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FIVE

Respecting Nature's Autonomy in Relationship with Humanity

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PRESERVATIONIST ENVIRONMENTAL thought involves the following interrelated ideas. Nature's value is significantly a function of its degree of independence from humanity. Naturalness or wildness is what most centrally grounds nature's value. When considerably modified by humans, nature loses much of its value and even its essential character. A strong conceptual separation exists between humans and nature. Nature is to be understood in opposition to humanity; nature is the nonhuman. Wilderness is thus quintessential nature. Respect for nature most importantly involves preservation of wilderness areas, free from significant human influence.

In the context of today's massive and ongoing humanization of the planet, these ideas have much truth and power. With perhaps half the planet's surface significantly disturbed by humans and half of that human-dominated (Hannah et al. 1993), valuing nature for its remaining wildness, separating humans from nature, and preserving wilderness are essential if nature as an independent other is to continue to flourish on this planet. But, as important as they are, these preservationist ideas—left by themselves and unsupplemented—have a dark side.

Most troubling is that such views of the human relation to nature make it difficult to envision a positive role for humans in nature. As the antithesis of nature, humans necessarily degrade and destroy it. But an adequate environmental philosophy must explain how humans can be something other than an ugly scar or nasty stain on the natural world. Purely preservationist views also fail to provide guidance for how humans should treat the nature with which we must interact. Specifying how to value and respect nonwilderness lands (and less than fully wild animals and plants), including the rural, middle, or working landscape, is also a crucial task for environmental philosophy. At best, pure preservationists tell us to minimize our use of such lands and entities. At worst, preservationists see such lands (and the animals and plants

on them) as human artifacts totally lacking natural value. But an adequate conception of humans' relation to nature must allow for the possibility of respectful *use* of nature. Unsupplemented preservationist views fail to account for how respect for nature can go hand in hand with human use of nature.

I believe that a particular concept of nature's autonomy provides an important resource for responding to these challenges. Preservationist intuitions need to be joined with the idea of respecting the autonomy of nature. A healthy respect for the wildness of nature that is significantly uninfluenced by humans combined with a respect for the autonomy of nature with which humans are involved provides a far more adequate and comprehensive ethic of respect for nature than does either ethic alone. This essay explores the concept of respect for nature's autonomy and relates it to preservationist intuitions.

Problems for Pure Preservationism

Numerous environmental philosophers, including some of the most influential, accept some version of these preservationist ideas and are vulnerable to the criticisms just mentioned.¹ For example, Paul Taylor's fine book *Respect for Nature* (1986) is concerned only with respecting wild nature and intentionally leaves out discussion of proper treatment of nature that has been heavily used in the fulfillment of human ends. This type of nature Taylor calls "the bioculture," and, in his account, it is "part of human civilization," not nature (310). Although Taylor believes developing an "ethics of the bioculture" is an important task, he thinks it is not part of environmental ethics proper. This is unfortunate, for an ethic of how humans should treat the nature with which they live and work is of crucial importance and a central (if too often forgotten) task of a philosophical account of the human relation to nature. Additionally, one of Taylor's fundamental rules for respecting nature is the duty of noninterference: "We must not try to manipulate, control, modify, or 'manage' natural ecosystems or otherwise intervene in their normal functioning" (175). We are "required to respect their wild freedom by letting them alone" (176). While the duty of noninterference in wild nature is crucially important, suggesting that any human modification of—or involvement with—nature of any sort violates a prima facie duty to nature makes a positive conception of the human relationship with nature difficult to conceive.²

Eric Katz's conception of the value of nature and our obligations to it also leaves little room for a positive account of humans' relationship with nature. His characterization of the human-nature relationship suggests that any human use of nature is abusive. Katz says, "When humans shape and manipulate the natural world to meet their own interests, to satisfy their desires, it

is a form of anthropocentric domination, the oppression and denial of the autonomy of nature" (Katz 1997: xxiv). But humans, like other species, must influence the natural world. Human survival, much less human flourishing, requires this. Katz's language suggests that humans—by their very nature—dominate, oppress, and subvert the autonomy of nature. For Katz, even well-intentioned human involvement with nature—such as restoration of degraded nature—is oppressive. Katz writes, "The re-created natural environment that is the end result of a restoration project is nothing more than an artifact created for human use" (97), and although "these restored and redesigned natural areas will appear more or less natural . . . they will never be natural" (98). For Katz, then, the human stain on nature is so toxic that once nature is soiled, it has been spoiled forever; it will never return. Given Katz's account, it seems impossible to envision an environmentally just future in which humans live in the natural world in a morally appropriate way.

At times, Holmes Rolston's account of nature approaches the same set of problems. In a powerful response to J. Baird Callicott's (1991) critique of the idea of wilderness as unpeopled places and to Callicott's suggestion that human interaction with nature might benefit nature, Rolston says: "The fallacy is to think that a nature allegedly improved by humans is anymore real nature at all" (Rolston 1991:371). This borders on the claim that only pristine wilderness is real nature. Such a view leaves no place for humans in nature. Although Rolston sometimes writes about rural nature, he conceives of it as a "hybrid" between nature and culture (Rolston 1988:330), suggesting that real/pure nature has been degraded in rural landscapes. Furthermore, Rolston has a decidedly "tradeoff view" concerning interaction between humans and nature. Although in various places Rolston suggests humans might add to natural value, the dominant story is that human interaction with nature is a loss for nature. To flourish, human civilization must trade in natural values in the pursuit of cultural ones (Rolston, 1994:85–86). While there is much truth in this perspective, it is important to allow for types of human flourishing that need not compromise natural value.

If we accept the troubling idea that "nature can be fully itself and thus have full value only when left undisturbed by human beings" (Kane 1994:71), we are left with the unfortunate suggestion that—from the perspective of nature's value—a policy of human/nature apartheid would be best. In the context of today's harmful human transformation of the planet, apartheid *is* a major part of what is needed. Leaving much of nature on Earth alone is an absolutely central part of any adequate environmental ethic. But this is not all that is needed, and an environmental ethic that suggests nature necessarily loses or ceases to be nature in any significant interchange with humans makes the human presence on Earth a tragedy for earthen nature. Environmental philoso-

phy must ultimately articulate a constructive human-nature relationship that allows us, as John Visvader says, to "imagine giving more to the world around us than the gift of our mere absence" (1996:18). The alternative of either minimizing human influence on nature (Katz's ideal of human/nature apartheid) or sacrificing natural value for human good (Rolston's tradeoff view) fails to provide for such a positive role.

For humans to have something other than a purely negative and harmful role with respect to nature, we must distinguish between human *involvement* with nature and human *domination* of nature. *Modification* and *alteration* of nature must be distinguished from *mastery* and *control* of nature. If we define human alteration of nature as ipso facto degradation, humans who want to be respectful of nature will not be allowed to interact with it at all. Activities such as birdwatching from a distance would seem the extent of allowable interaction. Relatedly, we need to explain how certain types of human uses of nature need not be abusive and how humans can use nature as a means without necessarily using it as a *mere* means. If our use of other humans need not be devoid of respect for them, one would expect that our use of nature need not be devoid of respect and concern for its flourishing. A positive vision for humanity's role in nature might involve a partnership relationship between humans and nature, where humans use nature respectfully while nature does not lose and perhaps even benefits from the interaction. A symbiotic, mutually beneficial relationship with nature is the ideal.³ Such an ideal should supplement, not supplant, a preservationist ethic that requires significant separation.

Varieties of Nature's Autonomy

A particular way of understanding respect for nature's autonomy can provide a means to address these concerns. Autonomy is a form of independence that is distinct from absolute independence (i.e., maximum avoidance of influence). Respecting the autonomy of others does not mean avoiding interaction with or influence on them. What respect for autonomy requires is that one not dominate or control the other. Thus nature's autonomy need not be compromised by human involvement as long as this involvement is not domineering, just as a person's autonomy need not be compromised by the involvement of others so long as they avoid dominating and controlling that person. Jack Turner puts a related point this way: "Although autonomy is often confused with radical separation and complete independence, the autonomy of systems (and I would argue, human freedom) is strengthened by interconnectedness, elaborate iteration, and feedback—that is, influence" (1996:113).

Nature is clearly not autonomous in some senses in which persons are autonomous. With the possible exception of psychologically sophisticated animals, natural entities or systems do not survey the range of possible alternatives and intentionally choose a plan of action. Neither is the activity of natural entities autonomous in a sense that would justify us holding them morally accountable for their behavior. Nevertheless, the behavior of natural entities can be plausibly described as autonomous in a number of respects. Human action can be seen as thwarting or respecting nature's autonomy in these senses.

The most fundamental sense of nature's autonomy is freedom from human domination and control. Call this the autonomy of nature in relation with humanity. This is a purely negative sense of autonomy, and it consists in the lack of a certain type of human influence over nature. Autonomy in this sense is a relational property between natural entities and humans. To say nature is autonomous in relation to humanity is to say that nature carries on independently of human control or domination. Humans dominate nature when they exercise mastery over it by exerting the supreme determining or guiding influence. When human influence over a natural entity or process outweighs all the other determining factors, humans are dominating that entity or process and failing to respect nature's autonomy in relation with humanity. For example, regulating the height and timing of a geyser by the systematic application of soap in the underground plumbing undermines the geyser's autonomy, for humans are then the chief determining factor in the geyser's eruptions. In contrast, watering a tree so it grows more quickly and larger (or shading it with one's house and thus slowing its growth) does not dominate the tree, despite constituting significant influence over it.

To respect nature's autonomy in relation to humanity is not to respect nature in virtue of particular properties it possesses but to treat it in a certain way. We respect nature's autonomy by avoiding exerting the preponderance of influence over it. Humans can respect the autonomy of nature in this sense whether the natural entity is goal-directed (e.g., organisms and perhaps some ecosystems) or not (e.g., rocks and mountains), whether the natural entity is quite active (like a river) or relatively passive (like a pond). A natural arch about to collapse because of anthropogenic acid rain has had its autonomy undermined as much as has a drive-through sequoia whose life cycle has been cut in half by the tunnel, even though the former is not a self-organizing or teleological being. In both cases, humans dominate these natural entities by exerting the preponderance of influence over their fates. Similarly, keeping an arch from falling as a result of wind and water erosion by using metal cables and bolts puts humans in control of the fate of the arch and fails to respect its autonomy from humanity.

All natural entities and processes have headings or trajectories in the minimal sense that they have beginnings, endings, and patterns of change.⁴ Humans can participate in and influence these journeys while respecting the autonomy of the entities undergoing them by avoiding a controlling or dominating influence. For example, human mimicking of the natural fire regime in a fire-adapted forest is significant human involvement in a natural system that nevertheless does not constitute domination or mastery over it in part because the overall trajectory of the system is not altered. Selective, multiage logging that preserves forest species and successional processes might also be compatible with the forest's autonomy from humanity for similar reasons. Affecting the population of deer and the predators that feed on them by subsistence hunting influences this predator/prey system without necessarily controlling it. In contrast, regulating deer and predator numbers by scientifically managed hunting seasons, a birth-control regime for the deer, or systematic poisoning of predators approaches human mastery over this predator/prey relationship and thus fails to respect the autonomy of this natural process.

It is sometimes suggested that if humans are necessary conditions for the existence of an entity, then it is ontologically dependent on them and thus lacks autonomy in relation to humanity (Katz 1997; Lee 1999). Domesticated animals and plants would not exist but for humans and thus, the argument goes, are dominated and controlled by humans. Insofar as this is a critique of contemporary agriculture, it is much too broad. According to this account, all agriculture, whether it be small-scale organic farming or industrial-chemical agriculture, is disrespectful of nature. In the account given here, humans dominate a natural entity when they exert the preponderance of influence over it. Being a necessary condition for something's existence is not itself to exert such influence over it. Parents are necessary conditions for their children's existence but may not exert such influence over them. Many species on the planet—including those existing in wilderness areas—have human forbearance as a necessary condition for their existence. But this is not to dominate them. Thus that humans are necessary conditions for the existence of some aspects of nature is not necessarily to dominate or show a lack of respect for their autonomy in relation to humanity.

There are other conceptions of respecting the autonomy of nature that, unlike autonomy in relation to humanity, suggest that we can and should respect natural entities and systems because they possess specific properties or capacities. Respect for the autonomy of nature might mean respect for self-organizing, autopoietic systems in nature, or it might mean respect for natural entities and systems that are powerful, active, resistant, or resilient to human-induced changes. A wild river actively and powerfully resists human attempts to change its course or flow. Rainy eastern North America is much

more resilient in the face of human impacts than is the dry west, and a granite mesa is more resistant to the mountain biker than the fragile desert that lies around it. If respecting nature's autonomy means respecting natural entities and systems in virtue of these properties, then, implausibly, those dimensions of nature that lack these features would not be worthy of such respect. Calling for respect for nature's autonomy in these senses would lead to other counterintuitive results as well, for it is the less powerful, more delicate, and more easily influenced aspects of nature (those natural entities and processes that are less autonomous) that need greater protection. One virtue of respecting the autonomy of nature in relation to humanity is that it does not discriminate in these ways between natural entities.

Nature Influencing Humans

Whether humans dominate a natural entity or process (and in this sense fail to respect its autonomy in relation to humanity) depends not just on the sheer amount of influence humans have over it but also on whether that entity/process influences us in return. Consider that, although spouses exert a high degree of influence over each other, they typically do not dominate each other. That same amount of influence exerted over an acquaintance would likely be considered domination. We are less likely to judge that a high degree of influence of one over another is domination when there is significant influence in return.⁵ The autonomy of nature is thus dependent not just on the amount of influence humans have over nature but also on the amount of influence nature has over humans. When a natural system or entity plays an important role in what happens in human culture, that is, when it exerts significant influence over our lives, then substantial human influence over that natural entity is less likely to count as domination and more likely to be compatible with respect for nature's autonomy in relation to humanity than when the natural entity exerts little or no influence over humanity. In human affairs, it is a sign of a healthy relationship when two people exert significant nondominating influence over each other. Such influence is a similar sign of health when present in the human relationship with nature.

This mutual influence dimension of respect for nature's autonomy can help us see certain types of human relations with rural nature in a positive light. Contrast human interaction with rural landscapes and with wilderness areas. Many preservationists would argue that humans significantly dominate rural lands, while wilderness has autonomy from humanity. This need not be the case, given the above account of autonomy. While it is obviously true that wilderness is less influenced by people than are rural lands, it does not follow

from this that wilderness is more autonomous. For rural nature significantly affects people's lives in a way that wilderness does not.⁶ Often, people who work with rural nature live by the rain, the soil, the sun, the animals, and the plants. Instead of letting the banker, boss, or stock market determine their lives, they let the seasons, temperature, and presence or absence of predators or pests determine their lives. Rural nature can preserve its autonomy in relationship with humanity even when significantly influenced by humans because it can significantly influence us in return.

It is true that a farmer might have machinery, chemicals, irrigation systems, greenhouses, insurance, and so on, so that she is hardly more influenced by nature than is an urban dweller. But some farmers put their livelihoods in the hands of nature. They depend on the rain coming instead of irrigating with fossil water. They depend on insect predators in the hedgerows instead of chemical pesticides. They depend on the hawks to keep the field mice down. They depend on horses to plough and manure the fields. By leaving themselves open to significant influence from natural entities and systems, their relation with nature is likely to be a nondominating one.

One implication of this account is that if we want to respect the autonomy of nature, it helps not to protect ourselves too much from it.⁷ We can sometimes work toward a respect for nature's autonomy by leaving or making ourselves vulnerable to nature.⁸ Leaving or restoring predators is one way to accomplish this. When rural people must take down their bird feeders, properly seal their garbage, hike with bells, or give up certain trails because of bears or cougars, they are vulnerable to nature's influences and thus more likely to relate to an autonomous nature. Restoring to the rural landscape wolves that might eat our sheep forces us to change our grazing practices, adds to nature's influence over our lives, and lessens our control of the situation; thus it likely increases the autonomy of local nature in relation to humanity. When humans accommodate themselves to natural processes and entities rather than reworking or eliminating those processes or entities, they show a respect for the autonomy of the nature with which they live.⁹

Virtues of an Ethic of Respect for Nature's Autonomy

Thus, unlike a pure preservationist ethic of noninterference, respect for nature's autonomy in relation to humanity gives us some guidance for how to treat the mixed or rural landscape. The only guidance pure preservationists offer for our treatment of the nature we use is to minimize our involvement with it (or use it as efficiently as possible). As Eric Katz says in his contribution to this volume, "Even in the case of hybrid environments, we ought to lean to-

ward leaving nature alone." But then our advice to the farmer, the forester, and the rural homebuilder is to do as little farming, forestry, or home building as possible. If respect for nature means leaving nature alone, then using nature involves disrespecting it, and at best we can minimize our disrespect by using it as little as possible. In contrast, if respect for nature can mean respecting its autonomy in relationship with humanity, then it is possible to use nature while respecting it. Use of nature that does not compromise its autonomy can be respectful use.

Not only does a pure preservationist ethic give no real guidance for our treatment of less than fully wild nature, but it tends to disparage the value of that type of nature. Lack of respect for less than fully wild nature is an increasingly frequent target for critics of the pure wilderness preservation ethic. Val Plumwood puts the criticism this way: "A dualistic wilderness cult which confines respect and the status of 'nature' to pure virgin land does not support a culture of respect for ordinary land or for nature in the context of everyday life" (Plumwood 1998:667–668). By making respect for the autonomy of nature in relation to humanity a central focus of an environmental ethic, we can avoid viewing nonwilderness lands and humanly influenced species as inferior, degraded versions of wild nature. Rural lands and domesticated animals and plants—though more greatly influenced by humans—can be just as autonomous as wild nature. We can respect them by influencing them in a way that does not dominate them and letting them influence our lives in return.

A purely preservationist ethic tends to define nature par excellence as wild nature or wilderness, entities or places devoid of a high degree of human influence. Once natural entities have been significantly influenced by humans, they lose their status as nature or natural. Thus, for Rolston, a nature improved upon is no longer real nature, and for Katz and Keekok Lee (1999), significantly human-influenced biota are artifacts, whether they be restored landscapes or domesticated animals or plants. But it is not plausible to claim that a formerly barren lake in which humans introduce fish is no longer nature, and neither is it plausible to claim that replanted forests, horses, or cattle are nonnatural, human-created artifacts, as artificial as plastic chairs. Granted, these entities are not wild nature, but, unless unspoiled wildness is one's criterion for nature, things can be nature and natural, without being wild nature.

The concept of the autonomy of nature in relation to humanity can help us here as well. We can argue that human influence over landscapes or other natural entities need does not render them nonnatural, artificial beings as long as they retain autonomy in their relation to humanity. In this account, some rural landscapes and some domesticated animals and plants can continue to count as nature and natural, even though they are significantly in-

fluenced by humans. Only when their relation to humanity is such that their autonomy has been undermined does it become plausible to argue that they are no longer natural but rather artificial beings who belong to the category of culture more than to nature. When nature is not defined as the absence of humans or human influence but as requiring the absence of human control and domination and the presence of autonomy in relation to humanity, then less than fully wild nature can be natural and remain real nature

One example of the excesses of defining nature as wild nature is Keekok Lee's claim that "transgenic organisms are artifacts with a degree of artificiality analogous to that of plastic toys" (1999:53). Inserting a few genes into an organism with tens of thousands of genes hardly turns it into a human-created artifact analogous to a cultural phenomenon like a hula hoop. Similarly, a replanted forest, or even a vegetable garden, retains sufficient autonomy from humanity to qualify as nature. Sun, rain, birds, bugs, and all sorts of natural processes continue to operate beyond human control in gardens and forests, giving them a plausible claim to autonomy from humanity. A fish tank or bonsai garden, on the other hand, may be sufficiently under human control and artificial that the label "nature" may be more plausibly withheld. By defining nature not as the absence of humans or human influence but as requiring the absence of human control and domination and the presence of autonomy in relation to humanity, we allow for a human place and role in nature. Humans can use nature and natural entities without necessarily destroying their essential character. Our use of nature can be respectful of it, provided it retains its autonomy in the context of this use. The strict separation of humans and nature (i.e., human/nature apartheid) need not be our only way of respecting nature. Human participation in nature and involvement with natural entities, constrained by respect for their autonomy, are equally important components of an ethic of respect for nature.

Conclusion

While preservationist intuitions and policies are of crucial importance to a proper respect for nature, by themselves they provide a merely negative model of humanity's relationship with nature. By supplementing preservationism with an ethic of respecting nature's autonomy in relationship with humanity, we allow for a positive role of humans in nature. With respect for the autonomy of nature as a central moral norm for the human relation with nature, human involvement with nature need not be harmful or degrading to nature in this important respect. This opens the door to the respectful human use of nature and to humans flourishing in nature as real possibilities.

NOTES

1. In addition to the examples in the text, see Robert Elliott (1997), Ned Hettinger and Bill Throop (1999), and Keekok Lee (1999).
2. Taylor explicitly allows that some interference with nature is compatible with respect for nature (1986: 94). But most of his examples involve humans undoing damage they have caused, and this is not an overall positive involvement with nature. He also gives examples of medical assistance to wild animals and providing food and housing for birds. But even if these examples can be made consistent with Taylor's fundamental duty of noninterference, they are not examples of respectful human use of nature.
3. Callicott (1991) is right about the importance of envisioning such a notion, which he calls "sustainable development." Unlike Callicott, I believe that such a relationship should go hand in hand with an ethic of wilderness preservation and need not displace it.
4. For a discussion of these notions, see Rolston (1988:197–201; 1994:181–184) and Lee (1999:177–180).
5. Of course, mutual domination is possible. But a high degree of influence of one party over the other that would be considered domination absent a corresponding influence in return need not be a situation of mutual domination when the corresponding influence is present.
6. It is true that when a person hikes or camps in wilderness, nature has great influence over that individual, and the individual has little or no influence on the wilderness. But such influence is temporary. It is a kind of vacation influence and much less powerful and long term than the influence rural nature has over the lives of rural people who live with and by nature.
7. I thank Bill Throop for this idea specifically and for discussions that helped enormously in the genesis of the ideas in this essay.
8. Examples where people are vulnerable to nature and have little choice in the matter—lightning strikes, tornadoes, the inevitability of death, etc.—provide particularly powerful evidence for the idea that nature is not completely under the human thumb. In these respects, nature might even be seen as dominating humans and thwarting our autonomy. See Katz (1997:133–146) for a discussion.
9. Michael Gill has raised a worrisome counterexample to the suggestion in this section. If making ourselves more vulnerable to nature is a step toward respecting nature's autonomy in relation to humanity, then human-caused global warming—a dramatic human-caused alteration of nature if there ever was one—should be seen as a step in the direction of respecting nature's autonomy, for global warming may well make us more vulnerable to nature, and it is a clear example of nature influencing us in return. Other examples raise the same worry: Are humans respecting nature's autonomy when they clear-cut hillsides and make their homes and villages more vulnerable to massive landslides? Are we respecting nature's autonomy by suppressing fire so that we are more vulnerable

to massive landscape-scale fires? I am not sure what to say about these examples. On the one hand, these examples of human influence over nature that makes us more vulnerable to it illustrate the point that humans are not in control of nature in these situations. That when we dramatically influence nature we often do so at our own peril suggests that we are far from dominating nature (despite trying to). Nature remains autonomous from us even in such cases of significant and harmful human influence. On the other hand, such human activity and nature's response hardly constitute healthy human-nature interaction, and increasing human vulnerability to nature by such dramatic influence is not a way of respecting nature's autonomy in relation to humanity. A comparable human analogue might be driving one's spouse to mental instability with the result that one's life is greatly and negatively affected in return. Perhaps these examples should count as examples of mutual domination and not as a type of mutual influence that lessens the likelihood of domination. These examples suggest that the intentions of humans whose activity increases their vulnerability to nature may play a role in whether one should characterize this activity as a step toward respecting nature's autonomy in relation to humanity. They clearly show that increasing human vulnerability to nature is not a sufficient condition for acting in a way that shows respect for nature's autonomy in relation to humanity.

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Autonomy and Agriculture

WILLIAM THROOP AND BETH VICKERS

Leopold's Distinction



A LITTLE over fifty years ago, Aldo Leopold distinguished between two approaches to land use, which he characterized as "the A/B cleavage." Type A agriculture and forestry attempted to maximize yield using the best science available, while type B aimed at using the land in ways that preserved the health of the whole ecosystem. In the former, humans saw themselves as ruling over the land, whereas in the latter humans were conceived as "plain members and citizens of the biotic community."¹ Although Leopold condemned the type A approach on both practical and moral grounds, he did not develop a moral critique of the domination that essentially characterizes it. Others have argued that the domination of nature is in itself morally problematic,² but such critiques have not shown that we can draw a Leopoldian distinction between domination and respectful participation in an ecosystem. They do not show how type B agriculture and forestry can avoid dominating nature while still radically transforming ecosystems. An analysis of domination will not provide a positive image of how we should pursue agriculture and forestry; for this, we must have an account of the value preserved when domination is absent. We think that the term "autonomy" captures key dimensions of this value. In humans, autonomy is the value that is compromised through domination. We suggest that it seems natural to extend this to nonhumans when we seek to understand why dominating them is wrong.

Of course, Leopold did develop an ethic for land use that provides the kind of positive image we seek. Agriculture that preserves the integrity, stability, and beauty of the biotic community would be appropriate or "right," and that which compromises these features of ecosystems would be wrong. This ethic has encountered serious challenges, however. Increasingly, Leopold's focus

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