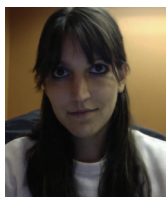


The Logical and Practical Necessity of Ethics in Ecological Forestry: A Reply to Palik and D'Amato 2016

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In our critical review (Batavia and Nelson 2016), we argue that “ecological forestry” requires a clear normative framework to become an enduring philosophy of sustainable forest management. We appreciate the response made by Palik and D’Amato (2016) and hope that this is the beginning of an important and productive conversation about ethics in the practice of forestry. Palik and D’Amato offer four principles—continuity, complexity, timing, and context—as a “framework” for ecological forestry. This effort to distill and articulate ecological forestry’s underlying precepts is a useful contribution. However, Palik and D’Amato “are unsure about the ability to develop an ethical statement for a framework of management” (p. 5). On this point, we are quite sure: a framework of forest management not only can but also *must*, as both a logical and a practical necessity, have an ethical basis.

Consider complexity, for example. As a “foundational principle” of ecological forestry, “complexity” is a scientific word with ethical undertones: it signifies both a physical condition of a forest and a condition considered to be good or valuable. These two (scientific and ethical) connotations of complexity are not equivalent, nor is the latter reducible to the former. The insight that facts are distinct from values dates back centuries (e.g., Hume 2000) but has perhaps most influentially been explained by philosopher G.E. Moore (1993) as the “naturalistic fallacy.” This fallacy of reasoning can be illustrated by a simple example. Consider some physical object, e.g., a tree, and some quality, e.g., health. The former is an empirically discoverable (what philosophers call “natural”) object. The latter points to conditions considered beneficial or vitalizing, both value judgments about what is good. This is the purview of ethics. The statement “a tree is healthy” indicates that the tree is characterized by health. “Healthy,” however, is not the definition of “a tree,” nor is “a tree” the definition of

“healthy.” To conclude from the statement “a tree is healthy” that “healthy” *means* “a tree” commits an obvious logical fallacy, and it is a “naturalistic fallacy” because it defines an ethical value judgment as a natural property of the world.

Palik and D’Amato suggest an ecological forestry framework can be based on the principle of complexity (along with continuity, timing, and context), but they question whether ethics is applicable to this framework. As an operationalized, technical standard, complexity is a “natural” property (in the philosophical sense)—we can identify and describe it scientifically. But as a foundational principle of ecological forestry, complexity is clearly valued in forest ecosystems, which implies it is good. “Good” is an ethical value judgment, and as a matter of logic, an ethical value judgment cannot be defined as a natural property without committing the naturalistic fallacy. Complexity is considered good for a reason, the discernment and articulation of which belongs to ethics. Thus, ethics is not only applicable, but actually integral, to the ecological forestry framework proposed by Palik and D’Amato.

Palik and D’Amato’s four prescriptive principles (along with a host of terms they use to describe the goal of ecological forestry, e.g., “healthy,” “productive,” and “natural,” p. 2) are both scientific and normative. As Palik and D’Amato point out, the peer-reviewed literature has evaluated these concepts in their technical or scientific aspects. But full critical evaluation requires also considering them in their ethical aspect, as prescriptive principles. According to a basic rule of logic, any proposition about what we ought to do or what should be done requires both scientific (or descriptive) and ethical (or prescriptive) premises. Critical thinking entails assessing all the premises (P), scientific and ethical, that support a conclusion (C). For example, consider the argument:

- P1. Forests managed for complexity support native biodiversity.
- P2. Native biodiversity is good and should be supported.
- C. Therefore, we should manage forests for complexity.

Although the literature cited by Palik and D’Amato may have examined P1 by describing complexity and its effects, the ethical appropriateness of P2 also requires articulation and justification before we accept the conclusion that forestry should exemplify the principle of complexity (i.e., through ecological forestry). Viewed in this critical

Received September 24, 2016; accepted September 26, 2016; published online December 22, 2016.

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Acknowledgments: This work was funded through the HJ Andrews Experimental Forest research program, funded by the National Science Foundation’s Long-Term Ecological Research Program (DEB 1440409), with supporting funds from the ARCS Foundation.

light, we hope it is clear that ecological forestry, as a prescriptive framework for management, has and must have an ethical foundation.

Palik and D'Amato also effectively highlight ecological forestry's ethical aspects in more practical terms. They say all the variable applications of ecological forestry "address the foundational principles, with a goal of improving on approaches for sustaining native biodiversity and ecosystem services in managed forests" (p. 5). It first bears pointing out that mere "improvement" suggests a stifling lack of ethical imagination; surely we can conceive a more ambitious and articulate vision for a sustainable future, beyond "better than status quo." More to the point, "improving" implies some normative standard (you have to know what is "good" to know what is "better"), and a normative standard is an ethical proposition. Further, in the frequent cases where protecting native biodiversity and providing ecosystem services for human well-being (including timber production) are incompatible objectives (Cimon-Morin et al. 2013), foresters need guidance for recognizing and making tradeoffs. There are a great many ways for forestry to exemplify, to some extent, at least one of the four principles Palik and D'Amato suggest, but only a subset of these represent sustainable, appropriate relationships between humans and forests. To find and implement this subset, however, we must first answer an inherently ethical question, namely, what *is* a sustainable, appropriate relationship between humans and forests?

Palik and D'Amato contend that, though "comprehensive ecological forestry" (p. 4) is rarely realized, ecological forestry is being practiced "to greater or lesser degrees" across the globe (p. 5). Palik and D'Amato take this as an indication that ecological forestry is more durable than we suggest in our review. In the current catchall connotation

of the phrase, at least some of the numerous forestry practices Palik and D'Amato consider "ecological forestry," which have already been used for centuries (e.g., Perevolotsky and Sheffer 2009), will, of course, continue to be widely implemented into the indefinite future. How could it be otherwise, if anything in the range between nonintervention and industrial forestry is considered, more or less, ecological forestry? But "durability," which signifies temporal longevity, is not measured by spatial extent. We suggest ecological forestry will not be durable over the long-term, as a prescriptive framework of forest management, unless it challenges and perhaps radically redefines the basic values and beliefs perpetuating an unsustainable, exploitative relationship between humans and forests (White 1967, McAlpine et al. 2015). This, again, requires a clear ethic.

Palik and D'Amato distinguish between a philosophy and a framework, suggesting that while the former has an ethical basis, the latter does not. We reiterate that "philosophy" was not our chosen terminology, and we feel it is reasonable to scrutinize a label self-selected by some of the leading proponents of ecological forestry (e.g., Franklin and Johnson 2013). We would not be overly concerned with semantics if a substantive difference were not being drawn between a value-laden "philosophy" and an ostensibly value-neutral "framework." And yet, although logically impossible, Palik and D'Amato perpetuate the illusion that a prescriptive framework for sustainable forest management can provide scientific or technical directives without needing a clear ethical basis.

The original meaning of "framework" is "a structure for enclosing or supporting." As Palik and D'Amato demonstrate, it is possible to build a makeshift framework out of scientific and technical standards, concealing an ill-defined ethic. But far from a

secure enclosure, delineating a set of appropriate practices guided by clear values, this rickety structure leaves "ecological forestry" wide open to interpretation. And although operational flexibility may be useful within limits, a framework untethered from any normative grounding cannot support a sustainable practice of forestry over the long-term. An enduring framework, one that will support humanity, forests, and biotic diversity into the future, is one with sturdy scientific pillars built on a solid ethical foundation, which engenders respectful and reciprocating relationships between forests and society.

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