that there is pleasure to be had in raising wild crops as well as tame ones. (Leopold, 1966, p. 203)

Koepf et al. give an example of where the implications, “new possibilities,” are explicitly tied to “daily work”:

Over and above their [the forces within plants, the soil, and the universe] actual application they open for the spirit in man new possibilities of achieving a clear and conscious relationship to the world of forces appearing in living organisms. In turn the daily work is given more of a meaning and an aim. (Koepf et al., 1976, p. 31)

In addressing the processual quality of identification in TPAE, Jackson illuminates the recursive nature of the developmental aspect, in a way that mirrors Berry’s characterization of personal identification in the previous section:

I am not talking about how we can load up with different kinds of ideas, different thoughts that various people have had about the world. I am talking about how, as Sloan puts it, the “quality of consciousness” itself can change, and how this affects what we can experience and know of the world. (Jackson, 1996, p. 39; see also pp. 107–108)

Finally, as noted above, Berry is keen on the iterative element of development, which should have an enormous impact on daily living. For instance, Berry is of the position that the “mentality of conservation” (Berry, 1997, p. 28) is divided between

protection and production. In Berry's estimation, a third way has not been articulated because conservation "is *not yet sensitive to the impact of daily living upon the sources of daily life* [emphasis added]" (ibid.). Elsewhere, Berry makes a point of equating the "good" with the everyday:

Good work is not just the maintenance of connections—as one is now said to work "for a living" or "to support a family"—but the *enactment* of connections. It *is* living, and a way of living; it is not support for a family in the sense of an exterior brace or prop, but is one of the forms and acts of love. (Berry, 1997, p. 139)

Thus, many TPAE authors felt it necessary to bring into focus the processual nature of identification, with implications for the farm and farmer, with an awareness toward human development, and an understanding that this process gets embodied mainly through day to day life on the farm. While there may be some debate within transpersonal disciplines about the nature of ecological or spiritual identity and development, with an eye toward the possibility of a totalizing conversion experience, it seems clear that, in TPAE, it is not a one-time experience, but a way of being for the farmer in relationship to the farm, which affects the farmer and has effects for the farm, and is continually refined on daily, seasonally, and yearly bases.

Transpersonal Agroecology: Contribution

A final aspect of TE that is necessary in the discussion of TPAE is Fox's (1995, p. 199) assertion that TE is not subordinate to transpersonal psychology (TP). This is true of TPAE in two ways: (a) TPAE is not subordinate to TE, and (b) TPAE is also not

subordinate to TP. There are important aspects of TPAE that are mentioned tangentially in the other two theories. The fact that they may not be central concepts in TE or TP in no way diminishes these concepts' importance for TPAE.

Values

For instance, Fox did not talk very much about values in delineating his theory of identification. However, Stavely and McNamara (1992), in summarizing Fox's position, characterized it as a "reorientation of value theory from instrumental and intrinsic value explanations to ecological values as axiomatic" (Stavely & McNamara, 1992, p. 203). Most TPAE theorists raise questions about values in terms of the misguided values of modernity, exhibiting a transpersonal orientation that becomes even clearer as other aspects of transpersonal theory are overlaid on the agricultural theorists' concern for values.

These critiques of modern values, or lack thereof as the case may be, and their relationship to agriculture, comes in two forms: (a) a simple critique where values are forgotten or lost and (b) a critique that also advocates new values. Fukuoka and Koepf et al.'s critiques fall in the first category. Fukuoka wrote, "Another problem is that spiritual and emotional values are entirely forgotten, even though foods are directly connected with human spirit and emotions" (Fukuoka, 1978/2009, p. 140). Koepf et al. wrote:

The crisis, rather, is a structural one, and includes the single farm and the positioning of farming in the social fabric. . . . Finally, the crisis includes man. When his interest is absorbed in a onesided way by economics and technology,

important human values are lost. The ethical foundations of the farming profession remain undernourished. (Koepf et al., 1976, p. 398)

Jackson also included economics in his critique of modern values but he ties that critique to the hope that a new economics will follow from a new way of being in the world:

An extractive economic system to a large degree is a derivative of our perceptions and values. But it also controls our behavior. We have to loosen its hard grip on us, finger by finger. I am hopeful that a new economic system can emerge from the homemaker's effort—as a derivative of right livelihood rather than of purposeful design. (Jackson, 1996, p. 99)

Leopold echoes Jackson in making explicit the idea that value change cannot come from within a paradigm, but the object of derision here is specifically conservation education:

It defines no right or wrong, assigns no obligation, calls for no sacrifice, implies no change in the current philosophy of values. In respect of land-use, it urges only enlightened self-interest. Just how far will such an education take us? (Leopold, 1949, pp. 207–208)

Finally, Berry (1997) took a different tack than the economics of Jackson or the conservation education of Leopold. Berry addressed “the machine metaphor”, which, “in modern agriculture...is allowed to usurp and wipe from consideration not merely *some* values, but the very *issue* of values” (Berry, 1997, p. 91). He went on to say, “the good use of such land (use that is at once full, efficient, and careful) requires something

altogether different and is probably unthinkable in terms of our present agricultural economy and cultural values” (ibid., p. 186).

Whether simply leveling a critique, or coupling that critique with a new vision, as it pertains to economics, education, or language, TPAE seeks to bring an understanding of values into alternative agriculture practices as an integral part of what truly sustainable farming will be.

Alternative Methodologies and Epistemologies

TPAE theorists are explicitly interested in alternative methodologies and epistemologies for two reasons, both of which have transpersonal implications. First, they react against the fundamentalism associated with the methodology and epistemology of the productionist mentality. Second, they advocate a theory of knowledge that goes beyond rationality and intellect, including methodologies like poetry, art, and conversing with nature, as well as epistemologies which honor feeling, sensitivity, and religious knowing. This second part, concern with alternatives, is particularly transpersonal in that, in Walsh and Vaughan’s (1993b) estimation, “the transpersonal disciplines stand alone in adopting an eclectic epistemology that seeks to include science, philosophy, introspection, and contemplation” (Walsh & Vaughan, 1993, p. 205). This openness to alternatives across methodological and epistemological boundaries is important for the next section of this article, where the spiritual dimensions of TPAE are explored. By default, a practitioner of these alternative agricultural practices must diverge from a reductionistic, mechanistic, materialistic epistemology in order for the spiritual to play a role.

Fukuoka invoked alternative epistemologies in the two ways that were highlighted earlier. On one hand, he pointed to the inability of the intellect to provide total knowledge, particularly as it pertains to scientism. On the other hand, he pointed to those things that he believes provide the necessary larger picture:

Scientists think they can understand nature...But I think an understanding of nature lies beyond the reach of human intelligence. . . . Why is it impossible to know nature? That which is conceived to be nature is only the *idea* of nature arising in each person's mind. (Fukuoka, 1978/2009, p. 25; see also p. 154–155)

Fukuoka went on to tell a story, relative to insect control and who should have a say in how it is practiced, about spider webs covering his fields overnight to the point that a field-hand rushed to Fukuoka's house to ask him if he covered his fields in a net. He closed the paradigm-shifting story by saying, "The spectacle is an amazing natural drama. Seeing this, you understand that poets and artists will also have to join in the gathering" (Fukuoka, 2009, p. 27–28). In ruminating on this theme, Fukuoka later included philosophers and "men of religion" on the guest list (*ibid.*, p. 28).

In his critique, Bailey also included the limitations of the intellect, but he emphasized enlarging the scope of what is important in making good agricultural decisions, if not good life decisions. Like Fukuoka, he included the heart, writing how "soft green things push up out of the earth, growing by some sweet alchemy that I cannot understand but that I can feel" (Bailey, 1915/2013, p. 78). In another passage he wrote, "The old-time formal and literary attitude, with facility in a particular group of

academic subjects, is much to be prized; *but sensitiveness to life is the highest product of education* [emphasis added] (Bailey, 1915/2013, p. 99).

In these quotations from *Outlook*, which preceded *Holy Earth*, Bailey seems to be giving voice to the inkling of heart-centered alternative epistemologies. In *Holy Earth*, Bailey took this concept as a given; there are examples of second-level thinking seemingly derived from these alternative, spiritual, epistemologies. For instance, “An oak tree is to us a moral object because it lives its life regularly and fulfills its destiny” (ibid., p. 12). Here he was most explicit, stating that to take nature spiritually isn’t a form of dogma but is a form of objectivity available to everyone: “The good spiritual reaction to nature is not a form of dogmatism or impressionism. It results normally from objective experience, when the person is ready for it and has good digestion” (ibid., p. 52).

It would benefit the reader to reflect on this for a moment. While this last quotation is in a section on “alternative” methodologies and epistemologies, Bailey does not consider “the good spiritual reaction to nature” at all alternative; in point of fact, he thinks it is “normal” and is an “objective experience” (Bailey, 1915/1988, p. 52). Besides being in stark contrast to what is currently considered “normal” and “objective” in agriculture today, this position is important to note because the epistemology of relatedness (through feeling, emotion, or sensitivity) is shared by so many of the theorists to such a degree that both Berry (1997) and Koepf et al. (1976) used the same terminology as Bailey, the necessity of *sensitivity*:

The use of land cannot be both general and kindly. . . . To treat every field, or every part of every field, with the same consideration is not

farming but industry. Kindly use depends upon intimate knowledge, the most sensitive responsiveness and responsibility. As knowledge (hence, use) is generalized, essential values are destroyed. As the householder evolves into a consumer, the farm evolves into a factory—with results that are potentially calamitous for both. (Berry, 1997, p. 31)

And:

Nevertheless, it is also important to be able to feel one's way into the processes of nature. It is then important to form thoughts that can penetrate into the structure of nature for such thoughts will stimulate rather than banish the appropriate sensitivity. (Koepp et al., 1976, p. 125)

Leopold expressed both a critique and advocated an alternative, writing that “nevertheless, there are many discontents in agriculture which seem to add up to a new vision of ‘biotic farming’” (Leopold, 1949, p. 222), and “the evolution of a land ethic is an intellectual as well as emotional process” (ibid., p. 225).

So too did Jackson, who with the benefit of time and perspective, was succinct and direct in his analysis of current methods and his proposal for the future: “Here lies my worry. Most proposals for bringing about a sustainable agriculture and culture carry the fingerprints or markings of the Baconian-Cartesian worldview. At best, it amounts to Smart Resource Management” (Jackson, 1996, p. 25), and, “If we can [risk looking downward from the ecosphere and seeing nature's ecosystems in the mosaic as primary objects of study], then we can fashion a new research agenda for agriculture featuring a dialectical interaction with nature and, ultimately, a conversation with nature” (ibid., p. 111–112).

Along with Berry's contribution to the concept of an epistemology of relatedness above, he also leveled critiques and offered an additional alternative: "To define knowledge as merely empirical is to limit one's ability to know; it enfeebles one's ability to feel and think" (Berry, 2000, p. 103, 101; Berry, 1997, p. 48). Berry's alternative, which could be shown to correspond to an epistemology of relatedness, is the belief that "religious faith may be a way of knowing things that cannot otherwise be known," (Berry, 2000, p.28) over and against the scientific, narrow "definition of reality" that E.O. Wilson puts forward as the only legitimate possibility.

Nowhere is the significance of these alternatives better articulated than by Koepf et al. The following passage serves not only as a conclusion to this section, with its summary of the necessity of seeing the limits of a scientific framework and its support for an alternative methodology, but also as a culmination of previous sections. Notice how personal development is mentioned, as is an awareness of the recursive nature of the process. Indeed, this quote offers a nice segue into the final section of the article on Spirit:

Natural science has as far as possible detached man from knowledge in order to reach objective results. But in the processes described here man works on himself in order to become an ever more complete instrument for understanding nature. In doing so he begins to meet layers of reality that must remain incomprehensible to one who proceeds only by measuring, counting and reckoning. He then experiences more consciously something belonging to the most ancient experiences of mankind: that in natural beings themselves something lives and works

that can only be comprehended if he compares it with his own will and indeed grasps it with his own will.

This is the path that is likely to suggest itself to the farmer, for he constantly experiences himself as working in nature out of his will. He has to adapt to conditions and yet he can transform them. (Koepf et al., 1976, p. 200–201)

Spirit

Spirit and a sense of the numinous also exist in TPAE writings, appearing in a way that forgoes strict religious affiliation. This too is a shared attribute of transpersonalism. One way of looking at it is through Walsh and Vaughan's attempt to define the transpersonal realm. They specifically note that transpersonalism has a relationship to religion, albeit a complicated one. They begin with a "simple definition of religion" as "that which is concerned with, or related to, the sacred" (Walsh & Vaughan, 1993a, p. 5). They went on to say that the overlap occurs where transpersonal experiences are religious and religious experiences are transpersonal. This definition, in which an individual has an experience of the sacred outside the boundaries of institutionalized religion, matches almost exactly the accepted definition of a spiritual experience, which also matches much of the writings of the TPAE theorists. For example, Fukuoka wrote:

So for the farmer in his work: serve nature and all is well. Farming used to be sacred work. When humanity fell away from this ideal, modern commercial agriculture rose. When the farmer began to grow crops to

make money, he forgot the real principles of agriculture. (Fukuoka, 1978/2009, p.113; see also p. 111)

As its name suggests, Bailey's *The Holy Earth* was directed entirely toward the spiritual relationship between humanity and the earth, and this is especially true for farmers. Even in *The Outlook to Nature*, Bailey was clear about the role of spirit and, in particular, its relationship to agriculture, and at the end of the book it is possible to see how Bailey's thinking honed in on the spiritual in a way that gave birth to *The Holy Earth*:

The countryman's training, whether in home or school, should be such as to intensify his spiritual reactions. There is a danger that we miss the reverential attitude toward life... One stimulates it in himself only as he feels that the earth is holy and that all the things that come out of the earth are holy....Such an attitude of mind as inclines one to pause to listen to a bird's song (even though he may not stop his work), to give more than a passing glance to a potato plant, to inhale some deeper draught of the fragrance of new-plowed land, will produce in him a sweet seriousness that will stand him in good stead in stress and strain, and will much reinforce his spiritual stability. (Bailey, 1915/2013, p. 87–88, 80, 189)

Given the above, in relation to the preceding sections of this article, it is easy to see the “trans” nature of the transpersonal. This quotation could easily have been included in the alternative epistemology section because Bailey here is talking about “the reverential attitude toward life” as a learning outcome of proper agricultural

training. Furthermore, it could also have been included in the process section with its many references to seemingly mundane agricultural experiences (like looking at potato plants or smelling new plowed land) as playing a role in reinforcing the farmers “spiritual stability.”

While the theme of the importance of spirituality and religion, again with regard to nature and agriculture, filled the majority of *The Holy Earth*, in this text, Bailey also introduced philosophical, practical, and moral implications, which he used to the same effect:

The sacredness to us of the earth is intrinsic and inherent. It lies in our necessary relationship and in the duty imposed on us to have dominion, and to exercise ourselves even against our own interests. We may not waste that which is not ours. To live in sincere relations with the company of created things and with conscious regard for the support of all men now and yet to come, must be of the essence of righteousness. (Bailey, 1915/1988, p. 11; see also pp. xi, 20, 78)

Here, Bailey uses terms like “intrinsic” and “inherent,” which came with their own weight at the time that he wrote them, but contain even more now after decades of debate over these terms in environmental philosophy. But he makes these concepts practical by relating them to “our necessary relationship” while at the same time making them moral by adding that we should adhere to this understanding “even against our own interests.” That is the power of the spiritual: to contain the religious, moral, philosophical, and practical arts within one frame.

Few are better at simultaneously containing the religious, moral, philosophical, and practical arts than Wendell Berry. Berry expressed himself on spirituality in agriculture when writing “but [farming] is also a practical religion, a practice of religion, a rite. By farming we enact our fundamental connection with energy and matter, light and darkness” (Berry, 1997, p. 87; see also p. 11, 131). He also stated:

The “drudgery” of growing one’s own food, then, is not drudgery at all...It is—in addition to being the appropriate fulfillment of a practical need—a sacrament, as eating is also, by which we enact and understand our oneness with the Creation, the conviviality of one body with all bodies. (Berry, 1997, p. 138)

To bring Leopold into a section on spirit is to be walking a paradoxical tightrope. On one hand, Curt Meine, Leopold’s biographer, stated that Leopold was “reticent on matters of the spirit” (as cited in Pryor 2011, p. 487). On the other hand, Leopold’s daughter called him “the most religious person I ever knew” (Van Horn, 2011, p. 406). While *A Sand County Almanac* is peppered with religious references, like the “Mosaic Decalogue” (Leopold, 1949, p. 202), one would be hard pressed to find Leopold using overt spiritual language or concepts in arguing his case. One important exception (see also Leopold, 1949, p. 210) is a story that he tells about an atheist boy who ‘converted’ when confronted with “a hundred-odd species of warblers” (Leopold, 1966, p. 230). Nothing but the spiritual could grant an understanding of such beauty: “I dare say this boy’s convictions would be harder to shake than those of many inductive theologians” (ibid., p. 231). What makes this story so interesting is that Leopold’s brother, Frederick, suggested that it was likely that Aldo was writing about himself (Swan, 2010). This

story, and the possible autobiographical nature of it, goes a long way towards describing the deep spiritual roots of Leopold's land ethic, and in turn, the spiritual roots of TP AE.

Finally, turning to Steiner, there is another spiritual story that bears telling: the very origins of biodynamics. It appears that this method of agriculture was Steiner's answer to the series of questions posed by an agricultural associate, Ehrenfried Pfeiffer.

[Steiner] had been speaking of the need for a deepening of esoteric life, and in this connection mentioned certain faults typically found in spiritual movements. I then asked, "How can it happen that the spiritual impulse, and especially the inner schooling, for which you are constantly providing stimulus and guidance bear so little fruit? Why do the people concerned give so little evidence of spiritual experience, in spite of all their efforts? Why, worst of all, is the will for action, for carrying out these spiritual impulses, so weak?" ...Then came the thought-provoking and surprising answer: "This is a problem of nutrition. Nutrition as it is to-day does not supply the strength necessary for manifesting the spirit in physical life. A bridge can no longer be built from thinking to will to action. Food plants no longer contained the forces people need for this." A nutritional problem which, if solved, would enable the spirit to become manifest and realize itself in human beings!...This puts the Koberwitz agricultural course in proper perspective as an introduction to understanding spiritual, cosmic forces and making them effective again in the plant world. (Steiner, 1958, pp. 7-8; see also Koepf et al., 1976, p. 24)

This quotation also puts the role of spirit in proper perspective: whether it is Leopold's land ethic, Steiner's biodynamics, or Fukuoka's natural farming, spirit is instrumental in undertaking a truly sustainable agriculture.

Conclusion

The conceptualization of TPAE and its recoupling with the practices of sustainable agriculture are of great importance. As has been shown, TPAE theorists not only put forward alternatives to the unsustainable practices of industrial agriculture but also challenge the productionist mind-set. Unfortunately, what is taught and undertaken as sustainable agriculture is mainly its practice; the unsustainable productionist mind-set is left more or less intact.

In the academic context of teaching sustainable agriculture, the cause of this omission might stem from higher education's reluctance to entertain the spiritual. Since TPAE calls for alternative epistemologies and an acceptance of the spiritual, it tends to challenge "the often-unacknowledged presuppositions that guide higher education and that can stifle the legitimate exploration of our larger human concerns, including what we can call our moral and spiritual concerns" (Zajonc, 2003, p. 50). Shahjahan provided a remarkable analysis of the marginalization of spirituality in the academy. His conclusion was to "dialogue so that we can address the question of spirituality in research from different social locations and spiritual traditions" (Shahjahan, 2005, p. 703). This article is an attempt to start such a dialogue with the discipline of sustainable agriculture.

The economic reasons for ignoring the spiritual in sustainable agriculture are inherent in the economic system itself. Vandana Shiva, a farmer and environmental leader and thinker, noted that “the organizing principles of development based on economic growth render valueless all resources and resource processes that are not priced in the market and are not inputs to commodity production” (Shiva, 2005, p. 49). C. A. Bowers, ecojustice educational theorist, stated that “one of the hallmarks of modernization has been the shift in market relationships from a peripheral though essential aspect of community life to the dominant focal point of human interaction” (Bowers, 2001, p. 159). In agriculture, this development has taken the form of the stereotypical farmer knowing “as much about financing and business accountability as his banker,” in the estimation of former U.S. Secretary of Agriculture Earl Butz (Berry, 1997, p. 33). Therefore, most farmers, even those interested in alternatives, are tied up in a system where their primary thinking is done through the lens of business and where their intimate relationship with the land is not valued.

As it stands now, sustainable agriculture seems held back. However, if sustainable agriculture, in both discipline and practice, were to take seriously the ideas of its founders as they are conceptualized in TPAE, it could more fully deal with what Wendell Berry considered the first disruptive boundary of a practitioner of the productionist mentality: “Its first disruption is in his mind” (Berry, 1997, p. 71).⁵

⁵ Here “practitioner of the productionist mentality” is used synonymously with Berry’s concept of the “specialist.”

CHAPTER 3. GRAFTING METAPHYSICS: HOW TRANSPERSONAL
AGROECOLOGY BEARS FRUIT WITH PROCESS METAPHYSICS AS ITS ROOT

Modified from a paper to be published in
Process Studies

Travis Cox

Abstract

Transpersonal Agroecology is a theory, derived from the collective leanings of various important thinkers and practitioners in the field of alternative agriculture over the last century, which sees the mindset of the farmer to be just as important as her agricultural practices. However, these accumulated intuitions do not provide a coherent metaphysics within which to practice TP AE, and a metaphysic is needed in order to provide the intellectual and perceptual space for true alternatives to arise. Process metaphysics (PM) not only provides a metaphysical grounding for TP AE, matching up with its concepts one-to-one, but it also offers justification for adjudication, which is essential for agriculture, and provides a proper valuing of the human from which to build human systems such as agriculture. With PM as the metaphysical basis of TP AE, practitioners will be able to situate their on-farm experiences and relationships within a coherent framework that positively reinforces their commitment to, and practice of, sustainable agriculture.

Introduction

Industrial agriculture is embedded in an industrial worldview that reinforces and reflects agriculture as industry. Many in the sustainable agriculture movement resist the

practices of industrial agriculture, but the worldview, at its root, frequently remains unchallenged. However, there is, in the field of sustainable agriculture, an identifiable tradition that has been labeled “transpersonal agroecology,” or TPAE (Cox, forthcoming), which attempts this necessary worldview reform.

The theory of transpersonal agroecology (TPAE) is based on the premises of some alternative agricultural theorists who believe that a shift in consciousness, alongside a shift in practice, is an essential component in the transition from industrial to sustainable agriculture. Representatives of this tradition in the early 20th century include American horticulturalist and “father” of the extension service Liberty Hyde Bailey, biodynamic progenitor Rudolf Steiner, and one of the founders of organic agriculture, Sir Albert Howard. American ecologist and environmental philosopher Aldo Leopold and Japanese agricultural scientist and “natural farmer” Masanobu Fukuoka are two middle century theorists. Finally, Land Institute founder Wes Jackson and farmer and man of letters Wendell Berry make up the turn of the 21st century voices within TPAE.

The “transpersonal” aspect of TPAE finds its source in Warwick Fox’s “transpersonal ecology,” TPAE’s methodological and ideological antecedent (Fox 1995). Fox used quotes from various theorists of a particular environmental philosophy, deep ecology, to highlight an important, yet previously unconscious, commonality amongst them. This commonality pertained to the theorists’ predilection towards privileging a kind of human self-realization, in conjunction with an appropriate relationship to the natural world, as integral for deep ecology. Therefore, Fox suggested “transpersonal ecology” (TE) as a more appropriate label than deep ecology, where “transpersonal experience,” from the discipline of transpersonal psychology, is defined

as “experiences in which the sense of identity or self extends beyond (*trans*) the individual or personal to encompass wider aspects of humankind, life, *psyche*, and cosmos” (Walsh & Vaughan, p. 3). Fox also felt that the new label was etymologically appropriate since “trans” could mean beyond, changing thoroughly, and transcending. TE went beyond other environmental philosophies through its enlarged concept of self, which was changed thoroughly through the process of identification, thus transcending the limits of a more narrow sense of self typical of most other environmental philosophies.

Similarly, TPAE goes beyond traditional western concepts of the “self” of a farmer, taken for granted from the dominant western metaphysics of science and Judeo-Christian religions. This sense of self is changed thoroughly, as are the farming practices, through processes of identification from Fox’s framework, outlined below, whereby the farmer comes to identify with the farm and the beings on the farm. Finally, in the same way that TE transcends the limits of other environmental philosophies, so too does TPAE transcend the limits of industrial agriculture.

The particulars of transpersonal agroecology are derived from the commonly held beliefs of the various theorists. First, they advocate for a reshaping of the alternative farmer’s very identity, based on a revised relationship with the beings on the farm, as well as the awareness that this revised sense of self is an outcome of the process of being in the new relationships. Second, the alternative agricultural theorists see alternative methodologies and epistemologies as relevant, believe a conversation about values is necessary, and recognize that this paradigm shift has spiritual implications as

well. Finally, they argue against scientism and economism, which typify the ideology of modern conventional agriculture.

However, at this stage in theorizing about transpersonal agroecology, commonalities provide only a beginning. At present, transpersonal agroecology represents the collective leanings of a variety of alternative agricultural theorists. Much like TE before it, TPAE is primarily concerned with experiences of identification, as opposed to metaphysical frameworks that engender or interpret these experiences. So while TPAE is enough to show that the psycho-spiritual facet of sustainable agriculture has been ignored, what is needed now is a metaphysics that takes into account these similarities and provides a way of being in the world that allows the alternative agriculture practitioner to participate in daily farm activities that confirm this new way of being in the world. In this paper, I argue that TPAE is in need of an alternative metaphysics to support both the philosophical commitments and the daily practices of sustainable agriculture in this tradition, and that a process metaphysics (PM) is uniquely situated to serve this need. Additionally, by adopting PM as its established framework, TPAE gains two significant benefits. First, it will be shown that PM lends itself well to an environmental ethic that is seeking to discriminate between types of beings, which is the very definition of agriculture – the human selection of some species to cultivate and others to deter. Second, as a balance to this capacity for adjudication, PM can be shown to provide a conception of human “be-ing” that facilitates a symbiotic relationship between humanity and the more-than-human world. In maintaining this balance, it will be necessary to show that, contrary to valid concerns, PM, like TPAE, is *not* anthropocentric. Therefore, with process metaphysics, transpersonal agroecology has

found a ground that not only supports its claims, but actually solidifies them. To put it another way, the mindset of the system of agriculture that comes out of PM is one that looks exactly like the mindset of TPAE.

For some, the question then arises, “If the outcomes are the same, why does TPAE need a coherent metaphysics?” This is an excellent question and one that is addressed by the environmental process thinkers who are referenced in this article, as it pertains to environmental philosophy (as opposed to TPAE).⁶ They make the case that metaphysical views assign parameters of what is possible, given a particular conception of reality. Relative to agriculture, Cobb characterizes the two metaphysical views, or “modes of perception,” as mechanical and ecological (Cobb, 1984, p. 209). The mechanical model, which describes the metaphysics of industrial agriculture, is the understanding of reality as “made up of substances” and in which “all relations are external” (ibid., p. 210). The ecological model, on the other hand, thinks “of the substantial aspects of things as superficial,” because beings are actual events that endure. “Relations to other things are internal. They are constitutive of each thing” (ibid., p. 212, 211). Cobb concludes that “Only as there is real conversion of perception by the emergence of a new horizon [read metaphysics] will the question of this conference, that

⁶ The term “environmental process thinkers” here is meant to delineate those theorists who are influenced by Whitehead’s thinking, but have applied his concepts in novel ways over the last century. These thinkers will be referenced much more than Whitehead himself because they represent a mature form of his thought relative to the issues at hand.

of a sustainable agriculture, come to command wide attention” (Cobb, 1984, p. 216-217). Henning states: “Taken seriously, our understanding of reality as composed of vibrant, organically interconnected achievements of beauty and value, has a dramatic effect on how we conceive of ourselves, of nature, and of our moral obligations” (Henning, 2009, p. 109).

Suffice it to say, the purview of this article is not so much an argument for why metaphysics are important to environmental philosophy in general and TP AE in particular, but rather, more in line with Gunter who attempted to show that bioregionalism, Leopold’s land ethic, and Whiteheadianism would all benefit from establishing an explicit and intricate relationship, whereby bioregionalism provides the praxis, the land ethic provides the beliefs, and the process thought provides the metaphysics that supports those beliefs. To paraphrase Gunter, the central thesis of this paper is that the “*Theorie*” of PM can mutually reinforce the “*Praxis*” of TP AE in all the important ways that have been outlined above (ibid., 219).

Process Metaphysics and Transpersonal Agroecology

Having defined TP AE and given a preview of its relationships with PM, the next step is to provide a working definition for process metaphysics from the environmentally-focused process literature. Whitehead said, “Metaphysics is nothing but the description of the generalities which apply to all the details of practice” (Whitehead, 1978, 13). Benzoni says “Whitehead starts with human subjectivity and seeks to develop a metaphysical system that characterizes all things. He strips away all characteristics that are not shared by other entities (such as rationality, consciousness,

sentience, life), with the goal of arriving at those characteristics (that is, metaphysical characteristics) that truly make up all final real things” (Benzoni, 2007, 137). To put it in Whitehead’s words: “subjective experiencing is the primary metaphysical situation which is presented for metaphysical analysis” (ibid., 160).

Taking the beginning of Whitehead’s metaphysical project as subjective experience, Benzoni’s characterization of where that leads provides the definition of process metaphysics for this paper: “Metaphysically fundamental units of reality, the ultimate ontological units of existence (or ‘actual entities’), are all alike *subjects* of experience constituted by internal relations to past subjects, which they integrate into one felt whole, thereby conditioning the future” (Benzoni, 2007, p. 164). Thus, having a working definition for both PM and TPAE, the next section will delineate the similarities between the two, on the way toward showing the crucial additions that PM makes to a fully developed TPAE.

Similarities between PM and TPAE

The promise of process metaphysics for transpersonal agroecology does not just lie in its adjudication and proper valuing of the human species, though they are significant additions to the theory. Almost every aspect of TPAE finds a correlate in PM. Not only does PM address the solution-oriented aspects of TPAE, such as identification and its process, alternative epistemologies and methodologies, the role of spirit, but it also addresses the critical aspects as well, economism and scientism, though in its own particular way. It becomes clear, then, that process metaphysics will serve transpersonal agroecology well as the theoretical basis of its alternative worldview. The discussion of

the relationship between PM and agriculture has been moved forward significantly by Henning and he does a brilliant job of highlighting the issues around the proper human diet relative to a “processive cosmos” (2005). Obviously, what a person decides to eat has a tremendous influence of the kind of agriculture that supports it. However, the discussion here is based off of TPAE, which has as its object the mindset of the farmer and its relation to agricultural practices, and therefore breaks off from, and contributes to, that discussion.

Identification

The concept of identification is fundamental to TPAE, as it is to TPAE’s disciplinary precursor, transpersonal ecology (TE).⁷ For a TPAE theorist like Bailey, for example, the mindset of the farmer and her relationship to the beings on the farm is of utmost importance in carrying out the practices of a sustainable agriculture.

[The farmer] must be instructed in matters pertaining to good schools, good churches, good roads, good local government, good politics; he must be stimulated in citizenship; *and his intellectual and spiritual horizon must be broad enough to allow a sympathetic appreciation of the nature of which he is a part* (Bailey, 2013, p. 80)

[emphasis added]. Process metaphysics gives the farmer a different but valid way of understanding reality, which in turn produces sustainable actions. In this understanding of reality, the farmer’s experience of identification with the farm is validated. Palmer, when comparing process metaphysics and deep ecology, states, “Feeling, or even

⁷ For an in-depth discussion of “identification,” see Fox’s book *Towards a*

Transpersonal Ecology, Chapter 7 (197-24) and Chapter 8 (249-268).

identifying with, that which lies outside the body remains perfectly possible. Indeed, in some sense it is inevitable [with process metaphysics]" (Palmer, 1998, p. 189). It should be noted here that Plamer's work is a critique of PM as a viable environmental ethic, nonetheless, many of her characterizations of the theory are discerning, even if her ultimate assessment is incorrect.

Another way of thinking about identification, a way that is shared by both the transpersonal ecology and process metaphysics disciplines, is the concept of self-realization. For instance, Griffin notes "For the momentary self to realize its true nature is to realize that it is akin to all other things" (Griffin, 1984, p. 198). Armstrong-Buck, in contrasting Whitehead's metaphysics with Spinoza's, shows how Whitehead's view is "consonant with the Western emphasis on becoming more conscious as the meaning of human life" (Armstrong-Buck, p. 259). The purpose of these two quotes is not to get into the theoretical particulars of what self-realization means for PM, but instead to indicate PM's interest in identification by way of self-realization. The affinity between PM's interest in self-realization and TPAE's interest in identification will be shown by adopting Fox's framework, which is outlined below.

TPAE adopted Fox's identification framework from TE. Using Fox's framework for PM is appropriate not only because of the similarities, to be discussed later, between PM and TPAE, but also because the experiences from the process literature match up nicely with Fox's framework irrespective of their relationship to TPAE. The three experiences of identification for TE are: 1) personal; 2) ontological; and 3) cosmological.

Personal identification “refers to experiences of commonality with other entities that are brought about through personal involvement with these entities” (Fox, 1995, p. 249). Ontological identification “refers to experiences of commonality with all that is [,] that are brought about through deep-seated realization of the fact *that* things are” (ibid., p. 250-251). Cosmological identification “refers to experiences of commonality with all that is[,] that are brought about through deep-seated realization of the fact that we and all other entities are aspects of a single unfolding reality” (ibid., p. 252).

In the context of process metaphysics, personal identification comes from the experience of interconnectivity (Benzoni 137, Birch & Cobb, p. 144). Again, the terms used vary, including “interdependence” (Cobb, 2001, p. 112), “interrelatedness” (ibid., 122), “interpenetration” (Birch & Cobb, p. 144), “intertwined and interconnected” (Henning, 2009, p. 108), and even “kinship” (Cobb & Griffin, 1976, p. 18). What is of importance, for process metaphysics’ collaboration with TPAE, is that PM actually promotes a way of being in the world that TPAE seeks to elicit. The Bailey quotation above requires for a TPAE practitioner a “sympathetic appreciation of the nature of which he is a part;” with process metaphysics, “the sense of kinship with all things, which has evidently characterized human experiences at most times and places, is rationally supported” (ibid., p. 18). For all beings, relationships are not secondary things, they are primary; the entire past goes into creating present individuals who in turn influence future beings. Therefore, interdependence is not “simply an ideal but an ontologically given characteristic” (ibid., p. 21). Whitehead himself described his metaphysical enterprise as being “mainly devoted to the task of making clear the notion of ‘being present in another entity’” (Whitehead, 1978, p. 50).

Ontological identification in the context of process metaphysics comes through the awareness that “to be” is to be a “subject,” to be an “agent.” This is vastly different than the current modern metaphysics, which takes human beings (or other “higher” mammals) to be the only “subjects” in the universe. For TPAE, to take seriously the belief that an object’s exteriority necessitates an interiority, is to put the farmer in the correct relationship to the other beings on the farm, because the recognition of that interiority facilitates identification. To put process metaphysics squarely in Fox’s framework, the ontological realization of the fact that things *are* is concurrent with the realization that things *have* subjectivity. This is possible in process metaphysics because the theory states that “All metaphysically fundamental entities, all true individuals, are ‘subjects’ ...Subjectivity characterizes all levels of reality, and so the world cannot be divided into subjects and objects” (Benzoni, 2007, p. 129).⁸ Ontological identification, from a process perspective, centers on this awareness: not only do the things that exist have an internal and an external component, but the other being’s internal component is self-creative, just like “I” am (Benzoni, 2007, p. 8, 139, 146; Birch & Cobb, 1990, p. 143⁹). Cobb employs strong rhetoric in favor of ontological identification saying, “The emergence, in the course of history, of the ability to think of the other as another subject

⁸ For a further discussion of “subjectivity,” see Benzoni’s comments on “subjects of experience” (p. 135) and “agents” (p. 138) and Armstrong-Bucks description of “self-significance” (“Process Philosophy”, p. 32).

⁹ In *The Liberation of Life*, Birch and Cobb discuss “animals as subjects.”

and to appreciate the moral demand that this lays upon one – to treat the other as an end and not only as a means – is an achievement of civilization that most of us are not willing to abandon” (Cobb, 2001, p. 126).

Finally, there is cosmological identification, or the realization that everything is an aspect of a single reality. Just as with the other two types of identifications, there are various ways that process metaphysicians describe cosmological identification. One way is to talk about “The continuity between the nonliving and the living” (Armstrong-Buck, 1985, p. 247). Another is the self in relation to the world: “There is no self apart from the world or world apart from the self, but the one reality of being-in-the-world” (Cobb & Griffin, 1976, p. 81). Still a third would be to talk about a present individual’s relationship to the past and future: “Being a self, in short, involves an inclusion of the whole past universe,” or “to be actual is to be involved in the double relation of the actuality inheriting the past world and the actuality bequeathing itself to future actualities in the world” (Griffin, unpublished, p. 16; see also Benzoni, 2007, p. 159). The fourth way of discussing cosmological identification is to relate it to the transcendence of the ego, where self-interest becomes Self-interest (Griffin, unpublished, p. 34).

Thus, PM gives an alternative conception of reality that, by its nature, provides for transpersonal agroecological experiences, or in Henning’s words “expand the depth and breadth of our aesthetic horizons,” particularly as they relate to identification (Henning, 2005, p. 152). These experiences can be understood through the lens of “self-realization” but are brought into tighter focus in Fox’s three categories of identification: for PM, the personal occurs through various forms of interconnectivity, the ontological through subjectivity, and the cosmological through continuity. And, like TPAE, this

identification is not conceived of as a one-time event, but rather a continuous process of “becoming.”

Process

The process aspect of TPAE comes from the theorists’ awareness that the experience of “identification” is not a static one. TPAE theorists recognized the dynamism inherent in identifying with the other beings on the farm and, as a result, explicitly noted the developmental nature of identification. Three examples from TPAE literature illustrate the internal and dialectical nature of this point:

Yet we have other relations than with the physical and static materials. We are parts in a living sensitive creation. The theme of evolution has overturned our attitude toward this creation. The living creation is not exclusively man-centered: it is bio-centric. We perceive the essential continuity in nature, *arising from within rather than from without*, the forms of life proceeding upwardly and onwardly in something very like a might[y] plan of sequence, *man being one part in the process*. (Bailey, 1988, p. 23) (emphasis added)

Also:

Good work is not just the maintenance of connections – as one is now said to work “for a living” or “to support a family” – but the enactment of connections. It is living, and a way of living; it is not support for a family in the sense of an exterior brace or prop, but is one of the forms and acts of love. (Berry, p. 139)

And:

I am not talking about how we can load up with different kinds of ideas, different thoughts that various people have had about the world. I am talking about how, as Sloan puts it, the “quality of consciousness” itself can change, and how this affects what we can experience and know of the world. (Jackson, p. 39)

Process metaphysics is so named because the very nature of reality, made up of actual entities or subjects, is defined as a process of past subjects informing the self-organization of current subjects, which will in turn inform the self-organization of future subjects. Reality itself is a process of becoming. Thus, the intimations of development by TPAE theorists find a metaphysical home in process thinking. Benzoni clearly states that “the key point here is that the ‘being’ of an actual entity is in its ‘becoming’” (Benzoni, 2007, p. 133). Birch and Cobb approach it from a sociological perspective where “what is truly best for society is not an ideal state to be attained once for all but a process in which Life is freed to work its creative transformation” (Benzoni, 2007, p. 188). To paraphrase from a TPAE perspective: The “being” of a farmer is in her “becoming,” and what is best for the farm is not a static proscription but a process in which the beings on the farm are freed to work their creative transformations, which affects the farmer, and in turn lays claim on her very “being.”

Alternative Epistemologies and Methodologies

In TPAE, alternative epistemologies and methodologies accompany the alternative mindset of the farmer; so too in process metaphysics. First of all, Whitehead

was explicit in wanting his metaphysics to be derived from basic human experience, which gives process metaphysics a phenomenological bent. Second, the theory of knowledge that is derived from metaphysics itself is made up of a variety of epistemological experiences, including sympathy, compassion, creativity, and the most primary form of knowing called “prehension.” Finally, it can be shown that the epistemological and methodological alternatives in process metaphysics match up well with TPAE.

Several process thinkers (Esbjörn-Hargens; Benzoni; Cobb & Griffin; Palmer; Armstrong-Buck, 1996) have discussed Whitehead’s experiential criteria as it relates to environmental ethics. As mentioned previously, Whitehead himself wrote “subjective experiencing is the primary metaphysical situation which is presented to metaphysics for analysis” (Whitehead, 1978, p. 160). Benzoni, quoting from Whitehead, gives a representative example of how the phenomenological aspects of PM pertain to TPAE: “Indeed, one of Whitehead’s goals in developing his metaphysics is to do justice to ‘the poetic rendering of our concrete experience’ of nature” (Benzoni, 2007, p. 142). Hence, process metaphysics is helping to do justice to the alternative farmer’s experience of farming.

The epistemology of process thinking differs substantially from the epistemology based on the “mechanistic” metaphysics derived from a Newtonian and Cartesian understanding of the world (Cobb, 1984, p. 210). The latter would be concerned mostly with the forces acting on the discrete objects of the world, only one of which, the human, has any subjectivity. PM, on the other hand, ascribes some form of subjectivity throughout reality, and with that subjectivity comes knowing. Granted, at the primary

levels, that knowledge looks very different than it does at the more complex levels, including plants, animals, and especially humans. But this recognition of knowing in the most elementary forms of reality opens up new epistemological vistas. Some of these vistas at the higher level include seeing sympathy, compassion, and creativity as forms of knowledge (Griffin, 1994, p. 199; Cobb & Griffin, 1976, p. 47-48; Griffin, unpublished, p. 24). The primary revelation for TPAE is “prehension,” which is the most basic form of knowing that any subject can have (Griffin, unpublished). Whitehead himself called it a “direct mediation of emotional tone” (Whitehead, 1978, p. 141). In other words, feeling is a basic capacity of beings in existence and, as such, feeling is the most basic form of epistemology, which *everything* possesses, with sense perception and other forms of knowing existing at a higher level.

In fact, Benzoni goes so far as to say: “The ‘subjective form’ of the data is a way of expressing the point that there is no such thing as bare data. They are always prehended with some subjective form, or ‘feeling tone’” (Benzoni, 2007, p. 134). This is markedly different from a Cartesian understanding, because consciousness, as understood from a process point of view, by definition does not illuminate prehension: “Because consciousness arises, if at all, only in a late phase, it *tends to illuminate only those elements of experience that themselves arise in a late phase*. The negative point here is that consciousness therefore does not cast a bright searchlight upon those elements of experience that are truly fundamental in the sense of arising in the initial phase of experience” (Griffin, 1994, p. 199).

For TPAE, this means, when dealing with the more-than-human beings on the farm, the “bright searchlight” of a farmer’s consciousness may actually interfere with the

information that those other beings are trying to convey on a subtler level. The implications of prehension for TPAE are perhaps best seen in a quotation from Koepf, Pettersson, and Schaumann discussing the epistemology of biodynamic farming:

Natural science has as far as possible detached man from knowledge in order to reach objective results. But in the processes described here man works on himself in order to become an ever more complete instrument for understanding nature. In doing so he begins to meet layers of reality that must remain incomprehensible to one who proceeds only by measuring, counting and reckoning. (Koepf et al., 1976, p. 200-201)

The association of process metaphysics' alternative epistemologies with TPAE's alternative epistemologies continues with both theories' emphasis on the role of spirit. Griffin expressed an interesting take on this connection when he stated that "an epistemological revolution can help promote a moral revolution" (Griffin, 1994, p. 200).

Spirit

Whitehead was explicit in the relationship between God and his metaphysics. God's joy comes from co-experiencing the subjectivity of every entity in existence. Also, just as every past entity is involved in a subject's present becoming, God is also present, not commanding adherence, but instead enticing subjects to move into the

fullness of their possibilities.¹⁰ Griffin (Griffin, 1994, p. 200) quotes Whitehead in this way:

On the one hand, God enters into all other actualities: “The world lives by its incarnation of God in itself. On the other hand, all other actualities enter into God: “It is as true to say that the World is immanent in God, as that God is immanent in the world”. (1978, p. 348; see also Benzoni, 2007, p. 159)

Therefore, just as spirit has a role in TPAAE, so too does it play a role in PM as it relates to TPAAE. In TPAAE, the role that spirit plays is not formalized. It can range from Fukuoka’s belief in agriculture assisting the spiritual development of the farmer, to Bailey’s reverential attitude towards life, or to Steiner’s belief that modern spiritual woes are actually an issue of “nutrition.” In process metaphysics, those concerns are addressed by the very role that spirit or the divine plays in the functions of reality:

Nevertheless, part of what is meant by the divine presence in the world is that there is impetus given to each actual occasion to exist as intensely, creatively, richly, and harmoniously as it can, given its current situation. (Armstrong-Buck, 1986, p. 249; see also Benzoni, 2007, p. 159)

TPAAE is an agriculture that allows the beings on the farm to exist “as creatively, richly, and harmoniously as [they] can, given [their] current situation.” Spirit, as envisioned in process metaphysics, works at a fundamental level that addresses the

¹⁰ Throughout their work *Process Theology: An Introductory Exposition*, Cobb and Griffin endeavor to substantiate this position.

TPAE concerns before they arise: with the recognition of the divine in all things, the farmer develops through relating to that divinity (Fukuoka), establishing a reverential attitude towards life (Bailey), and farming with a concern for the health and well-being of the more-than-human world such that those beings who are selected for food will be full of the forces of life that are traditionally lacking in conventional agriculture (Steiner).

Scientism and Economism

For the purposes of this paper, a short section on Scientism and Economism is included to further illustrate the overlap between TPAE and PM. However, this section is limited because, while noteworthy, the congruence is not of the same significance as those previously discussed, particularly as compared with the contributions of PM to TPAE.

David Ray Griffin, in his introduction to the edited volume, *The Reenchantment of Science*, takes on scientism, but in a different way than do the transpersonal agroecology theorists. Whereas the TPAE theorists challenge scientism because they perceive science to have an unjustified monopoly on understanding and articulating reality, Griffin's critique takes science on its own terms and shows that science is unfairly limiting its purview, with the results of both critiques being the same. However, Griffin is careful to point out, just as Wes Jackson did in TPAE (Cox, forthcoming), that a negation of scientism is not a negation of science (Griffin, p. 9-10).

With regard to economism, Whitehead himself stated: "It is very arguable that the science of political economy...did more harm than good...it riveted on men a certain

set of abstractions which were disastrous in their effect on modern mentality” (Daly & Cobb, 1994, p. 35-36). Daly and Cobb, who unpack this understanding of economism in *For the Common Good*, are explicit in qualifying their critique in much the same way that Griffin did above. This is where the issue of metaphysics becomes relevant (ibid., p. 41). Daly and Cobb state “that when economists deal with living things, and especially with large systems of living things, they cannot think of these *only* as resources for fueling the human economy” (ibid., p. 202). Both PM and TPAE, as outlined above, would not allow that to happen because living things have value for themselves and for the whole, as well as for others, humans being but one. Therefore, PM’s affinity with TPAE’s understanding of scientism and economism are yet another example of the ways that PM provides the fertile ground from which TPAE understandings can take root and bloom.

How Adjudication and Proper Valuing of Humans in PM Contribute to TPAE

Besides addressing the significant concepts of TPAE, PM lends itself well to an environmental ethic that is seeking to discriminate between types of beings, providing justification for adjudication, which is the essence of agriculture. There are two components of PM that support discernment within sustainable agriculture. First, there is no divide between humans and the natural world. In industrial agriculture, with a mechanistic metaphysics as its base, this divide has led to a use-only relationship where humans use the natural world for their advantage, which is natural world’s only value. With process metaphysics, there is no divide. Therefore, humans have to take into account, as Whitehead said, that “Everything has some value for itself, for others, and

for the whole” (Whitehead, 1938, p. 111). PM’s different understanding about the nature of existence, one where everything has value for itself, provides a theoretical basis for the transpersonal agroecological way of being in the world, which in turn solicits mutually beneficial farming practices.

This leads to the second component of PM that facilitates making agricultural distinctions. Because everything has value for itself as well as for others, we are put in a position of needing to choose, or adjudicate, between centers of value, given that “life is robbery. It is at this point that[,] with life[,] morals become acute. The robber requires justification” (Whitehead, 1978, p. 105). Transpersonal Ecology, one of the theoretical bases of TP AE, finds its own roots in Deep Ecology (DE), an environmental philosophy that holds as one of its tenets “biocentric egalitarianism,” which means that all life-forms have equal value. Obviously this philosophy doesn’t lend itself well to situations of competing values, like agriculture, and Arne Naess, founder of Deep Ecology, states as much (Griffin, 1994, p. 201).

PM, on the other hand, believes that the ultimate purpose of Being (whether coming from God or the process of evolution) is subjective experience. In evaluating the subjective experience of all things (because in PM all things, even rocks and the tiniest particles of matter, partake in some form of awareness), it is the current understanding of process theorists that human beings have the richest subjective experience of the beings on this planet, and therefore the needs of human beings take precedent over the needs of those beings whose experience is not as complex. Because DE was a precursor to TP AE, and because there are important overlaps, this article will

continue to compare and contrast the two, as a way of clarifying the latter, highlighting its distinctive nature.

It would be understandable to think that process metaphysics are therefore “anthropocentric,” which is something that transpersonal agroecology, transpersonal ecology, and deep ecology are against. Process theorists, however, don’t see their metaphysics as anthropocentric, especially if one uses the definition given by Fox, a transpersonal ecologist, who defines anthropocentrism as “an undue emphasis on the human” (Fox, 1990, p. 242). This is because, in striving for the maximum amount of rich subjective experience, the adjudication process favors diversity and making those difficult decisions between rich centers of experience only rarely. In fact, a close examination of PM shows that the proper valuing of human beings would be in creating human systems that not only benefit *all* human beings but also benefit as much of the non-human world as possible.

Adjudication

Agriculture is a conscious human intervention into the natural world, the cultivation of some species for human benefit, with the added component of discouraging the growth of species that compete for the resources of the desired species or endanger the selected species (i.e. “weeds” and predators). To paraphrase Henning: “What kind of agricultural relationship between human beings and plants and other nonhuman animals would assure the most inclusive, complex and unified farm?” (Henning, 2005, p. 166). This section will illustrate the importance of adjudication for transpersonal agroecology while attending to the charges of anthropocentrism, which have been exacerbated by the problematic language used by many of the process metaphysics authors.

Process metaphysics' propensity for adjudication follows from its two major tenets: 1) the intrinsic value of all things (actual occasions) by the nature of their subjectivity, the agency inherent in all actual occasions that enacts the novelty and creativity in the universe and 2) the mutual implication of a past actual occasion into the experience of a present actual occasion. The first tenet stems from Whitehead's understanding that subjectivity or "feeling" accompanies material existence, "where there are exteriors there are interiors – they arise together and are mutually arising and determining" (Esbjörn-Hargens, 2011, p. 13).

This stands in contrast to the "mechanical" metaphysics, which posits a separation between the human and the natural world, between mind and body, and between the subjectivity of people (and perhaps higher mammals) and the unsubjective nature of the rest of the world. Therefore, with process metaphysics "the difference between human beings and other creatures is a matter of degree rather than of kind" (Benzoni, 2007, p. 128). To put it another way:

Each actual occasion has an inwardness, a subjectivity, an experience of itself as a self-creating process...Because actual occasions experience their self-creation, they have intrinsic value. (Armstrong-Buck, 1991, p. 32)

The second tenet of process metaphysics is the belief that each actual occasion in the past has some bearing on the possibilities of actual occasions in the present. Furthermore, the decisions of an actual occasion in the present will affect future actual occasions. The combination of these two tenets: 1) all things in existence having an interior and 2) the past meeting in the present individual to partially determine the

future, along with the understanding of “life as robbery,” create the conditions for and require adjudication: the subject weighs “conscious” decisions and those decisions are deeply affected by and will deeply affect others. Cobb and Griffin write, “Every occurrence grows out of its whole environment and becomes a part of the environment out of which all future events come into being. In the constitution of one event, certain others play a particularly large role; so discrimination of relative importance is possible” (Cobb & Griffin, 1976, p. 154).

While discussing the first tenet, where subjectivity bestows intrinsic value, Benzoni addresses adjudication:

However, this does not mean that all creatures are of equal value in Whitehead’s metaphysics; he establishes a hierarchy based upon a creature’s capacity for rich or intense experience – the greater a creature’s capacity for intense experience, the greater its moral worth. This conceptualization corresponds to our intuitions regarding the value of creatures, with living creatures being of greater worth than non-living ones, conscious creatures being of greater worth than non-conscious ones, and self-conscious creatures (that is, human beings) being of greater worth than those that are merely conscious. (Benzoni, 2007, p. 163)

Through the first tenet, PM addresses the need to overcome the duality between humans and non-humans by granting everything some value for itself, but, with the second tenet, it does so in a way that allows for decisions to be made between competing centers of value; there is an awareness of both responsibility and repercussions. From Henning’s framework, this understanding is characterized as follows: “This rich

metaphysical and axiological basis not only allows the ethics of creativity to appreciate the intrinsic value of even the most simple individual, but also the obligations of beauty—particularly the obligation of peace—provide a means by which to arbitrate between mutually exclusive ends” (Henning, 2005, p. 180).

Whether discussing the implications of a worldview that facilitates adjudication or using terms like “gradations of value” or “value hierarchy,” some process metaphysicians have used seemingly anthropocentric language to make the case for their metaphysics (Cobb & Griffin, 1976, p. 63; Benzoni, 2007, p. 179). This legitimate misunderstanding will be clarified in the next section (see Proper Valuing of the Human Species) and, for the moment, the language will stand unaltered while making the case for adjudication.

Benzoni continues by saying:

As long as we see ourselves as separate from the rest of creation, different in kind and with a *telos* that differs in kind, it seems difficult to imagine an effective response to the problems we face... Though a value hierarchy is needed in order to avoid paralysis, such a hierarchy need not, and ought not, entail a dichotomy. There are morally legitimate distinctions to be made between types of creatures with different potentialities. But these are distinctions within continuity. (Benzoni, 2007, p. 179)

Indeed, Cobb and Griffin seem to indicate that such ways of talking and thinking are required by the first major tenet of process metaphysics: “Ethical respect for all creatures requires, for any serious implementation, distinctions that have not yet been clarified. Our attitude toward a rock is properly very different from that toward a dog.

If these discriminations are not made, undeniable beliefs about reality are flouted” (Cobb & Griffin, 1976, p. 77). They go on to delineate the differences between entities, allowing for adjudication in a fashion similar to the explanation given at the beginning of this article; emphasis is given to the richness of subjective experience but is tempered by the understanding that all beings are subjects with moral worth coupled with the understanding that all beings participate in the creation of other beings.

This allows them to “bring the process view of reality into harmony with our ‘common sense.’ However, there is another obvious question. We need to act. And virtually every action is destructive of life. How can we have reverence for all experiential wholes, at least all living ones, and continue to live?” (Cobb & Griffin, 1976, p. 79). Again, the ability to answer this question for Birch and Cobb is based on their ability to use seemingly anthropocentric language:

There is a hierarchy of values; so when a choice must be made there is a basis for discriminating value judgments. Destroying the life of some types of actualities is more serious than destroying that of others.

Everything else being equal, those with greater intrinsic value are to be preferred, when a choice must be made. Of course, everything else is rarely equal. For besides the intrinsic value of things, we must consider their instrumental value, the role they play in the total ecosystem... Accordingly, working out an ecological ethic will be a gigantic undertaking. The main point of the present section is that process thought provides the theoretical basis for such an ethic. (Birch & Cobb, 1990, p. 79)

Armstrong-Buck uses slightly less confrontational language, and the implication is still there – choices need to be made, and process metaphysics gives individuals an informed way to make those decisions:

The satisfactions attained by actual occasions differ in the intensity of feelings, the complexity of feelings, and the novelty and harmony of feelings which are integrated...

Whitehead interprets this difference in experience as a difference in intrinsic value because for him there is an immanent purposiveness in Nature...God desires there to be as much novelty, harmony, intensity of feeling, and complexity in the experience of an actual occasion as possible...

In addition, we have a greater obligation toward entities with more intrinsic value, that is, entities which are capable of more significant experience. Our obligations apply to all entities and incorporate both the intensity of that entity's own experience and its contribution to the intensity of experience of other members of the ecosystem in question.

(Armstrong-Buck, 1991, p. 32-33)

Henning goes the farthest in combating the anthropocentric persona of PM. He explicitly calls out the tendency of PM theorists to privilege a being's "onto-aesthetic status," in other words its intrinsic value based on its subjective capacities (Henning, 2005, p. 186). Elsewhere, he makes this point by discussing invasive species and the necessity, in some circumstances, to terminate the individual, which has more "onto-

aesthetic status,” for the benefit of the ecosystem, which has less (Henning, 2005, p. 161).

Obviously, where adjudication exists there will be a debate over the criteria used to make such a decision and, just as expected, will be the charges of anthropocentrism when the criteria happen to favor humans, Henning uses deep ecologist John Rodman to illustrate this point: “‘Subhumans’ may now be accorded rights but we should not be surprised if their interests are normally overridden by the weightier interests of humans, for the choice of the quality to define the extended base class of those entitled to moral consideration has weighted the scales in that way” (Henning, 2009, p. 112). Therefore, the next step is to put together a novel, coherent argument for why a process metaphysics is not anthropocentric, beginning with a summary that uses the thoughts of process thinkers in their own terms:

It is often overlooked that recognition of human experience as generally more valuable than that of non-human entities does not imply domination – quite the contrary. The human ability to apprehend the interconnections of the ecosystem and the intrinsic value of all things requires a nurturing care, responsibility, and respect for nonhuman entities (Armstrong-Buck, 1986, p. 256).

Also:

Human beings do have unique value and worth that is probably not equaled by any other species on this planet. But other species also have intrinsic worth, and in some instances great worth. Their survival and free development is important also, not only when it contributes to that of

human beings but even when it involves some cost to the human species (Cobb & Griffin, 1976, p. 148).

And:

We humans have the responsibility to work for a world in which both they [non-humans] and we have habitat and opportunity to flourish. This is not just a slightly modified form of anthropocentrism. It involves a drastic rejection of the now dominant world system (Cobb, 2001, p. 117).

Unfortunately, these ideas appear dwarfed in the literature by the constant privileging of the human species over any other. However, this “power over” is the very nature of agriculture, the selection of species for the benefit of humans, the adjudication between what gets encouraged and what gets suppressed, and therefore, this metaphysics lends itself well to the project of transpersonal agroecology. What is needed to move forward is an overt characterization of the proper valuation of humankind, a realization that we have the capacity to act in ecologically beneficial ways on behalf of non-human species, even on behalf of non-living things.

Proper Valuing of the Human Species

The first tenet of process metaphysics, the intrinsic value of all subjects, forces humans, to a greater or lesser extent, to account for other beings. Process thinkers believe that this accounting is within our nature to achieve, because this understanding can exist within our pre-established social concepts, like duty, and, in actively working out this requirement, humans will foster a symbiotic relationship with the non-human world, linking the individual good with the social and even cosmic good. One ends up

with the axiom to maximize the number of humans within our ecological limits and within a social system that provides the most benefits to all humans and non-humans.

Process theory “sees truth both in the focus on [human] history as the important arena and in the radical condemnation of this focus” (Cobb & Griffin, 1976, p. 148).

The way forward is to acknowledge and articulate the reality of “the human species as simply one among many” (ibid., p. 147), existing beside the reality that human beings possess, in Naess’ words, “‘extraordinary’ traits” (Naess, 1995, p. 76). Benzoni states “the ethical assessment of human development hinges not only on how such development impacts the expansion of human freedoms or capabilities, but also on how it impacts the capacity of other creatures to exercise their freedoms or capabilities” (Benzoni, 2007, p. 182). The basis of this qualification stems from the first tenet. To take seriously the interiority and, therefore, intrinsic value of all beings necessitates not only the accommodation of others but actual concern for their well-being.

This puts the onus directly on the human and, in particular, human consciousness. “In human beings consciousness has become conscious of itself” (Birch & Cobb, 1990, p. 162). This is both a blessing and a curse; it is both the problem and the solution:

Human consciousness is able to grasp the universal nature of ideals and symbols... Yet this same capacity for abstraction from the actual world allows humans to forget their rootedness in their bodies and the world, as well as their kinship with non-human life. (Armstrong-Buck, 1986, p. 248)

This disconnection has resulted in an unsustainable way of life for the majority of humanity and the planet in the 21st century. However, it is this same capacity, abstraction through ideals and symbols, that process theorists and transpersonal ecologists think will save us.

By relating a process metaphysics to commonly held abstractions like “duty” and “justice,” as well as spiritual ideals, process theorists can ground this proper human valuing in human daily experience. Birch and Cobb believe that this self-consciousness has allowed humans to see themselves and other humans as “primarily ends and only secondarily means” (Birch & Cobb, 1990, p. 162). Obviously, human history can be seen as an exception to a statement that claims humans see other humans for who they are as opposed to what they can be used for, e.g. patriarchy, slavery, and other oppressive social structures. Just as easily, though, history can be seen as the working out of that ideal – the civil rights movement, the labor movement, feminism – accompanied by an understanding that it can sometimes be healthy to be the means toward another’s ends. In humanity’s continued evolution, Birch and Cobb see that “It is proper for human beings to serve as means not only to the welfare of other human beings but also to the welfare of other creatures. This is not sheer sentimentality. It is a duty” (ibid.). To reiterate, “To feel and change in that way is not mere sentimentality. It is appropriate to the real nature of ourselves and of our fellow creatures” (ibid., p. 161).

The end result of this way of being in the world, self-awareness directed toward the benefit of all, is how Henning describes the second step in a moral decision, “to act so as to include the demands of others as far as possible,” with the first step being an education directed towards an awareness of interconnectedness (Henning, 2005, p. 153).

This closely correlates with Naess' metaphysical axiom, or ultimate norm, of deep ecology, which he characterizes as "Maximize Self-realization!" but which he alternatively characterizes as "Maximize symbiosis!" (Naess, 1995, p. 80) Indeed, Birch and Cobb come to similar conclusions:

Whenever possible human beings should try to find ways to meet their own needs which at the same time support other forms of animal life. Often with a sufficiently long view there is congruence between the two goals. But there are times when the conflict is not subject to resolution in favor of both parties. At such times the ethical requirement is a compromise of human interests for the sake of the interests of other species...In general the need is to display how the human future and the future of other species can mutually support one another. (Birch & Cobb, 1990, p. 174-175)

Essentially, process metaphysics both supports and requires this axiom: maximize the number of humans within our ecological limits through a social system or organizational configuration that provides the most benefits to all humans and non-humans. It requires the maximum number of humans because of the level of their subjectivity and because of their value as conscious caretakers of the totality of nature. These humans must live within ecological limits because they themselves are subject to those limits, and because the non-human beings we are in relationship with have intrinsic value and rights, which we are responsible for upholding. Henning put the axiom in these terms: "In each situation we must strive to be as inclusive of the interests of others without allowing experience to devolve into chaos (harmony) and in choosing

between different courses and competing claims we ought always to aim at that whole which is richer and more complex (intensity)” (Henning, 2009, p. 119). By understanding that proper human development includes a concern for the development of the more-than-human world, and by being aware that through symbolic thinking humans have the capacity to incorporate this understanding into their daily awareness, and, finally, by correlating the individual good with the social and cosmic good, PM encourages humanity to create social systems that are just and equitable for all humans and non-humans in order to be true to who we really are and to acknowledge the true nature of the beings with which we share this earth. All of this stems from properly valuing the human species as an ecologically benevolent actor, the capacity of which follows from a process metaphysics. In turn, this proper valuing and adjudication engenders sustainable agricultural practices, which flow through, complement, and build upon transpersonal agroecology.

Conclusion

It is important to recognize that, while process metaphysics does closely correspond to transpersonal agroecology, it may not be the only metaphysics or ontology that does so. In fact, one of the positive attributes of TPAE, both in its formation and in moving forward, is its ecumenism. In TPAE’s formation, Bailey seemingly represented a Christian metaphysics, Fukuoka a Shinto/Zen metaphysics, and Steiner an anthroposophical one. In the evolution of TPAE, it is better to acknowledge outright that what is essential is the mindset of the farmer, and that evaluating different

metaphysics for their ability to engender a TPAE mindset is an important secondary concern.

That said, process metaphysics is indeed very well aligned with TPAE. There is overlap with identification and the process thereof, a regard for alternative epistemologies and methodologies, and concern for spirit. Process metaphysics also contributes to TPAE a justification for adjudication and a proper valuing of the human being. The first point regarding PM's recursive bent is especially well suited for farmers, who tend to be more concerned with the reality of the situation than with theorizing about it.

There are places in the environmental process literature where the practical applications of this seemingly "esoteric" theory are extremely clear. Birch and Cobb talk about "Trust in Life" as a way of being that values intuition and attentiveness, transformation of the old as opposed to repudiation, and the renunciation of control (Birch & Cobb, 1990, p. 183-188). Transpersonal agroecology is a way of farming based on that way of being. Benzoni believes that the "first principle" of an ethic based on relationality "is the instruction to seek to enhance the richness of experience for all creatures in the relevant future" (Benzoni, 2007, p. 165). Transpersonal agroecology is this kind of thinking applied to the farm. In perhaps the most pertinent instance of the possible symbiotic relationship between TPAE and PM, Gunter ends his assessment of process metaphysics' relevance for environmental thinking by stating that Whitehead's thinking lends itself to the "balance" that needs to take place between "wilderness and factory, city scape and landscape, native village and rainforest" (Gunter, 2000, p. 221). Nowhere will this balance be more important than in agriculture. This is the balance

between human needs and the needs of the rest of the biotic community, the balance of selected species and the rest of the web of life in which those species are intertwined, the balance of the richness of experience of the farmer and the richness of the experience of the farm. At this moment in time in agriculture, with the prevalence of genetic engineering and the consolidation of unprecedented control of seed production and food processing, concern for the “being” of the farmer and the other organisms of the farm seems to get at the root of the problems, and even the existence of this possibility, a transpersonal agroecology undergirded by a process metaphysics, contributes to the richness of experience in the present and toward the future. To be truly agricultural though, at least in a Midwestern American sense, the proof will be in what the practical application of a transpersonal agroecology, grounded in a process metaphysics, yields.

CHAPTER 4. CLUES THAT OUTLAST THE DECADES: CREATING AN
INTEGRAL AGRICULTURE THROUGH TRANSPERSONAL AGROECOLOGY
AND THE INTERIORITY OF THE MORE THAN HUMAN WORLD

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Abstract

Numerous theorists have analyzed either conventional agriculture or sustainable agriculture, or both, from ideological, paradigmatic, or cultural/historical levels in an attempt to get at the root of what makes conventional agriculture unsustainable. These theorists have identified problematic concepts in the very seedbed of ideas that make up conventional agriculture, and argue for alternative metaphysical paradigms that better support the goals of sustainable agriculture, albeit paradigms that still partake of a subtle form of reductionism, acknowledging only external relationships between beings. In reality, a fully ecological worldview would acknowledge and consider all forms of relationship, including relationships between subjects-as-subjects. Integral agriculture, as put forward in this article, provides an intellectual and philosophical space—with an eye to the practical implications—to ask a very important question in the quest for a truly sustainable agriculture: What would the practices of a sustainable agriculture look like that take seriously the interiority of the more than human world? Transpersonal agroecologists have already been identified as being aware of the significant role played by the mindset of the farmer. A return to these thinkers, cognizant of the question of interiority, yields an insistence on practices that are loving, sensitive to the “creatureliness” of the beings to which the farmer is relating. This gives the farmer a

realistic appreciation of the interconnections between self and other, and as a result of the extended conversations between them, the farmer embodies a sacred, non-dual, integral way of practicing agriculture, exhibiting right relations between herself and the more than human world.

Introduction

Several theorists have analyzed either conventional agriculture or sustainable agriculture, or both, from ideological, paradigmatic, or cultural/historical levels, as opposed to just comparing yields, profits, or practices, in an attempt to get at the root of the unsustainable nature of conventional agriculture. These theorists have identified problematic concepts in the very seedbed of ideas that make up conventional agriculture, and they argue for alternative metaphysical paradigms that better support the goals of sustainable agriculture. They believe that embracing holism, systems thinking and an ecological worldview is sufficient to address the metaphysical problems that hinder the development of a truly sustainable agriculture.

A central claim of this paper is that, while these approaches are certainly an improvement over the prevailing mechanistic paradigm, they fail to address the problematic nature of a materialistic worldview. Most of these theorists retain a commitment to what Esbjörn-Hargens and Zimmerman describe as a “subtle reductionism”, but would be better termed *subtle materialism*, whereby ecological relationships are principally conceived as relationships between material objects that lack a subjective, interior mode of existence (2009, p. 6). Interiority is granted to humans and (when relevant) to non-human sentient animals, but the primary mode of

description and analysis within modern agroecology is one that dismisses the interior dimension whenever possible and explicitly denies it to elements of the nonhuman world that are not judged to exhibit any form of subjectivity. A fully ecological worldview, on the other hand, would be one that acknowledges and considers all forms of relationship, including relationships between subjects-as-subjects. This is what is meant by a commitment to the “interiority of the more than human world”.

So-called “integral” approaches in science and philosophy incorporate interiority by definition into their theoretical frameworks (Esbjörn-Hargens and Zimmerman 2009). One of the goals of this chapter is to argue that an explicit consideration of interiority serves to both complement and complete the previously articulated theory of “transpersonal agroecology” (TPAE) (Cox 2014). TPAE draws attention to the importance of the farmer’s interior life for sustainable agriculture. “Integral agriculture,” the theory outlined herein, expands TPAE to include a consideration of the interiority of the more than human world.

This chapter has two parts. Part One surveys the work of agricultural theorists by highlighting the incongruous metaphysical concepts of industrial agriculture that they’ve uncovered and outlining the commonalities amongst the alternative metaphysical paradigms they offer as substitutes. The section then draws attention to the subtle materialism of the theorists’ alternatives. Part One concludes with a discussion of interiority as an antidote to subtle materialism, facilitated by a clue from J.Baird Callicott, given when he holds up Aldo Leopold and Thomas Berry as thinkers who best express the progressive eco-evolutionary thinking that is necessary for the 21st century. Leopold and Berry share the view that the proper relationship between human

beings and the natural world involves extending interiority to the more than human world, and they do not balk at the radical implications of this view or the challenge it poses to 20th century understandings.

Part Two elaborates on the relationship between interiority, the framework of TP AE, and the practice of agriculture. A return to TP AE and its roots, deep ecology and transpersonal ecology unearths concepts like love, creatureliness, and a realistic appreciation for the interconnectedness of beings, which were originally left out of TP AE but have re-emerged with the awareness of the necessity of interiority, coalescing in order to explain *why* interiority is important. Another concept that was present in TP AE, spirit, is here expanded into “sacred,” a way of being for the farmer that is both ordinary and non-dual, with the “sacred” bridging the gap between the importance of interiority and the actions associated with a newfound awareness of it. Finally, the *how* is explained as the development of a kind of sensitivity that facilitates right relationship with the beings on the farm.

The conclusion of this chapter is that TP AE, combined with an understanding of interiority, forms an “Integral Agriculture,” which takes seriously both the subjectivity of the farmer as well as that of the more than human world, to the benefit of all involved.

Survey of Contemporary Agricultural Theory

The following section is a survey of a dozen or so analyses of agriculture, some that have analyzed conventional/industrial agriculture, others that have focused on sustainable/alternative agriculture, and still more that have studied both. These analyses were undertaken from a “meta” perspective, or an ideological or paradigmatic level, as

opposed to an analysis of energy usage or yield. Hardeman and Jochemsen state, “Since ideologies function at the level of a cultural mind-set, countering an ideology starts with the essential step of becoming aware of its presence” (Hardeman & Jochemsen, 2012, p. 670). The first subsection here concerns itself with the perceived problems of industrial agriculture, which stem from a problematic worldview according to most so-called “meta-theorists”. This leads to a section on neo-metaphysics, the alternative metaphysics that most theorists propose as substitutes for the problematic one delineated above. Finally, the subtle materialism of these proposed metaphysics is emphasized as a way to transition to a discussion of the thinking of Aldo Leopold and Thomas Berry on the subject of interiority as a counter to subtle materialism.

Problems with “Conventional,” “Modern,” and “Industrial” Agriculture

In an analysis of industrial agriculture, the observations of meta-theorists typically fall into one of two categories: 1) the philosophical and 2) the agricultural. We can begin by looking at the philosophical category. Figure 1 illustrates a list of all of the problematic concepts that are ascribed to the ideology of industrial agriculture and the modern western metaphysical system that lies behind it. The second aspect of the meta-theorist’s analysis, the agricultural aspect, highlights the real world implications of the actions undertaken from the ideological concepts that are outlined in Figure 1. Another way of putting this would be to say that this agricultural analysis links the concepts in Figure 1 to the real world problems that are a result of the industrial practices associated with these particular ideological concepts. The following are two representative (but not exhaustive) lists of these agricultural implications:

Resource degradation, desertification, salinization, pest and disease outbreaks and dependence on curative interventions...increased dependence on subsidies, the slow death of the family farm (Hill, 2006, p. 266; Hill, 1998, p. 392).

Soil compaction, erosion, and loss of fertility; agrochemical pollution of air, surface, ground waters, and food itself...the replacement of local crop varieties and the ensuing loss of genetic diversity; rural depopulation and disruption of rural patterns of life and community; concentration (Callicott, 1988, p. 5).

Figure 1: The Shared Philosophical and Ideological aspects of Industrial Agriculture:

- *Mechanization/Mechanistic*^{2,4,8}
- *Scientism*^{1,6,7,8,9,10}
- *Totalizing nature of Modern Western Worldview/ A-contextuality*^{3,8}
- *Consumerism*^{1,9}
- *Techno-fetishism*^{1,5,8,9,10}
- *Alienation*^{9,10}
- *Anthropocentrism*^{1,9,10}
- *Dominion/Empire/Conquering mentality*^{1,5,9,10}
- *Economism*^{1,8,10}
- *Faith in Modernity bordering on Superstition*^{1,8}
- *Reductionism*^{2,4,10}

1—Beus and Dunlap 1990; 2—Callicott 1998; 3—Callicott 1999; 4—Callicott 1989; 5—Esbjornson 1992; 6—Freudenberger 1986; 7—Hill 1998; 8—Hardenman and Jochemsen 2012; 9—Morgan and Peters 2006; 10—Soule and Piper 1992

Industrial agriculture even admits to some of these problems; however, from within their paradigm, the solutions are, predictably, just more of the same. For instance, erosion can be acknowledged, but it must be dealt with either economically or scientifically, rather than ethically (Beus & Dunlap, 1990, p. 607; Esbjornson, 1992, p. 24).

This is such a metaphysical issue that some in the industrial camp would argue against the characterization of some of the above implications as problematic. For instance, where Hill lamented “the slow death of family farm,” Beus and Dunlap characterize industrialists as those who believe that “agricultural and social progress can be measured partly in terms of the exodus of people from the agricultural industry” (Beus et al., 1990, p. 604). Indeed, the very definition of conventional agriculture that has been given in one analysis encompasses many of the characteristics from the alternative agriculturalists’ “bad” list, but it would simultaneously be proudly adopted by the industrialists. This definition is “Capital-intensive, large-scale, highly mechanized agriculture with monocultures of crops and extensive use of artificial fertilizers, herbicides and pesticides, with intensive animal husbandry” (ibid., p. 594).

This dichotomy exists because industrial agriculture is an agriculture based on a metaphysics that believes “because the world does not have given structures but is just a conglomerate of materials and building blocks, [therefore] mankind can entirely rearrange it for its own benefit through science and technology” (Hardeman and Jochemsen, 2012, p. 667). Thus, in order to truly change the practices of industrial agriculture, the meta-theorists believe that the underlying metaphysics must change. As Liberty Hyde Bailey, father of the extension service and dean of Cornell University’s Agriculture College, said: “This century will be known in history as an epoch in which the race came to a turning point in its habit of contemplating the origin and destiny of itself and of the material universe” (Morgan & Peters, 2006, p. 456).

Metaphysical Paradigms

As the above section has shown, most in-depth analyses of the problems of industrial agriculture end up discussing the conceptual components of the modern western worldview as they are embodied in agricultural theory and practice. Theorists use a variety of frameworks to undertake this type of analysis including “ideological,” “metaphysical,” “historical and cultural,” and especially through “paradigms” or an understanding of “worldviews” (Hardeman et al., 2012; Callicott, 1989, 1998, 2011; Esbjornson, 1992; Beus et al., 1990; Freudenberger, 1994; Morgan et al., 2006). For example, here is Callicott relating the analysis of the problems of industrial agriculture with an understanding of worldviews:

But these are all literally “problems,” however enormous, to be “solved” by more of the same concepts and methods...only if one takes the world view in which industrial agriculture is embedded to be an objective description of things as they are. Those for whom these “problems” are less literally problems capable of “solution” than symptoms of a deeper malaise...in effect reject the mechanical paradigm and see the world through the lens of a new complex of ideas. (Callicott, 1998, p. 6)

Regardless of the framework used, the theorists conclude that, indeed, “worldviews,” “paradigms,” and the like, play a significant role, if not the most significant role, in perpetuating the problems of industrial agriculture. Therefore, most theorists put forward an alternative ideology or metaphysical paradigm that they believe could take the place of the current metaphysical system that lies at the root of the problems.

One finds three overarching themes in the proposed alternative paradigms: 1) the necessity of a “conversion” experience from our current metaphysics to a new one, in other words, a worldview revolution, a new awareness or consciousness (Callicott 1989, 2011, Esbjornson 1992, Morgan et al. 2006, Hill 1998, Hardeman et al. 2012), 2) a conviction that this change will have a broad effect on the norms, values, and philosophical and spiritual understanding of all peoples (Hardeman et al. 2012, Morgan et al. 2006; Callicott 2011, Esbjornson 1992) and 3) the inclusion of the development of what is broadly described as an “ecological-evolutionary worldview” (Callicott, 2012, p. 12, Soule & Piper, 1992 p. 150).

All of the theorists in this alternative tradition agree with the position of Esbjörn-Hargens and Zimmerman, that “some [philosophical] views are better (because they are more comprehensive, more inclusive, and more far-seeing)” (Esbjörn-Hargens et al., 2009, p. 34). These theorists believe that each of their particular alternative metaphysical paradigms are “better” in the sense that they are more comprehensive and inclusive. The theory of integral agriculture articulated herein also provides these benefits. Such views strive to “venture[s] entirely beyond the present system” (Freudenberger, 1986, p. 358), which is a desirable feature. The ‘going beyond’ of the industrial system qualifies each individual theory as ‘better’ because the alternative agricultural camp has as a criterion “a complete revamping of the U.S. agricultural system” as “necessary” (Beus et al., 1990, p. 591). The integral agriculture that is proposed at the end of this paper has the virtue of going beyond the present system by explicitly considering within its framework the interiors of the more than human world.

As will be shown, this embrace of interiority has both ideological and practical applications.

Subtle Materialism

As previously stated, subtle reductionism is the characterization of something in completely materialistic terms. Esbjörn-Hargens and Zimmerman differentiate “gross reductionism,” or “the reduction of all reality to individual, objective phenomena,” from “subtle reductionism,” which they define as “the reduction of all interiors to intersubjective phenomena (reducing the ‘I’ and ‘we’ perspectives to interwoven systems, ‘its’)” (Esbjörn-Hargens et al., 2009, p. 6). So, while all of the theorists are able to resist gross reductionism through the incorporation of ecology or systems thinking into their frameworks, most of them, with Morgan and Peters being the possible exception, still commit subtle reductionism or, more descriptively, subtle materialism—since what they are doing is reducing organisms’ experience to a solely materialistic conception, and they do so in two ways. First, they tend to characterize their position as “holistic,” believing that systems thinking is all that is necessary to move into a sustainable agriculture, without taking into account the interiors of the more than human world (in the way that Leopold and Berry do, as will be shown in the next section). Or, they will also advocate for a completely scientifically minded worldview as the proper way forward. Either way, the subjectivity of non-human beings gets a short shrift in their metaphysical paradigms.

One of the easiest ways to identify the first kind of subtle materialism is the conception “of the cosmos in terms of the ‘great web of life,’ a great interlocking order

of beings, each mutually interwoven with all others,' but wholly lacking interiority and intersubjectivity,'; examples include Freudenberger, Soule and Piper, and Callicott (Callicott, 1989, p. 23, 110; Freudenberger, 1986, p. 358; Soule et al., 1992, p. 73, 81, 124). However, Callicott does give some context for the pervasiveness of subtle materialism in ecology as a whole. In 1935, Arthur Tansley consciously attempted to move science away from conceptions of "communities" by coining the term "ecosystem": "Tansley's ecosystem model of biotic processes was intended to bring ecology as a science out of a qualitative, description stage, with anthropomorphic and mystic overtones, and transform it into a value-free, exact quantitative science" (Callicott, 1998, p. 106).

Tansley, then, serves as a model for the second type of subtle materialism, where an "ecological" metaphysics is still purposefully conceived of from within a materialistic scientific paradigm. Luckily, this type of subtle materialism isn't as rampant. It mainly appears as an unexamined aside in the work of Callicott, Freudenberger, and Esbjornson (Callicott, 2011, p. 520-522; Callicott, 1999, p. 279; Callicott, 1986, p. 360, 21, 26). One reason that this second form of subtle materialism isn't as rampant as it could be is that most of these theorists have an acute awareness of scientism in general, even if this awareness isn't complete enough to banish subtle materialism altogether. Remember that at least six sets of theorists make some sort of connection between the ideology of scientism and industrial agriculture's unsustainability (see Figure 1).

But, for all the awareness of scientism, there has not been the adoption of subtle materialism rejection by any of the meta-theorists. Both Hill and Freudenberger also

object to industrial animal agricultural practices, confined animal feeding operations (CAFOs), but both fail to mention interiority, and both reaffirm subtle materialism: “It should be noted that intensive, feedlot, and battery production systems deprive livestock of playing an ecologically helpful role within both agroecological systems and landscapes in general,” and “The issues of large confinement livestock operations, genetic alterations, and the impact of these systems on human health, the health of the environment and rural farming communities, and the prospects of once again developing diversified and integrated farming systems have to be confronted” (Hill, 1998, p. 399; Freudenberger, 1994, p. 51).

The next sub-section will analyze some of the work of J. Baird Callicott, who has, until recently, partaken of subtle materialism, to provide a way out through his more recent understanding of Aldo Leopold, as evidenced in his 2011 articles, “The Other in *A Sand County Almanac*: Aldo Leopold’s Animals and His Wild-Animal Ethic” and through his invocation of Thomas Berry in an article entitled “The Worldview Concept and Aldo Leopold’s Project of ‘World View’ Remediation.” Callicott’s lengthy oversight of Leopold’s concern for interiority can be forgiven when one understands the majority of Leopoldian scholars as having over-looked it as well, prompting them to also promulgate subtle materialism. These Leopoldian scholars too deserve our pardon, given the extent to which Leopold himself upholds a subtly reductionistic metaphysics. However, what is important for this paper is that it can be shown that Leopold’s core beliefs were ones that went beyond subtle materialism, as did Thomas Berry’s.

Interiority, Subjectivity, Awareness

While Callicott has a history of recapitulating subtle materialism, what is noteworthy are the two ways, one explicit, the other implicit, in which he has diverged from that past as of late. Both instances come from 2011, his “Other” article being explicit, and his “World View” article being implicit. While it is odd that Callicott doesn’t include a discussion of Leopold’s understanding of interiority in this latter article, given the ground-breaking nature of the former article, what is most interesting for the current discussion is that, in this latter article, Callicott puts forward Thomas Berry, alongside Leopold, as a 20th century exemplar of “appreciating the positive aesthetic and spiritual potentiality in the scientific worldview” (Callicott, 2011, p. 527). This is interesting because both of these individuals share a further commonality, that is, their awareness of the interiority of the more than human world and its relevance for any future environmental ethic. While Callicott, a Leopoldian scholar bar none, might have neglected to mention this association between Berry and Leopold and seems to have overlooked Leopold’s awareness of interiority until his “Other” article, there are additional theorists, Esbjörn-Hargens and Zimmerman, Pryor, and Nash, who have picked up on Leopold’s awareness and assist in making a case for it. Meanwhile, anyone who has familiarity with Berry’s work will be instantly familiar with his emphasis on interiority through, perhaps, one of his most famous quotations which has been articulated in different ways in different works. Here, Hargens provides the most succinct version: “The universe is a communion of subjects, not a collection of objects” (Hargens, 2011, p. 99).

This association by Callicott of Leopold and Berry, along with their common acceptance of the interiority of the more than human world, forms the basis of the analysis for this paper and also inspires its name. It is the basis for analysis because the thesis of this paper is that non-human interiority and subjectivity have to be taken seriously in order to have a truly holistic and sustainable agriculture. It inspires the name in two ways. First, Leopold's awareness of interiors and the role they should play in an environmental ethic has not been obvious to many environmental ethicists, to say nothing of the average reader, hence the use of his own words to describe that situation: "clues that outlast the decades" (Leopold, 1949, p. 57). *A Sand County Almanac* is filled with clues to point us toward the awareness of interiority. Second, while Callicott's association of Leopold and Berry wasn't overtly based on interiority, his grouping together of these two thinkers served as a "clue" to the importance of interiority for the task of worldview remediation, even if it is something that went unmentioned by Callicott himself.

In terms of subtle materialism and interiority, there are two positions which are frequently represented in Leopoldian scholarship, Callicott having held both. Esbjörn-Hargens and Zimmerman represent one position where Leopold could be understood to be employing "subjective and intersubjective perspectives [in *Sand County*], which [Leopold] referred to as aesthetic (subjective) and ethical and cultural (intersubjective)" in order to articulate "the need for including human and animal interiority in our understanding of the natural world and humanity's relationship to it" (ibid., p. 10-11). Nash presents Flader as holding a counter position, where Flader describes Leopold's later thinking, including *A Sand County Almanac*, to be from the perspective of "an

ecologist rather than a metaphysician and theologian” (Nash, 1987, p. 78). Nash himself agrees “in part” and sees Leopold’s emphasis on an understanding that “the glue holding the earth together consist[ing] of food and energy circuits rather than divine forces or noumena” as “not so much a switch as an extension” (ibid.). Nash’s agreement is partial because, in addition to the subtle materialism above, he also believes that Leopold’s intellectual lineage is comprised of people who share Leopold’s concern for the more than human world:

Henry David Thoreau:

Every creature is better alive than dead, men and moose and pine trees. (Nash, 1987, p. 65)

John Muir:

What good are rattlesnakes for?...good for themselves, and we need not begrudge them their share of life. (ibid., p. 66)

Nash on Charles Darwin:

Ultimately, Darwin thought that, as ethics evolved, all ‘sentient beings’ would come to be included in this moral community. (ibid., p. 68)

Nash on Edward Payson Evans:

Evans branded as wrong ‘maliciously breaking a crystal, defacing a gem, girdling a tree, crushing a flower, painting flaming advertisements on rocks, and worrying and torturing animals.’ (ibid., p. 70)

J. Howard Moore:

All beings are *ends*...No creatures are *means*...All beings have not equal rights, but *all have rights*. (ibid., p. 71)

Albert Schweitzer:

Today it is thought an exaggeration to state that a reasonable ethic demands constant consideration for all living things down to the lowliest manifestations of life. The time is coming, however, when people will be amazed that it took so long for mankind to recognize that thoughtless injury to life was incompatible to with ethics. (ibid., p. 74)

However, Leopold's language makes it easy for people like Callicott to present him with a subtly reductive bent. One of the main culprits in Leopold's lexicon would be "energy." Here again, Callicott has Leopold borrowing from Tansley, who "pointed out that from the perspective of physics, the 'currency' of the 'economy of nature' is energy." (Calliott, 1987, p. 202) One can see this in Leopold: "Plants absorb energy from the sun. This energy flows through a circuit called the biota," or "Land, then, is not merely soil; it is a fountain of energy flowing through a circuit of soils, plants, and animals" (Leopold, 1949, p. 215, 216).

Leopold's language aside, there are others who can see past it and intimate Leopold's other aim of overcoming subtle materialism and bringing the human awareness of the non-human subject to bear on environmental issues. In addition to Esbjörn-Hargens and Zimmerman, Pryor has made an excellent case for asserting Leopold's place in this effort (Pryor, 2011). By not dismissing out of hand the influence that P.D. Ouspensky had on Leopold and comparing Ouspensky's language and philosophy with Leopold's, Pryor argues that Leopold "believed these [non-human] entities possessed some kind of mind, consciousness, or psyche", which gives philosophical, rather than poetic, credence to Leopold's tendency to write not only about

how “these ‘other than human’ beings look like and act, but very often, if controversially, also what and how they *feel* and even how they *think*” (ibid., p. 471, 473).

Finally, to be fair to Callicott, it must be pointed out that, regardless of his previous silence on the subject, 2011 found him articulating an understanding of Leopold almost identical to Esbjörn-Hargens and Zimmerman’s understanding from 2009, albeit one that stems from a very different analysis. In “Others”, Callicott et al. analyze *A Sand County Almanac* through “the lens of continental philosophy” for the purposes of articulating an ethic for “hunting and killing animal subjects,” and still Leopold’s concern for a “trans-scientific, interspecies, intersubjectivity” comes through (Callicott et al., 2011, p. 115, 118). In the words of Callicott et al., “We suggest that the descriptive encounter with animal Others provided by Leopold in the *Almanac* serves to redefine and transform the self...Key to both self and Self transformation is the counter with animal Others, less as objects than as Other subjects” (ibid., 2011, p. 116).

While the belief in the subjectivity of the more than human world might have a controversial history in the world of Leopoldian scholarship, it essentially defines the parameters of the discussion with regard to Thomas Berry. Esbjörn-Hargens’ interest in interiority brings him to comment on Berry’s work as well. In his essay that is entitled “Ecological Interiority: Thomas Berry’s Integral Ecology Legacy,” Esbjörn-Hargens describes his commentary on Berry as “a joy-filled observance of [Berry’s] emphasis on the interior dimensions of ecological and evolutionary realities” (Esbjörn-Hargens, 2011, p. 93). It would be difficult for a treatment of Berry to do otherwise, particularly if it is focused on Berry’s *The Great Work*, which is filled with references to everything

from the necessity to further develop “our capacity for intimacy in our human-Earth relations” to the assertion that the “governing principles of evolution” be seen “in terms of its three movements towards differentiation, inner spontaneity, and comprehensive bonding” (Esbjörn-Hargens, 2011, p. x, 169).

Though Esbjörn-Hargens and Zimmerman believe that interiors “must be interpreted on their own terms,” currently they are not, mostly because “corresponding to any exterior sociopolitical, economic, or technological dominator hierarchy is an interior dominator hierarchy” (Esbjörn-Hargens et al., 2009, p. 20, 40). Many of the concepts from Figure 1 correspond to these hierarchies, e.g. economism as an economic dominator hierarchy. What is missing from Figure 1, and what this paper is seeking to include, is an awareness of that latter hierarchy, the “interior dominator hierarchy,” because, as Esbjörn-Hargens and Zimmerman point out, “unless a critical mass of people evolve to postmodern levels of interiority [i.e. acknowledge the subjectivity of non-human beings], in which heedless domination of human and nonhuman beings becomes unacceptable and immoral, environmentalism will remain a reform movement within technological modernity” as opposed to a genuinely sustainable movement with an integral agriculture in its ranks (ibid., 2011, p. 41).

Transpersonal Agroecology, Interiority, and Integral Agriculture

Transpersonal Agroecology (TPAE) is a theory that is based on the writings of many of the leading alternative agricultural theorists of the 20th century, including people already cited herein, such as Bailey, Leopold, Rudolf Steiner, progenitor of biodynamic agriculture, Masanobu Fukuoka, creator and practitioner of natural farming,

Wes Jackson, agricultural meta-theorist and perennial polyculture scientist, and Wendell Berry, Kentucky farmer and man of letters. This theory proposes that a farmer's internal state is just as important for alternative agriculture as are the external practices. TPAE encourages 1) the critical analysis of the role that economics and science play in agriculture, 2) a sense of identity with the farm and the beings on the farm, and a continual process by which that identification is reflected upon and, 3) an awareness of the role that values, spirit, and alternative epistemologies and methodologies play in this enterprise (Cox, 2014). TPAE is juxtaposed against a paradigm that Keller and Brummer call a "productionist paradigm", one that recapitulates many of the unsustainable assumptions of the modern western worldview. As Freudenberger noted: "a land and community enhancing agriculture cannot orbit around a society that goes the other way" (Keller & Brummer, 2002, p. 265; Freudenberger, 1994, p. 52).

Transpersonal agroecology has as its disciplinary analogue transpersonal ecology (TE), as conceived of by Fox (Fox, 1995). In turn, TE was derived from deep ecology (DE), an environmental philosophy that asks "deep" questions about the assumptions of modernity and includes an articulated set of philosophical principles. Fox advocated for the position that self-realization was DE's true distinction from other environmental philosophies and, as such, he offered the term "transpersonal ecology" as more apt. The term "transpersonal" describes experiences that transcend the skin-encapsulated boundaries traditionally reinforced through a modern western metaphysics, experiences that can include, amongst other things, the recognition of the interiority of the more than human world.

Fox's key concept, which facilitates this transformation or self-realization, is identification. Fox highlights three ways that an individual can experience identification with the more than human world: personal, cosmological, and ontological. The personal is based on an individual's experience with another being, whereby an understanding of commonality brings about identification. Cosmological identification results from the awareness that all things in the universe are part of a single unfolding reality. The ontological experience of identification stems from the profound realization of Being. These three forms of identification have proven to be valuable for both TE and TPAE.

Unfortunately, like most of the theorists above, TPAE doesn't explicitly address subtle materialism. It does, however, contain within itself the capacity to do so, primarily through the previously unexplored concepts of love and creatureliness, as well as through the criteria of providing a realistic account of interconnections as a method for facilitating identification. Additionally, TPAE also provides some practical means to accomplish this intersubjective experience through the aforementioned alternative methodologies, which include consultation and conversation with the more than human world, as well as developing sensitivities in order to achieve right relations.

TPAE and Interiority: Why?

In its initial conception, TPAE specifically addressed the mindset of the sustainable agriculture practitioner. As such, it didn't explicitly address the subjectivity of the more than human world. However, does this mean that TPAE theorists are unaware of interiority? A revisiting of the precursors of TPAE, deep ecology and transpersonal ecology, as well as input from TPAE theorists themselves, shows not only

why interiority is important for TPAE, but also *how* farmers are expected to deal with this understanding, which is so contrary to the modern western worldview.

There are three reasons that interiority is important for TPAE. First, it is implicit in TPAE's sense of identification, particularly as it pertains to a newly articulated concept of "love." Second, it correctly situates the frequently invoked concept of "creatureliness" that is applied to both humans and non-humans by TPAE theorists. Third, it fulfills the requirement of providing the most realistic appreciation of the interconnectedness of things. The gap between 'why' and 'how' is bridged through an understanding of the sacred, which is a way of being in the world by which the duality of spirit and matter, and self and other, is overcome, a way of being that is available to anyone. Finally, just how the understanding of interiority should impact the farmer is addressed: through conversation and consultation with nature and a sensitivity that leads to right relations.

Love

In addition to the three forms of identification outlined above, there is another form of identification that is essential for TPAE as it pertains to identification, one that Fox dismissed but needn't have. Fox acknowledges Maslow's precursory term "identification-love," but discredits it as being too anthropocentric (Fox, 1995, p. 201). This rejection is premature, especially since Fox himself notes transpersonal psychology's anthropocentrism but still moves forward in using it as a framework for his proposal of a transpersonal ecology. Therefore, the term "love" will be used here, though Maslow's boundary at the human species will be rejected in favor of freeing love to spread across the boundaries between species, in effect, giving Maslow the benefit of

the doubt when Fox asks: “One must wonder, did Maslow never identify with a cat, a dog, a wild animal, or a place?” (Fox, 1995, p. 202).

Fox’s renunciation of Maslow’s term is especially odd, given its affinity with an Aristotelian definition of love, which, if adopted, could easily eclipse the boundaries between species. Maslow defined “identification-love” as “a kind of transcendence, e.g., for one’s child, or for one’s beloved friend. This means ‘unselfish.’ This means transcendence of the selfish Self. It also implies a wider circle of identifications” (Maslow, 1971, p. 272). If one were to use the definition of love as provided by Aristotle in the second book of *Rhetoric* (here presented in non-anthropocentric language), “Let loving be defined as wishing for a [being] those things which you consider to be good—wishing them for his sake, not your own—and tending so far as you can to effect them”, then the concept of “identification-love” explicitly provides for a sense of interiority (Cooper, 1960, p. 102-103).

In fact, if Fox had included love in his identification, it would’ve provided even more guidance for the interpretation of commentary that occurred later on in his efforts, such as where he quotes Naess as stating, “Through identification they may come to see their own interest served by conservation, through genuine self-love, love of a deepened and widened self,” and “We need not say that today man’s relation to the nonhuman world is immoral. It is enough to say that it lacks generosity, fortitude, and love” (Fox, 1995, p. 218, 221). It would also be helpful where Fox uses Drengson to explain, “the follower of the Deep Ecology Way practices extended self-identification... This sense of extended caring was expressed well in Spinoza’s observation that we are as large as our loves” (ibid., p. 235) Even Fox himself uses the term “love” when discussing the

implications of cosmological identification: “Over time, steadfast friendliness often comes to be experienced by the recipient as a deep form of love precisely because it does not cling or cloy but rather gives the recipient ‘room to move,’ room to be themselves” (Fox, 1995, p. 257).

However, the same can be said for TPAE: where’s the love? In its initial conception and articulation, there was only one place where love was invoked. Wendell Berry states (Cox, 2014, p. 47):

Good work is not just the maintenance of connections—as one is now said to work “for a living” or “to support a family”—but the *enactment* of connections. It *is* living, and a way of living; it is not support for a family in the sense of an exterior brace or prop, but is one of the forms and acts of love. (Berry, 1997, p. 139)

In the same way that embracing love helps to explain Fox’s use of the above quotations, so too does it help with the following Berry quote: “the enactment of connections...is one of the forms and acts of love.” By honoring the interiority of the more than human world, the farmer enacts deep connections between herself and those beings, which is a form and act of love.

In order for the interiority of the more than human world to be taken seriously by TPAE, the role of love in identification will have to be made explicit. Luckily, the support for that argument exists in abundance, even if it was left out of TPAE’s initial articulation. For instance, Berry noted: “Farming by the measure of nature...means that farmers must tend farms that they know and love, farms small enough to know and love, using tools and methods that they know and love, in the company of neighbors that

they know and love” (Berry, 1990, p. 210). While another definition of love might be necessary to explain the love of tools and methods, the Aristotelian definition explains the rest in a way that becomes obvious, loving small farms and neighbors by wishing for their good and tending to them; in this case, the ‘farm’s good’ is, at heart, the good of the beings on the farm.

This inclusion of love as a natural fit with the concept of identification is just as true for Bailey. In a section of *Outlook to Nature* entitled “The nature-ward tendency,” Bailey uses the term “nature-love” when this tendency is applied to farmers, and he says it will develop “slowly and non-theoretically...I am sometimes told...that I am idealizing...but I hope that the ideals are attainable” (Bailey, 2013, p. 87). He goes on to close the book with a light-hearted example of this attainable ideal:

In these matters, I will substitute trust for faith. If I cannot remove the dandelions from the lawn, then I will love the dandelions. Where once were weeds are now golden coins, bees reveling in color, and the spring sunshine kissing the blossoms with lips of dew. It is so sweet and restful that I abide in peace. (ibid., p. 195)

In *Holy Earth*, Bailey ties this love, this unselfishness, as both he and Maslow see it, to evolution, in a similar way that evolution was invoked above by the theorists:

If we are parts in the evolution, and if the universe, or even the earth, is not made merely as a footstool, or as a theatre for man, so do we lose our cosmic selfishness and we find our place in the plan of things...This is the philosophy of the oneness in nature and the unity in living things. (Bailey, 1988, p. 23)

While Jackson might not have used love in the sources consulted to craft TPAAE, he did use it in his article cited herein with the meta-theorists, and in such a way that the concern for the other shines through: “Abuse a hillside and the sins of the fathers *will* visit the sons even unto the third and fourth generations but not necessarily forever, for redemption of the wasted hillside is possible if *loving* care is given it” (Jackson, 1984, p. 171).

Finally, Leopold is conspicuous in the number of times he invokes love, especially in *The Land Ethic*:

When one of these non-economic categories is threatened, and if we happen to love it, we invent subterfuges to give it economic importance.”

“We can be ethical only in relationship to something we can see, feel, understand, love, or otherwise have faith in.” “It is inconceivable to me that an ethical relation to land can exist without love, respect and admiration for land, and a high regard for its value... I mean value in the philosophical sense (Leopold, 1949, p. 210,214, 223).

One sees Leopold’s intention more clearly with the insertion of an Aristotelian understanding of love: when we are concerned for the well-being of the more than human world, we give it economic importance; we are ethical when we are concerned about the good of the other for its sake. An ethical relation to land cannot exist without that concern.

Creatureliness

Another way that an understanding of interiority helps to explain the writings of TPAE theorists is through “creatureliness.” Here again, Berry, Leopold, and Bailey are at the forefront. In the initial conception of TPAE, Berry states that scientism and economism have come to dictate that “it is the destiny of every creature (humans not excepted) to have a price and to be sold” (Cox, 2014, p. 43). Here, Berry insinuates that humans are creatures. Elsewhere, he is explicit, such as when he writes “We are working well when we use ourselves as the fellow creatures of the plants, animals, materials, and other people we are working with” (Berry, 1997, p. 140). As with Berry’s conception of love, it is difficult to surmise what the creatureliness of the materials would be, and what that characterization would entail in terms of obligations, but what is important is the interiority that Berry’s characterization ascribes, as well as how his conception of creatureliness is intricately tied to other important TPAE concepts, such as spirit, as will be shown in a later section.

Leopold also invokes humans as creatures in TPAE: “men are only fellow-voyagers with other creatures in the odyssey of evolution. This new knowledge should have given us, by this time, a sense of kinship with fellow-creatures” (Cox, 2014, p. 45). Outside of TPAE’s initial articulation, Leopold extends this awareness by giving it a famous new name: “In short, a land ethic changes the role of *Homo sapiens* from conqueror of the land-community to *plain member and citizen* of it. It implies respect for his fellow members, and also respect for the community as such” (Leopold, 1949, p. 204, emphasis added).

Perhaps it will be easiest to see the association of creatureliness and interiority in the writings of Bailey. In one instance, which is not cited in TP AE's original conception, Bailey explicitly connects humans with the more than human world: "Man finds himself upon [the earth], with many other creatures, all parts in some system which, since it is beyond man and superior to him, is divine" (Bailey, 1998, p. 4). This characterization mirrors that of Berry and Leopold, but Bailey was explicit in his invocation of creaturely interiority, even in TP AE. In one instance, he describes farming as a drama including "a thousand actors moving in and out, always going, always coming," and while he, a human, is one of the actors, so too are the plants that he planted, "tender things...that had not been seen on the earth before" (Cox, 2014, p. 38). Elsewhere, Bailey describes an oak tree as a "moral object because it lives its life regularly and fulfills its destiny" (ibid., p. 50). Now, we can compare Bailey's last quotation with one from Sessions as quoted in Fox (Fox, 1995): "Naess [as a deep ecologist]...speaks of the equal right of all things to live and blossom into their own unique forms of self-realization" (Fox, 1995, p. 223). Taken together, and in light of the deep ecology quote, these three quotations from Bailey can be seen to indicate interiority as a function of creatureliness. Added to the previous quotes from Berry and Leopold, they tend towards an assurance that the concept of interiority is a necessary one for TP AE.

"Realistic Appreciation"

A third example that points towards the necessity of interiority is again related to identification in the original TP AE. It was indicated there, through paraphrasing Fox, that "a realistic appreciation of the ways in which we are intimately bound up with the

world around us, especially the farm and the beings on the farm, inevitably leads to wider and deeper identification, and hence alternative modes of farming” (Cox, 2014, p. 37). The crux of the argument to follow is that an inclusion of interiority of the more than human world gives a farmer a more realistic appreciation of interconnection; this leads to an even wider and deeper sense of identification, which is the essence of TPAE. Another way to think about it comes from Fox: “If one has a deep understanding of the way things *are*...then one *will* (as opposed to should) naturally be inclined to care for the unfolding of the world in all its aspects” (Fox, 1995, p. 247).

There are two instances that illustrate an understanding of the importance of a realistic appreciation of interconnections in the original conception of TPAE and, looking back in light of subtle materialism and interiority, they are significant. First, Jackson stated: “Here lies my worry. Most proposals for bringing about a sustainable agriculture and culture carry the fingerprints or markings of the Baconian-Cartesian worldview. At best, it amounts to Smart Resource Management” (Cox, 2014, p. 51).

There are two things to note here. To begin with, a case could easily be made as to why subtle materialism carries the “markings of the Baconian-Cartesian worldview,” as indicated through Keller and Brummer’s conception of the productionist mentality as one that denies intrinsic value to nature (Keller et al, 2002, p. 264). Next, through the analysis of this paper, it is obvious that this denial of interiority, coupled with the concept of ecosystemic relations as external, “amounts to Smart Resource Management.” Simply acknowledging the subjectivity of the more than human world goes a long way towards easing Jackson’s worry.

Second, Berry contends: “To define knowledge as merely empirical is to limit one’s ability to know; it enfeebles one’s ability to feel and think” (Cox, 2014, p. 51).

This isn’t the only way that Berry has expressed this concern. Elsewhere he has written:

For a while it has been possible for a free and thoughtful person to see that to treat life as mechanical or predictable or understandable is to reduce it. Now, almost suddenly, it is becoming clear that to reduce life to the scope of our understanding (whatever “model” we use) is inevitably to enslave it, make property of it, and put it up for sale. (Berry, 2000, p. 7)

And:

Reduction does not necessarily limit itself to compacting and organizing knowledge; it also has the power to change what is known. (ibid., p. 101)

To summarize Berry’s concerns, empiricism and reductionism limit one’s ability to know, enslave life, and actually have the power to change the object of knowledge. In the same way that the move towards interiority ameliorates Jackson’s worry, so too can it address Berry’s concerns. As will also be shown later in this paper, the acceptance of interiority opens epistemological vistas that have previously been constrained through empiricism. As discussed above, it frees life to “fulfill its destiny.” Finally, it doesn’t comport the more than human world to fit in with reductionism’s model, thus changing those beings. Instead, it acknowledges the subjective space of those beings, liberating it to engender more ways of feeling and thinking in the farmer, her relationship to the farm, and her process of farming.

Again, this understanding will be fleshed out more in the next two sections. For now, a return to TPAE’s transpersonal and deep ecology roots will assist the

solidification of the role of a realistic appreciation of interconnectedness. For example, by acknowledging interiority and providing a more “authentic” understanding of interconnectedness, and thus “human existence,” Zimmerman believes that “human existence functions to serve, not to dominate” (Fox, 1995, p. 239). In a turn especially relevant to the next section, he goes on to state, “In the moment of releasement, enlightenment, or authenticity, things do not dissolve into an undifferentiated mass. Instead, they stand out or *reveal themselves* in their own unique mode of Being” (ibid., emphasis added). Rodman has another way of putting it; as he says, “the human personality discovers its structure through interaction with the nonhuman order”, and Callicott et al., discussing deep ecologist Paul Shepard, yet another: “[Shepard] explores the way intersubjective interaction with animal Others not only changes our understanding of what it means to be human, intersubjective interaction with animal Others is indeed what made *Homo sapiens* human” (ibid., p. 240, Callicott et al., 1990, p. 128). Finally, here is a paraphrase of Fox, as a way to return these transpersonal concerns to agriculture: “Indeed, if a particular way of farming or farmer imposes themselves unduly upon the more than human world, an impartially based sense of identification may lead a person to feel that one has no real choice but to *oppose*...the destructive or oppressive, unsustainable way of farming” (Fox, 1995, p. 256).

TPAE and Interiority: The Sacred as an Ordinary but Integral Way of Being that Leads to Action

To invoke the terms “sacred” or “spiritual” is, in the minds of some, to invoke something that can only obfuscate the efforts here. MacDonald goes a long way towards

dispelling that misconception, particularly as spirituality relates to identity (MacDonald, 2009). He explores the possibility of a more empirically and scientifically oriented definition of spirituality in an effort to show how spirituality relates to the individual conception of self. In that exploration, he puts forward a definition that ultimately doesn't fit his purposes, but works well here: "Spirituality...is considered to entail an experientially grounded sense of connection with, or participatory consciousness of, the 'sacred,' 'transcendent,' 'numinous' or some form of higher power or intelligence" (ibid., p. 87). This section will show how a 'spiritual' or 'sacred' experience of reality bridges the gap between *why* interiority is necessary and *how* one enacts that knowledge, that this way of being in the world is taken to be 'ordinary' both by some TP AE theorists and Leopoldian scholars alike is significant. What is of utmost importance, however, is that this spiritual way of being does not conceive of itself as separate from the material world; it exists alongside it; in some ways, they are one and the same thing.

Wendell Berry addresses this issue through the lens of the economy, seeing it as a system that perpetuates the "disease" of disconnection: "Together, these disconnections add up to a condition of critical ill health, which we suffer in common—not just with each other, but with all other creatures. Our economy is based upon this disease. Its aim is to separate us as far as possible from the courses of life (material, social, and spiritual)... It fragments the creation and sets the fragments into conflict with one another" (Berry, 1997, p. 138). What can be taken from the above statement is that the material and the spiritual have been unduly fragmented, separated, and forced into competition, and as a result, the human and the more than human worlds suffer. This is what Berry meant elsewhere when he stated, "As a people, we have lost sight of the

profound communion—even the union—of the inner with the outer life” (ibid., p. 11).

For the present purposes, the fullness of Berry’s conviction is best expressed in this way:

“[Our bodies] are not distinct from the bodies of plants and animals, with which we are involved in the cycles of feeding and in the intricate companionships of ecological systems and of the spirit” (ibid., p. 103).

Two things are of note. First, notice how companionship is defined *both* as an ecological relationship *as well as* a spiritual one. Subtle materialism is unnecessary—thinking of interconnections materialistically is not mutually exclusive with thinking about interconnections subjectively or spiritually. Second, it is worth noting that Berry’s statements were made in relation to healing, and he goes on to conclude that “Healing is impossible in loneliness; it is the opposite of loneliness. Conviviality is healing. To be healed we must come with all the other creatures to the feast of Creation” (ibid., p. 103).

Fukuoka makes similar points: “To break experience in half and call one side physical and the other spiritual is narrowing and confusing,” and “This is what I mean when I say that agriculture has become poor and weak spiritually; it is concerning itself only with material development” (Fukuoka, 2009, p. 112, 111). So too does Bailey, and, as noted in TPAE’s initial articulation, he does so in such a holistic way that his statements simultaneously address the spiritual and the practical:

The countryman’s training, whether in home or school, should be such as to intensify his spiritual reactions. There is a danger that we miss the reverential attitude toward life...

One stimulates it in himself only as he feels that the earth is holy and that all the things that come out of the earth are holy....Such an attitude of

mind as inclines one to pause to listen to a bird's song...to give more than a passing glance to a potato plant...will produce in him a sweet seriousness that will stand him in good stead in stress and strain, and will much reinforce his spiritual stability. (Bailey, 1915/2013, p. 80, 87–88, 189)

Bailey takes this marriage of spirit and matter one step further. For him, and for TPAE as it pertains to interiority, the key is not only to not see these two as separate—exterior and interior, our ecological relations and our psychological relations—the key is also to see this as ordinary, as was highlighted in the quotation above.

In fact, the quotidian nature of this spiritual way of being in the world was so important for Bailey, as it should be given the nature of his referent—the daily agricultural activities of an enlightened farmer—he repeated himself in various ways and often (Cox, 2014, p. 39, 50):

I preach the near-at-hand, however plain and ordinary, -- the cloud and the sunshine; the green pastures...the rough bark of trees; the frost on bare thin twigs; the mouse skittering to its burrow; the insect seeking its crevice...the leaf that clings to its twig or that falls when its work is done.

Wisdom flows from these as it can never flow from libraries and laboratories. (Bailey, 1915/2013, pp. 9–10)

And:

The good spiritual reaction to nature is not a form of dogmatism or impressionism. It results normally from objective experience, when the person is ready for it and has good digestion. (Bailey, 1915/1988, p. 52)

In addition to Berry's quotation in the love section, where something ordinary like the "support for a family" was honored as an "enactment of connections...one of the forms and acts of love," Berry's emphasis on the ordinary flows into his discussion of conservation, which has so far failed because "it is not yet sensitive to the impact of daily living upon the sources of daily life" (Cox, 2014, p. 47).

Maslow, Swan, Devall—a deep ecologist, and Pryor are also keen to the possibility that this alternative—a spiritual way of being in the world in which one identifies with the more than human world—is one which is "ordinary." Fox states that Maslow "was always concerned to point out that his theorizing was grounded in empirical reality and that his proposals were open to empirical investigation" (Fox, 1995, p. 201). Swan, in "Transpersonal Psychology and the Ecological Conscience" states: "ancient wisdom and modern science can agree on the existence and validity of transpersonal experiences in natural settings as being a cornerstone of an ecological conscience, and such experiences are considered normal in traditional, non-western cultures" (Swan, 2010, p. 21). Devall, a deep ecologist cited by Fox, actually has a term for the ordinariness that connects it back to a realistic appreciation of interconnectivity, "Deeper perception of reality and deeper and broader perception of self is what I call ecological realism" (Deval, 1990 p. 226). Finally, Pryor describes it as "a most basic truth: that ordinary people in the course of their ordinary lives experience flashes of something greater than themselves—a 'mystical' dimension that binds all the beings of the world together" (Pryor, 2011, p. 486).

To summarize up to this point: the sacred is an integral, non-dual way of existing in the world, one aspect of which is the recognition of interiority, which is accessible to

anyone and is tied up with a realistic appreciation of interconnection as well as creatureliness. Finally, the role that spirit and interiority play in the practice of biodynamic agriculture has been reserved until the end of this section as a way to show the continuity between spirit and interiority, its ordinary enactments, and the agricultural practices that can follow.

In TPAE's initial conception, Koepf et al. are quoted as stating:

Natural science has as far as possible detached man from knowledge in order to reach objective results. But in the processes described here man works on himself in order to become an ever more complete instrument for understanding nature. In doing so he begins to meet layers of reality that must remain incomprehensible to one who proceeds only by measuring, counting and reckoning. He then experiences more consciously something belonging to the most ancient experiences of mankind: that in natural beings themselves something lives and works that can only be comprehended if he compares it with his own will and indeed grasps it with his own will. This is the path that is likely to suggest itself to the farmer. (Koepf et al., 1976, p. 200–201)

A further exploration of the thinking of these authors reveals a deeper complexity that follows the trajectory of spirit moving through the ordinary into farming. In the section "Understanding the Bio-dynamic method", they state that "much depends on the individual's capabilities, discernment and the entirely personal and cordial relationship [the farmer] has to the things he deals with" (Koepf et al., 1976, p.

24). Should there be any doubt that Koepf et al. are referring to interiority “of the things he deals with”, they quote Steiner himself from the fourth agricultural course as saying:

Nature and the working of the spirit through nature must be recognized on a large scale, in an all-embracing sphere. Materialistic science has tended more and more to the investigation of minute, restricted spheres...But the world in which man and the other earthly creatures live cannot be judged from such restricted aspects. (ibid., p. 24)

The understanding of the working of spirit and the interiority of the more than human world must not be removed from the daily experience of the practitioner, and Koepf et al. state as much: “It is not a question of ‘believing’ in it or not, but, to start with, in ordinary day consciousness, it may have the value of a hypothesis” (ibid., p. 28). But this hypothesis gets confirmed by “those who actually do the work in the field and garden” who “[have] the advantage of direct experience of the more intimate interplay that exists in the growth of plants, the rhythms of the seasons, the thriving of the livestock, and in general the communities of the field or garden. A personal relationship to all these arises out of his daily work. Experience shows him that the methods are justified” (ibid., p. 28-29).

Just how is a farmer supposed to undertake this task of being open to the spiritual and interior depths of the more than human world in her daily life? Simply by doing it, in the case of biodynamic farming, with an understanding of the farm as organism: “Achieving a living understanding of these relationships is a task we have as yet hardly begun, but Steiner’s ideas about the organism of a farm indicate a path that can be followed by the practicing farmer, since it involves the very things with which his daily

work confronts him” (Koepp et al., 1976, p. 25). Koepp et al. provide a succinct summary after quoting Liebig (of all people!) relative to interiority: “[Liebig’s] idea of the organism cannot be found at the level of discursive reasoning. It is rather a matter of creating a real relationship with life phenomena, a relationship based on the expanded capacities of a person seeking knowledge through inner training” (ibid., p. 26). Here, all three components are found—an understanding of interiority through ordinary relationships undertaken in service to agricultural practices. Those ‘practices’ could benefit from a better definition than “seeking knowledge through inner training,” though that does provide a start, as does Koepp et al.’s aside: “Since time immemorial the farmer’s calling has been based on a certain inner attitude” (ibid., p. 29). Addressing the farmer’s inner attitude was the intent of TPAE, though it has now been shown to be partial. What is now necessary is the development of agricultural practices that take into account *both* the interiority of the farmer *as well as* the interiority of the more than human world: such is the very definition of an integral agriculture.

TPAE and Interiority: How?

Much of what will be discussed in this final section comes from the first articulation of TPAE (again returning to it), transpersonal ecology, and deep ecology, with a newfound understanding of the necessity for agriculture to recognize the interiority of the more than human world. The actual application of this integral understanding to the farm and the beings on the farm comes in two forms. The first is more outwardly directed, though it should be pointed out that these actions, by coming from a spiritual way of being, are always at heart participatory, meaning they always

involve both the farmer and the other subject though the emphasis is on one or the other. The first mode, as compared to the second, is more inwardly directed. It is within the context of the realistic appreciation of interconnectedness that a sense of interiority develops a ‘sensitivity,’ or a new ‘attitude,’ within the farmer. The second is more outwardly directed, being ‘guided’ by nature and having a ‘consultation’ with it, if not a ‘conversation.’ Undertaking both of these activities, the inward sensitivity and the outward relationship with the beings of the farm, puts the farmer into a ‘correct relationship’ that facilitates identification, which then facilitates a truly holistic, integral agriculture. Finally, it should be noted that the previous discussion of love fits in well here, so well in fact that a revisiting of the topic seems superfluous. How can a farmer become an integral farmer? By loving the farm and the beings on the farm!

Obviously, as TPAE is explicitly concerned with the mindset of the farmer, there are also some redundancies in going over that the material again here. However, with the addition of interiority, the material on “sensitivity” undergoes a refined alteration. For instance, Bailey stated that a “sensitiveness to life is the highest product of education,” Berry put forward that “kindly use,” by which he meant treating every field with the consideration deserving of its uniqueness, “depends upon intimate knowledge, the most sensitive responsiveness and responsibility,” and Koepf et al. suggest that “it is also important to be able to feel one’s way into the processes of nature. It is then important to form thoughts that can penetrate into the structure of nature[,] for such thoughts will stimulate rather than banish the appropriate sensitivity” (Cox, 2014, p. 51). All of these quotations can now be interpreted to suggest that the farmer is becoming sensitive to the interiority of the more than human world and the responsibility that

brings. This has to be what Bailey meant when he stated, “The reverential attitude is the result of our feeling toward the materials of life, -toward the little things and the common things that meet us hour by hour” (Bailey, 1915/2013, p. 88).

The awareness of interiority also better situates the TPAE theorist’s suggestion to dialogue with nature. For instance, Jackson uses the term “consultation of nature” when discussing the science of ecology, but switches to “a dialectical interaction with nature” when discussing a new agricultural research agenda which culminates in “a conversation with nature” (Cox, 2014, p. 38, 51). Berry, who has been more overt in raising the issue of interiority, also uses the term conversation, again invoking the concepts of creatureliness and process, when he writes “The conversation [between place and inhabitant] itself would thus assume a kind of creaturely life, binding the place and its inhabitants together, changing and growing to no end, no final accomplishment, that can be conceived or foreseen” (ibid., p. 45). Yet again, Berry’s language might be philosophically ambiguous—how can a conversation between two entities itself have an interiority?—but one need only think of Bateson’s concept of mind in order to accommodate that particular presentation (Bateson, 1972, p. 491).

This example was given to illustrate a general awareness and not to advocate for a particular understanding. This family resemblance, as opposed to direct correspondence, is also true for Fukuoka who tends not to emphasize a conversation with nature per se, more so our conscious service to it: “The world exists in such a way that if people will set aside their human will and be guided instead by nature there is no reason to expect to starve...So for the farmer in his work: serve nature and all is well. Farming used to be sacred work” (Fukuoka, 2009, p. 113). This understanding is still

properly transpersonal and also relevant to interiority given Callicott et al. and Zimmerman's previously noted characterization of human existence consisting of being in service to the more than human world, and that to be in service reveals the role of interiority.

Thus, one finds with TPAE's emphasis on the mindset of the farmer, alongside a correct understanding of the subjectivity of the nonhuman world, a truly holistic, integral agriculture has been formulated, and this way of being and relating seems to be what progressive TPAE theorists had in mind all along. Here are Bailey and Fukuoka as quoted in Cox (2014, p. 53, 38):

The sacredness to us of the earth is intrinsic and inherent. It lies in our necessary relationship and in the duty imposed on us to have dominion, and to exercise ourselves even against our own interests. We may not waste that which is not ours. To live in sincere relations with the company of created things and with conscious regard for the support of all men now and yet to come, must be of the essence of righteousness.
(Bailey, 1915/1988, p. 11, xi, 20, 78)

And:

In one of the huts on the mountain I left the words, "Right Food, Right Action, Right Awareness" inscribed on a pinewood plaque above the fireplace. The three cannot be separated from one another. If one is missing, none can be realized. If one is realized, all are realized.
(Fukuoka, 1978/2009, p. 147)

“Right Awareness” would be the awareness of the necessity of the appropriate mindset of the farmer and the acknowledgement of the interiority of the more than human world.

“Right Action” would be to take that awareness and live in “sincere relations with the company of created things.” To apply these to agriculture would be to give humanity

“Right Food” and to create an integral agriculture.

Conclusion: Clues for a Future Integral Agriculture

To be clear, none of the alternative metaphysical frameworks cited herein represent a systematic attempt to connect agriculture with our ethical relationship with the more than human world, given its inherent subjectivity. However, TPAE, coupled with the current discussion on interiority, does just that, thus creating an integral agriculture. Taken collectively, integral agriculture provides an intellectual and philosophical space—with an eye to the practical implications—to ask a very important question in the quest for a truly sustainable agriculture: What would the practices of a sustainable agriculture look like that take seriously the mindset of the farmer and the interiority of the more than human world? With the clues contained in this essay, an attempt was made to provide the grounds to legitimately ask such a question, and some answers were put forward — the practices are loving ones, sensitive to the “creatureliness” of the beings to which the farmer is relating. This gives the farmer a realistic appreciation of the interconnections between self and other, and as a result of the extended conversations between them, the farmer embodies a sacred, non-dual, integral way of practicing agriculture, exhibiting right relations between herself and the more than human world. However, this effort in no way purports to definitively answer

such a complex and important question. In chapter four, when process metaphysics was offered as a ground for TPAE at the metaphysical level, it did so in a way that left open the possibility of other metaphysical root stocks (Cox, forthcoming). The case is the same here; the question of an integral agriculture can be answered in many ways. But at the very least, it is easy to say that industrial agriculture can't give an answer. Given the analysis of this article, it is easy to say that any metaphysical system that perpetuates subtle materialism won't give a full answer. Perhaps Leopold himself left yet another clue at the beginning of his "Marshland Elegy." Leopold begins that essay with an exquisite description of day break on the crane marsh. He quickly expands his focus to include not just this one particular day, but the "sodden pages" of that marsh's history and, as such, the crane's history as well, and here the narrative turns existential: "To what end?" What is the ultimate purpose of this ecosystem and the beings that make it up? What should be our relationship to it? As Leopold goes on, it becomes apparent that he is invoking, in no small part, the discussion herein: "Our ability to perceive quality in nature begins, as in art, with the pretty. It expands through successive stages of the beautiful to values as yet uncaptured by language. The quality of cranes lies, I think, in this higher gamut, as yet beyond the reach of words" (Leopold, 1949, p. 96). His repeated use of the phrase "as yet" is interesting here. It suggests that there may be a time when the value of nature can be captured by language and the quality of cranes can be expressed in words. Perhaps the language suggests to humanity that the value of nature has to be one that takes nature's interiority seriously. And perhaps the words that truly capture the quality of cranes will not be human words. Perhaps they may be 'crane words.' I think Leopold would agree: "To what end? Out on the bog a crane, gulping

some luckless frog, springs his ungainly hulk into the air and flails the morning sun with mighty wings. The tamaracks re-echo with his bugled certitude. He seems to know” (Leopold, 1949, p. 96).

GENERAL CONCLUSION

Allow me to summarize the results of this dissertation by way of telling yet another story. When I thought about what I wanted to write for my conclusion, I definitely wanted to explore suggestions for further research. As feedback for my first article, one of my committee members asked me “Where are the women?” I told her that I knew I had left out Lady Eve Balfour, founder of the Soil Society, as well as Vandana Shiva, but my excuse was that I wanted to use sources with which American farmers might be more familiar, with the possible exception of Fukuoka. In my heart, though, I knew she was right.

As such, one of the first things I hope to do is to write an eco-pedagogical critique of my second chapter. In it, I hope to bring more voices into the conversation. Besides Balfour and Shiva, I’d like to study the works of Cesar Chavez, George Washington Carver, Machaelle Small Wright, Rachael Carson, and others, in the hopes of gaining a broader transpersonal agroecological understanding, as well as expanding TPAE’s reach. Secondly, I hope to write an article discussing process metaphysics’ (PM) suitability as a metaphysics to undergird integral agriculture, which should be readily apparent to any reader of this dissertation, whereby the third chapter highlights PM’s belief that awareness, or interiority, goes ‘all the way down.’

Finally, I would like to enter into discussion with those persons interested in integral theory. For instance, while Esbjörn-Hargens and Zimmerman use Wilber’s understanding of integral almost exclusively, they do acknowledge (though mostly in footnotes) that the integral world is not exclusively Wilber’s domain (see p. 3, footnote 4; p. 10, footnote 14; p. 35, footnote 45; p. 203, footnote 76; and p. 561, footnote 13).

Therefore, I think it would be valuable to the field of integral theory and to the concept of integral agriculture to add more non-Wilberian voices by using theorists that Esbjörn-Hargens and Zimmerman acknowledge are integral as well, including Thomas Berry and Gregory Bateson, as well as Leonardo Boff, Sri Aurobindo, Jean Gebser, Edgar Morin, Sean Kelly, and more.

But I had also wanted to use the space afforded me in this conclusion to spotlight a Nobel prize-winning cytogeneticist whose work fits well into an integral agriculture, at least as it relates to research. Barbara McClintock worked on maize cytogenetics through a technique her biographers called a “feeling for the organism,” meaning “one must have the time to look, the patience to ‘hear what the material has to say to you,’ [and] the openness to ‘let it come to you’” (Keller & Mandelbrot, 1983, p. 198). On one double page in McClintock’s biography, several of the concepts from this dissertation are addressed:

Interiority and Sensitivity:

A motivated observer develops faculties that a casual spectator may never be aware of. Over the years, a special kind of sympathetic understanding grew in McClintock, heightening her powers of discernment, until finally, the objects of her study have become subjects in their own right; they claim from her a kind of attention that most of us experience only in relation to other persons. (ibid., p. 200-201)

Scientism:

She shares, with at least some, the additional awareness that reason and experiment, generally claimed to be the principal means of this pursuit, do not suffice. (ibid.)

Identification:

A deep reverence for nature, a capacity for union with that which is to be known—these reflect a different image of science from that of a purely rational enterprise. (ibid.)

Alternative epistemologies and methodologies:

In [McClintock's] mind, what we call the scientific method cannot by itself give us 'real understanding.' 'It gives us relationships which are useful, valid, and technically marvelous; however, they are not the truth.' And it is by no means the only way of acquiring knowledge. (ibid.)

However, one of my committee members encouraged me to “get practical” with my conclusion. He suggested that I give an idea of what the ideas and concepts contained within would mean for a farmer. I was hesitant. While my father grew up on a farm (he was the only one of four boys to leave the farm) and some of my friends and family are farmers, I didn't feel comfortable hypothesizing what this way of being would be like for individual farmers on a day to day level. I could understand the value in such a move, and I could certainly see it as a natural extension of my scholarship here, but I also felt the need to value the experience of the people who will be carrying out this work by not pontificating on possibilities. Luckily for me, I was reminded of an experience I had while working on the second chapter of my dissertation. The content

of that chapter stemmed from a presentation that I gave during Iowa State's first course on organic agriculture, taught by Dr. Kathleen Delate. The title of my presentation was "Profits or Prophets?" and was my first attempt to articulate something like transpersonal agroecology. When I returned to Steiner's *Agricultural Course* for my dissertation, a notecard from that presentation fell out. On it, I had written Vic Madsen's name, who is a farmer from Western Iowa that came and spoke to Dr. Delate's class. I remembered thanking him during my presentation because his honesty about his relationship to the land gave me the courage to explore the possibility of that which would become transpersonal agroecology. Remembering that card gave me the idea to contact Vic as a way of "getting practical" with my ideas.

I got Vic's contact information from Dr. Delate, and he and I set up a time to talk. When I got him on the phone, I told him that I remembered his participation in Dr. Delate's course, I explained to him that I needed to write a conclusion for my dissertation, and that I hoped to get some inspiration from our conversation, to which he agreed (Vic Madsen, personal communication, September 23, 2014). I asked him to begin by repeating what he remembered of what he had said in our class. From there, it effortlessly moved into a dialogue, during which I mostly asked him clarifying questions. Finally, I recapped our conversation, noting the overlap between what he said and the concepts of my dissertation, in order for him to agree that we were discussing the same things, more or less. Vic agreed. What follows is similar to the previous treatment of McClintock; concepts from this dissertation will be matched up with examples from my conversation with Vic.

For instance, while Vic had an appreciation for science--indeed, the Practical Farmers of Iowa field trials that he did on limited nitrogen fertilizer applications for corn got him to think about going organic--he also stated that “lots of things don’t lend themselves to scientific evaluation...science is great but it is limited,” which mirrors the TPAE concept of scientism. He talked about the pervasive nature of economism, where conventional farmers get “preached at” by herbicide and insecticide commercials, which, coupled with other agribusiness commercials, condition conventional farmers not to talk about anything but the economics of farming: “They want you to believe you can’t farm without it. [Even when you switch to organic], it takes a while to get that out of your mind.”

Vic was very open about the ‘conversational’ aspects of his farming practices (addressed in chapter four), stating that his “view toward nature has changed” as a result of going organic, where he now views nature as “a partner, not an obstacle.” Also, Vic had a phrase for the ‘sensitivity’ discussed in chapter four, calling it the “eye of the master,” where, in livestock, for example, a farmer is “in tune with his animals” and can notice issues based solely on their “body language: the arch of a back, or the color of their hair coat.” Though Vic didn’t use the term values explicitly, he did invoke the concept by acknowledging the trade-off between the efficiency of monocropping all of his land and his practice of breaking his 250 acres into various fields where he “matches the enterprise with the land.” In this instance, Vic is unapologetic about sacrificing economic value for the “satisfaction” he gets from knowing that he is caring for the land. Vic had another phrase that matched up well with a TPAE concept: he described his penchant for alternative methodologies as the “hunch factor.” He said, by developing

the aforementioned sensitivity, he says he will have an idea just “come into my mind,” then he thinks about it, and many times, he tries it. Vic contrasts that way of acting with that of a conventional farmer who evaluates his action against a different set of criteria, like “trials and ‘facts.’”

Finally, though Vic didn’t seem to really want to talk about it much, he did venture into the realm of the sacred. He said “the best fertilizer for the land is the farmer’s footsteps”, and he went on to say “I don’t want to say it’s mystical, but it almost becomes it, with the land telling you what to do.” He finished his thoughts on the subject by saying, “When you realize it, [that you can farm with nature], it is an epiphany.” I told Vic that I wanted to get a grant, maybe from PFI or the Leopold Center, to go around and meet with organic farmers and the like, and to see if I could get even more farmers to corroborate the concepts of my dissertation. He said it was going to be “difficult” because it is “not macho.” “They aren’t going to talk about their softer side. They won’t admit it.” He then told me a story about his neighbor, who is farming organic, doing a great job, but always talks about how he is in it for the money: “He’ll never admit the social aspects of why he does what he does.” So I asked Vic why he talks about it. In a way reminiscent of the epitome of the modern American Midwestern farmer, Vic answered “Because I’m too old to care.”

Here I’d like to take the time to thank Vic again. Not only did he inspire that initial presentation, but that presentation inspired this dissertation. And while I appreciate his perspective on everything we talked about, I’m going to have to kindly sidestep this last comment of his for two reasons. First, I believe that if there is one person like Vic Madsen, there have to be two, and most likely more, particularly among

so many young people who are currently entering agriculture and may be more open to discussing this “softer side”. Secondly, I believe that, through my dissertation, I’ve made the case for why the mindset of the farmer and the interiority of the more than human world are not only a part of alternative agriculture but are indeed a necessary part of it. As such, the sooner we have the types of conversations that Vic and I had, the sooner we’ll have an integral agriculture across the landscape.

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