# The Anarchist Library Anti-Copyright



# Recovering Evolution: A Reply to Eckersley and Fox

Murray Bookchin

Murray Bookchin Recovering Evolution: A Reply to Eckersley and Fox

http://pzacad.pitzer.edu/anarchist\_archives/bookchin/recover.html

theanarchistlibrary.org

of nature, which I repeatedly, indeed emphatically, claim is impossible. Thus, she demands early on in her piece, "How far does [Bookchin] go in challenging the human domination of nature?"<sup>33</sup>

The distinction between "dominating nature" and the idea of dominating nature is not an idle one. I am not concerned exclusively with whether a given society (be it hierarchical or egalitarian) actually damages the ecocommunity in which it is located; I am also concerned with whether it ideologically identifies human progress with the idea of dominating nature. I am concerned, in effect, with a broad cultural mentality and its underlying sources-notably, the projection of the idea of social domination and control into nature-not with transient behavior patterns that come or go as a result of opportunistic, often historically short-lived circumstances. Under capitalism (corporate or state), the idea of controlling nature is a deeply systemic factor in social life-although this ideology, I may add, can be traced as far back as Aristotle's justifications of slavery around 350 B.C.E. in the West and to Hsun Tzu's realism circa 298 B.C.E. in the East.

\* Institute for Social Ecology, Plainfield, VT 05667. Bookchin has written, lectured, and taught on the relationship of social to ecological issues since 1952. He is the author of fourteen books, principally on the social ecology, ecophilosophy, and eco-anarchism. His most recent books include *The Ecology of Freedom* (Palo Alto, Calif.: Cheshire Books, 1982), *Remaking Society* (Boston: South End Press, 1989), and *The Philosophy of Social Ecology: "Essays on Dialectical Naturalism* Montreal: Black Rose Books, 1990).

<sup>&</sup>lt;sup>33</sup> Eckersley, "Divining Evolution," p. 101.

clear cutting, and even fairly minimal efforts to disturb "native" ecocommunities for the greater part of a half-century.

Eckersley's polemical zeal reaches it acme when she criticizes such relatively minimal practices as permaculture for being anthropocentric on the grounds that permaculture selects species that are needed for human nutrition at the expense of native life forms and thereby dislocates "native" habitats. What, if you please, is food cultivation all about? By this logic, bears are being Ursidae-centric when they paw into beehives and gorge "selfishly" on honey without regard to the "intrinsic worth" of the bees, not to speak of their crucial role in many ecocommunities. If even permaculture is anthropocentric in Eckersley's eyes, are human beings to be criticized for interfering even on a minimal basis with other life forms in order to maintain themselves? In that case, Walter Truett Anderson my be quite justified in claiming that behind this kind of "biophilia" lies a good "old-fashioned misanthropy." 32

## IV

Finally, Eckersley expresses solidarity with Warwick Fox in attempting to dissociate human efforts to "dominate nature" from their roots in social development. Together they "refute" an important connection that I have made by obscuring my distinction between ideology and reality on the one hand by making out to be a determinist on the other.

I do not know how often I have to repeat that there is a distinction between the *idea* of dominating nature—an ideology—and actually dominating nature. The domination of nature is an oxymoron that is absolutely impossible to achieve if only because all phenomena are, in a broad sense, "natural." Eckersley, however, ignores the fact that my writings focus on the *idea* of dominating nature, not on the actual *dominating* 

# **Contents**

Ι.															5
II .															6
III															12
IV															18

<sup>&</sup>lt;sup>32</sup> Anderson, *To Govern Evolution*, p. 325.

Another double standard can be found in her accusation that when I make use of a traditional analogy, notably the development of a tree from a seed to maturity, I collapse "ontogenetic development...into phylogenetic evolution." When Arne Naess uses freewheeling expressions like "biospherical egalitarianism" radically to delimit human intervention into nature, Eckersley, instead of taking him to task for imprecision or for using sweeping metaphors that carry him from the natural to the social domain without qualifications or transitions, accuses his *critics* of being "over literal." For Eckersley to focus on analogical statements in my writings while exculpating deep ecologists who serve up a menu of the most mixed, confused, and even anthropomorphic metaphors is an extraordinary example of the pot calling the kettle black.

Eckersley's polemical zeal gets a bit out of control when she even impugns diversity as a desideratum—apparently as long as *I* favor it.<sup>31</sup> Ironically, apart from agriculture, nowhere have I argued that diversity should be "managed," although I frankly fail to see what is wrong with fostering diversity if we are, in fact, to restore ecocommunities that have been virtually denuded of complex food webs. Nor do I offer any "troubling scenarios for those concerned with native ecosystems" (whatever the word *native* means today, given the vast alterations that have been made over past millennia by *natural* as well as human activity). Certainly I nowhere promote the virtues of logging roads, clear cutting, and the like. Contrary to misleading characterizations of me that have been made by some Earth First!ers and deep ecologists, I have militantly fought logging,

and to adapt to our use as best we may." Spinoza, *Ethics*, part 4, appendix, paragraph 26, in *The Chief Works of Benedictus de Spinoza*, vol. 2, trans. R. H. M. Elwes (New York: Dover Publications, 1955), p. 241. The accuracy of this translation has been carefully checked against the original Latin text.

<sup>&</sup>lt;sup>29</sup> Eckersley, "Divining Evolution," p. 106.

<sup>&</sup>lt;sup>30</sup> Ibid., p. 113.

<sup>&</sup>lt;sup>31</sup> Ibid., p. 112.

theories—indeed, that we simply build up our generalizations from building blocks called "brute facts"—is surely as naive philosophically as it is unreflective intellectually. One wonders what Charles Darwin was doing when he sailed to the New World on the *Beagle* with a storm of evolutionary theories bouncing around in his head, including those of his grandfather, Erasmus. Are we to disparage his theory of evolution—or a theory of ecological ethics—because facts are "selected" to support a hypothesis? The question that is really at issue is not the selection of data to support a hypothesis, but whether the hypothesis is *adequately* supported by data—and, philosophically speaking (as I argue later), what is meant by *adequate*.

No less disconcerting is Eckersley's use of double standards to criticize many of my ideas. Although she exhibits deep concern about the problem of defining "limits" on human intervention in nature when it comes to my views, she never troubles Walter Truett Anderson with this problem, and she places not the least qualification or limit on her own vague metaphors, apart from the maxim, "Live simply that others may simply live." Alas, if Herbert Spencer's concept of "survival of the fittest" *could* be a "good and true path" in evolutionary development among many, as Eckersley suggests, we are indeed faced with considerable confusion.<sup>28</sup>

Robyn Eckersley claims erroneously that I believe humanity is currently equipped to take over the "helm" of natural evolution. In addition, she provides a misleading treatment of my discussion of the relationship of first nature (biological evolution) and second nature (social evolution). I argue that her positivistic methodology is inappropriate in dealing with my processual approach and that her Manichaean contrast between biocentrism and anthropocentrism virtually excludes any human intervention in the natural world. With regard to Warwick Fox's treatment of my writings, I argue that he deals with my views on society's relationship to nature in a simplistic, narrowly deterministic, and ahistorical manner. I fault both of my deep ecology critics for little or no knowledge of my writings. I conclude with an outline of a dialectical naturalism that treats nature as an evolutionary process-not simply as a scenic viewand places human and social evolution in a graded relationship with natural evolution. I emphasize that society and humanity can no longer be separated from natural evolution and that the kind of society we achieve will either foster the development of first nature or damage the planet beyond repair.

#### Ι

Robyn Eckersley's "Divining Evolution: The Ecological Ethics of Murray Bookchin" could have provoked a serious, responsible, and fruitful discussion between two differing ecological philosophies. Social ecology, which emerges out of a classical philosophical tradition, picks up the organismic thread in Western ontological philosophy that runs from Aristotle to Hegel, the social tradition initiated by Marx and Kropotkin, and the historical perspective opened by the age of democratic revolutions. It tries to advance a definition of

<sup>&</sup>lt;sup>28</sup> One finds similar double standards in deep ecology's one-sided treatment of philosophers and philosophical traditions. Spinoza, for eample, is cast frequently as a nouveau Taoist and is interpreted more in the romantic tradition than in the scholastic one to which he has more affinities, despite his many differences with medieval thinkers. That this great thinker was militantly anthropocentric is consistently ignored by deep ecologists, as far as I have been able to ascertain. I have yet to encounter any attempt to explain Spinoza's extraordinary statement: "Besides man, we know of no particular thing in nature in whose mind we may rejoice, and who we can associate with ourselves in friendship or any sort of fellowship; therefore, whatsoever there be in nature besides man, a regard for our advantage does not call on us to preseve, but to preserve or destroy according to its various capabilities,

<sup>&</sup>lt;sup>1</sup> Robyn Eckersley,"Divining Evolution: The Ecological Ethics of Murray Bookchin," *Environmental Ethics* 11 (1989): 99-116.

nature as and evolutionary phenomenon, in contrast to the largely ahistorical images that abound in much of the current ecological literature. Eckersley, on the other hand, is rooted deeply in the analytical philosophy and particularly in the skepticism of Hume, and intellectual tradition that leads to a denial of causality, to empiricism, and ultimately to solipsism. Her view of nature is basically static, almost pictorial in its one-dimensionality, and her discussion is formal in its treatment of ideas.

Unfortunately, a full comparison between my views and Eckersley's is rendered difficult by the account she–and, to some extent, Warwick Fox–gives of my views. "Divining Evolution" leaves a great deal to be desired in the way it presents my views. Space limitations make it impossible for me to correct paragraph by paragraph the errors that fill her article, let alone Fox's earlier "The Deep Ecology-Ecofeminism Debate and Its Parallels." I would be more that delighted to accept Fox's challenge to discuss our differences with a responsible, informed, and consistent deep ecology theorists, but I find that if Eckersley's form of argumentation is to be included in such a discussion, I will be obliged to devote the greater part of my contribution to an explanation of what I have actually written, as opposed to what she and other deep ecologists think I think.

### II

Eckersley's criticism rests on an attempt to show that I believe that humanity should "seize the helm of evolution" and take wanton command of nature. Thus, he tells us, I "privilege second nature (the human realm) *over* first nature (the nonhuman realm)": because I wish to assert this commanding

encountering definitions of freedom and histories and analysis of institutional forms of freedom.<sup>25</sup>

Because Eckersley is concerned about precise definitions, I feel obliged to turn to ask her about hers. What does she means when she approvingly writes that in a "biocentric orientations...bumans, like any other organism, are recognized as special in their own unique way and are entitled to modify the ecosystems in which they live in order to survive and blossom in a way that is simple in means and right in ends"?<sup>26</sup> This mouthful of vague metaphors can be interpreted quite validly in an endless variety of ways. What does she see as "special" about human beings, and in what ways can their "uniqueness" be expressed? Who has "entitled" them to modify these ecosystems, if not human beings themselves, with rights that they (anthropocentrically?) accord to themselves? What "means" should they use, by what biocentric standards? To what "rich" ends should they aspire? How does Eckersley define *simple* and *richness*?

Eckersley invokes Donald Worster's curious observation that ecological ethicists "picked out their values first and only afterwards came to science for its stamp of approval." But this is as disparaging of ethicists as a complaint that scientists form their hypotheses first and only afterward turn to nature for supportive data. The rather simple empiricist assumption that facts alone give rise to ethics and scientific

<sup>&</sup>lt;sup>2</sup> Warwick Fox, "The Deep Ecology-Ecofeminism Debate and Its Parallels," *Environmental Ethics* 11 (1989): 5-25.

<sup>&</sup>lt;sup>25</sup> By the same token, I fail to see how Eckersley can claim that I essentially ignore wilderness (ibid., p. 112, n. 49). She makes this claim exclusively about my essay "Thinking Ecologically." One would almost suppose that this essay was the only work of mine she scanned. *The ecology of Freedom*, for example, contains a pointed critique of domestication and its shortcomings (pp. 278-80). I praise Paul Shepard, in turn, quite extensively and quote him on his defense of wildness and wildlife, as against the myth of a "pacified" nature and the tragic emphasis of "civilization" on the domestication of life forms in an "overly administered and highly rationalized" society.

<sup>&</sup>lt;sup>26</sup> Eckersley, "Divining Evolution," p. 114.

<sup>&</sup>lt;sup>27</sup> Cited in Eckersley, "Divining Evolution," p. 110.

am not privileging human interests *over* nonhuman ones.<sup>22</sup> It is basic to my argument, in fact, that an ecological society, no conflict need exist between the two precisely because second nature–with its hierarchical, class, economic, ethnic, and psychological malformations–is transcended in a harmonious relationship among humans and between humanity and nature.

To examine in detail every instance where Eckersley, either by omission or commission, misrepresents my views would require a work substantially longer than her own. Nowhere, for example, do I clam that my "ecological ethics offers the *widest* realm of freedom to *all* life forms," as Eckersley alleges in her summary. My claim is far more modest–merely that an ecological ethic would "add the *dimension* of freedom, reason, and ethics to first nature." Indeed, an ethics based on complementarity would place a constrictive burden on the egoists, the corporate profiteers, and the predatory developers who claim their "freedom" to exploit the natural world in the name of rugged individualism.

In another, rather puzzling example, Eckersley claims that "nowhere" do I "specifically" define the terms "individuation and freedom or selfhood." Nearly all my works—and particularly *The Ecology of Freedom*—contain such definitions. Page 148 of the latter work explicitly defines "the equality of unequals" as a minimal form of freedom, in contrast to justice, or the "inequality of equals." Two lengthy chapters, "The Legacy of Freedom" and "The Ambiguities of Freedom"—not to speak of the closing chapter, "An Ecological Socity"—all focus on the history of freedom, the ways in which it has been defined, the problems it raises, and the ambiguities that beleaguer it. Indeed, it is difficult to read a single one of my theoretical works without

position of second "over" first nature.<sup>3</sup> "The clear message of Bookchin's ethics, then," Eckersley writes, "is that humanity, as a self-conscious 'moment' in nature's dialectic, has a responsibility to *direct* rationally the evolutionary process, which in Bookchin's terms means fostering a more diverse, complex, and fecund biosphere."<sup>4</sup>

Later, Eckersley observes that my "anthropocentrism" is "guided by overarching evolutionary and ecological processes, not the instrumental needs of humans, and approach that seeks to reconnect human social activity with the natural realm." A guileless reader might well ask what is so terrible about holding a view that is in consonance with "overarching evolutionary and ecological processes," whether is is mine or not. Apparently, Eckersley labels my view "anthropocentric" only because it is human beings who happen to be the ones who are involved in these "overarching and ecological processes."

Eckersley, however, does not permit guilelessness. "But are we really *that* enlightened?" she asks. Her typical questions—"Why not all...?" and "Can we really be sure...?"—explode like firecrackers apart from any social context, historical background, or sense of direction. Here, she follows a typically Humean tradition, in which one might as well ask,"Why can't elephants evolve into birds?" or "How can an individual be

 $<sup>^{22}</sup>$  See, for example, my essays in  $\it Toward$  and Ecological Society (Montreal: Black Rose Books, 1980).

<sup>&</sup>lt;sup>23</sup> Bookchin, "Thinking Ecologically," p. 36; emphasis added.

<sup>&</sup>lt;sup>24</sup> Eckersley, "Divining Evolution," p. 100, n. 5.

<sup>&</sup>lt;sup>3</sup> Eckersley, "Divining Evolution," p. 99.

<sup>&</sup>lt;sup>4</sup> Ibid., p. 111; emphasis added.

<sup>&</sup>lt;sup>5</sup> Ibid., p. 115.

<sup>&</sup>lt;sup>6</sup> Ibid., p. 115. My use of the term *second nature* has a sharp critical thrust as well as an evolutionary one. Of course, we are not enlightened today-which is precisely the reason why I believe that it is imperative that we advance toward an ecological society or "free nature." Even if we were to make this advance, it would be an essential part of my view that first nature is far too complex to be dealt with in anything but the most prudent manner. See below, where I criticize Eckersley for completely misunderstanding my view of second nature and its inadequacies.

'sure' that he or she has any interaction with external reality beyond the veil of sensation?"

In the world of analytical philosophy and skepticism, virtually anything is possible if it can be stated consistently, and virtually everything can be doubted, including the existence of reality itself, if we remove experience from any historical context. I fail to see why Eckersley's line of criticism should provide comfort to deep ecologists who profess to follow Spinoza, Whitehead, and/or Heidegger. Certainly none of these thinkers would survive her shredder of *hows*, *whys*, and *what ifs*-bolting as they d from the blue as an infinite number of ungrounded *possibilities* and *maybes*.<sup>7</sup>

Eckersley's Humean heritage, with its lack of contextuality, historicity, or sense of direction, serves her well when she asks:

Can we really be sure that the thrust of evolution, as intuited by Bookchin, is one of advancing subjectivity? In particular, is there not something self serving and arrogant in the (unverifiable) claim that first nature is striving to achieve something that has presently reached its most developed form in us—second nature? One could easily turn her skepticism (itself laden with implicit values) against Eckersley herself and ask, Can we really be sure that species have inherent worth? Certainly, skepticism and the search for an ethical ground have always been sources of crises in ethics. But what counts is not simply that an ethics be objectively grounded (a term I use repeatedly and that Eckersley quotes), but that this grounding be more that merely intuited and more than simply verifiable in some positivistic sense or other.

mutualistic harmony.<sup>18</sup> In that article, much of my discussion of a second nature (which I call a "warped development"<sup>19</sup>) recounts the damage second nature has done to both human and nonhuman nature, "the massive ecological crisis it has created, and the compelling need for a "radical *integration* of second nature with first nature along far reaching ecological lines"–or what I call "free nature."<sup>20</sup>

This does not mean that I want to reform second nature as it exists. Free nature represents the "synthesis" of first and second nature in a qualitatively *new* evolutionary dimension in which "first and second nature are melded into a free, rational, and ethical nature" that retains the "specificity" of first and second nature divested of all notions of "centricity" (read: hierarchy) *as such*. The concept of free nature is meant to express precisely the "ethics of complementarity," as Roderick Nash has recently put it in his account of my views, <sup>21</sup> in which human conceptual thought, placed not "over" first nature but in the service of both natural and social evolution, forms a new *symbiotic* relationship between human communities and the nonhuman ecocommunities in which they are located. This theme has run throughout all my writings over more than two decades.

Regrettably, Eckersley says nothing about the substantial closing section of "Thinking Ecologically," in which I discuss free nature, or the theme of complementarity that runs throughout my work. Indeed, my advocacy of human ecocommunities that are "tailored to the ecocommunities in which they are located" should make it patently clear that I

<sup>&</sup>lt;sup>7</sup> I would think deep ecologists of, say, the Spinoziastic variety would feel a stronger affinity with my commitment to organic entelechies and dialectical reason than to Eckersley's proclivity for propositional analysis and formal logic.

<sup>&</sup>lt;sup>8</sup> Ibid., p. 115; emphasis added.

<sup>&</sup>lt;sup>9</sup> By using the term *grounded* in relations to ethics, I am trying to say, following a long philosophical tradition, that values are implicit in the natural world, not that first nature is an arena for ethical behavior. There is

<sup>&</sup>lt;sup>18</sup> Murray Bookchin, "Thinking Ecologically: A Dialectical Approach," *Our Generation* 18 (1987): 3-40. Reprints of this article are available from Green Program Project, P.O.Box 111, Burlington, VT 05402.

<sup>&</sup>lt;sup>19</sup> Ibid., p. 38.

<sup>&</sup>lt;sup>20</sup> Ibid., pp. 32, 21; emphasis added.

<sup>&</sup>lt;sup>21</sup> Roderick Nash, *The Rights of Nature: A History of Environmental Ethics* (Madison: University of Wisconsin Press, 1989), p. 165.

and proceeds to refute me by throwing my own beliefs (many of which go back to my early writings of nearly three decades ago) back at me. "Ecologists and evolutionary biologists have repeatedly stressed our profound ignorance of nature's processes," she reproaches me. "Indeed, the present scale and depth of the environmental crisis is testimony to how little we know about nature; nor can we afford to dismiss the possibility that nature is more complex than we can know." <sup>16</sup> In point of fact, in the early 1960s, to the best of my recollection, very few "ecologists and evolutionary biologists" had much to say about the need to deal with nature prudently because of its complexity, as I was already saying even then. At that time, there was still very much of a "gung-ho" mentality of better living through chemistry. Knowingly or not, Eckersley has taken a free ride on a streetcar that I put into service as early as 1952 under the pseudonym Lewis Herber-and now she gallingly asks me to pay for her fare.<sup>17</sup>

# III

Because nearly all of Eckersley's critical comments rest on this basic misrepresentation, I cannot help by feel that she is intent on making the worst of any view that I present—even if it happens to be one that she herself holds, or if not, one that many deep ecologists hold. For example, nowhere do I ever "privilege" second nature "over" first nature in the sense that humans have a right to "seize the helm of evolution." Quite to the contrary, in "Thinking Ecologically," my concept of second nature resembles more closely the notion of a "fallen humanity" whose contact with nature must be restored at a fuller level of

To follow Eckersley's argument in another vein, she strongly contrasts my purported view unfavorably with Walter Truett Anderson's supposedly more reasonable view. She paraphrases Anderson's view approvingly, that "there is no escaping the fact that whatever we do has implications for future ecological and evolutionary processes and that we have been influencing these processes ever since our arrival on the evolutionary scene." Who could disagree? ONe would suppose from Eckersley's treatment that Anderson is basically a reasonable man with whom biocentrists could live, while Bookchin is somewhat of an anthropocentric rogue.

But any deep ecologist who casts Walter Truett Anderson's *To Govern Evolution* in a favorable light is naive to say the least, for Anderson consistently calls for the *total* remaking of nature–not merely for "ecological restoration work, as Eckersley suggests. Unhesitatingly, he approves the use of biotechnology and eugenics and the collaboration of multinational corporations–indeed, almost every institutional and technological nightmare that plagues deep and social ecologists alike. Anderson even disparages deep ecology itself

no ethical nonhuman nature as such. To validate this point would require a full-length article in itself. The difficulty deep ecologists are likely to have with my view that ethics is "grounded" in nature stems from the static image they have of nonhuman nature. Accordingly, from their standpoint, nature either "is" or "is not" an arena of ethical action. That it can be a nascent arena for the emergence of ethics seems beyond them. By contrast, my view is evolutionary-that is, I am concerned with how an ethics evolves through the gradual emergence of human agency over aeons of evolutionary development. Insofar as the evolution of human beings from a nonhuman nature is simultaneously a continuum *and* and disjunction, one can argue philosophically from a developmental viewpoint that the human ability to function as moral agents has its objective origins in their evolution from nonhuman nature. Hence, nowhere do I speak of an "ethics in nature" but rather of a nature that forms the ground for a human ethics. (The last half of the article will be posted shortly)

<sup>&</sup>lt;sup>16</sup> Eckersley, "Divining Evolution," p. 115.

<sup>&</sup>lt;sup>17</sup> Lewis Herber (Murray Bookchin), "The Problem of Chemicals in Food," *Contemporary Issues 3*, no. 12 (June-August 1952).

<sup>&</sup>lt;sup>10</sup> Walter Truett Anderson, *To Govern Evolution* (Harcourt, Brace, Jovanovich, 1987); paraphrased by Eckersley,"Divining Evolution," pp. 115-16.

as a "mode of discourse long favored by intellectuals on the make" who are engaged in a "Holier Than Thou" game. He dismisses deep ecology as "one strategy for escaping from the human condition, one attempt to opt out of the collective wrong-doing of the species. And it reflects a profound bitterness and alienation; behind the claim of a superior biophilia lurks the old fashioned misanthropy."

The guiding credo of Anderson's book comes from a "perspective" that is "strongly and frankly anthropocentric" (in his own words), apart from some environmental platitudes that acknowledge that "we are still within nature." Near the beginning of his book, he writes:

The American continent has been transformed; it is now an artificial ecosystem and it must be managed by human action. This cannot be stopped, now, nor can we return to a natural order untouched by human society. We are at the controls whether we like it or not. If suddenly the human race were to disappear from the North American continent there would be a period of ecological chaos followed by the emergence of a new balance of nature. But it would have very little resemblance to the America that existed before Columbus arrived. And since we do not intend to disappear and do not know how to live in anything but an artificial ecosystem, we would do well to confront the fact that we have indeed created one and now must manage it. We must confront the fact that our "system"-the whole political/social/economic interaction-must govern the entire physical space of America, all its water and air and living creatures. 13 Deep Ecologists may well wonder what Eckersley finds in this edifying credo that is worthy of commendation. Deep ecologists who are familiar with my own writings, moreover, will wonder what

she finds in *them* on which to base a claim that I–in contrast to Anderson–confer on humans "a mandate to seize the helm of evolution on the grounds that we have grasped the direction of evolution and are now ready and able to give it a helping hand." <sup>14</sup>

Had Eckersley examined *The Ecology of Freedom* in a more than cursory fashion, she would have encountered the following passage in the opening chapter:

If we assume that the thrust of natural evolution has been toward increasing complexity, that the colonization of the planet by life has been possible only as a result of biotic variety, a prudent rescaling of man's hubris should call for caution in disturbing natural processes. That living things, emerging ages ago from their primal aquatic habitat to colonize the most inhospitable areas of the earth, have created the rich biosphere that now covers it has been possible only because of life's incredible mutability and the enormous legacy of life-forms inherited from its long development...To assume that science commands this vast nexus of organic and inorganic interrelationship in all its details is worse than arrogance: it is sheer stupidity. If unity in diversity is one of the cardinal tenets of ecology, the wealth of biota that exists in a single acre of soil lead us to still another basic ecological tenet: the need to allow for a high degree of natural spontaneity. the compelling dictum, "respect for nature," has concrete implications. To assume that our knowledge of this complex, richly textured, and perpetually changing natural kaleidoscope of life-forms lends itself to a degree of "mastery" that allows us free rein in manipulating the biosphere is sheer foolishness.<sup>15</sup> Instead of citing this passage, or at least maintaining a decent reticence in her argument in view of it, Eckersley reproaches me for holding the very opposite view-

<sup>&</sup>lt;sup>11</sup> Anderson, *To Govern Evolution*, pp. 324-25.

<sup>&</sup>lt;sup>12</sup> Ibid., p. 346.

<sup>&</sup>lt;sup>13</sup> Ibid., p. 15.

<sup>&</sup>lt;sup>14</sup> Eckersley, "Divining Evolution," p. 116.

<sup>&</sup>lt;sup>15</sup> Murray Bookchin, *The Ecology of Freedom* (Palo Alto, Calif: Cheshire Books, 1982), 24-25. This book is now available only from the Green Program Project, P.O. Box 111, Burlington, VT 05402.