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## Response to Agarwal

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# Response

Julie A. Bunn

I am very pleased to have been asked to respond to Dr. Agarwal and to provide my own views on the theme of this year's Roundtable. I must state at the outset, however, that both turned into rather formidable tasks. The former did so because it began for me a journey into ecofeminism, which inevitably raised for me fundamental questions about economics in general, environmental and resource economics and policy in particular, political action, ethics, personal life choices, and so on. The latter did so because, as the only economist on the Roundtable lineup other than Dr. Agarwal, I felt, and accepted, the burden of providing an "economist's" response.

My remarks are organized as follows. First, I wish to underscore three key contributions of Dr. Agarwal's paper. Second, I will briefly explore each of these contributions by providing my response to her critique of ecofeminism, to her alternative approach to understanding the position of women and their ability to bring about environmental improvement, and to the prescriptive implications of her critique and alternative approach. Finally, I will offer my own views on the theme of the Roundtable and on issues raised by the other authors.

## I. On Agarwal

First, what I view as Dr. Agarwal's three major contributions are (a) her observation that the new institutional arrangements aimed at addressing the environmental crisis, specifically arrangements that are decentralized and community based, while sometimes effective at "greening," can actually entrench and exacerbate gender inequalities; (b) the insight that ecofeminist thought, by overstating both the links between women and the environment and between the domination of nature and women, has failed to provide a viable agenda for bringing about women's equality and may, in fact, be abetting the status quo; and (c) the understanding that the key to gender equality lies in agency—the ability to bring about change—and that agency is contingent on enhancing women's bargaining position within the household, the community, and the state.

My response to the first of these contributions is "But of course." It's easy to accept the fact that such projects were not informed by a gen-

der perspective from the outset and that that is the reason why environmental improvement projects may have failed to protect or encourage gender equality in natural resource management. Throughout this century, progressive movements of all stripes, whether antiwar or for civil rights, sexual freedom, environmental improvement, or political reform, although claiming to have agendas in the best interest of all, have not escaped the imprint of gender inequality. If development projects fail to address gender issues and inequality in their design and implementation, whether they aim to increase agricultural yields, improve community health, or enhance sustainable resource management, they will either fail or have unintended consequences. In Dr. Agarwal's examples, because men and women use the forest commons for different purposes, management regimes designed by men fail to adequately address the needs of women. In some instances, such regimes even prohibit the continued access of women to the resource, thus forcing them to trek further to meet their fuelwood and other forest-based needs. But such examples exist throughout the community and economic development efforts of the last twenty-five years. Even instances where development efforts have explicitly delivered resources to women, once the projects have become successful, men have often moved in to take control of these resources. For example, one World Bank project in the late 1970s funded packages of seeds and technology to enhance women's home garden production while providing enhanced public market space in which the produce could be sold (the old impromptu open-air market was replaced by concrete stalls with shelter). Yet, as soon as the program appeared to be successful, the village men pushed the women out of the market and took over the stalls.

Partly why the focal point of Dr. Agarwal's paper—that ecofeminist thought, by overstating the links between both women and the environment and between the domination of nature and women, has failed to provide a viable agenda for bringing about women's equality and may, in fact, be abetting the status quo—proves so intellectually interesting is that it seems counter-intuitive that ecofeminist thinkers would reach conclusions with regard to policy prescriptions that appear to allow traditional inequalities to persist in emergent institutions. Dr. Agarwal argues that ecofeminists, by misrepresenting the past, forge a dubious link between women and nature and the domination of women and nature, and in so doing, prevent identification—and hence challenge and change—of institutional and social con-

straints on women. In this regard, I find quite compelling the evidence Dr. Agarwal presents regarding what she views as ecofeminists' romanticization of the past. She pokes numerous holes in ecofeminist arguments that precolonial (in the Shiva variant) and preindustrial (in the Merchant variant) societies could be characterized as lacking gender inequality or as necessarily being sustainable. And having provided a powerful critique of ecofeminists' characterization of the past, their argument about a necessary link between women and nature, and hence the twin domination of women and nature under patriarchy, is left without legs. Assuming Dr. Agarwal's critique is correct, she and I are very much aligned.

For the most part, I also share Dr. Agarwal's view that "people's relationship with nature, their interest in protecting it, and their ability to do so effectively are rooted in and shaped by their material reality; their everyday dependence on nature for survival; and the economic, social, and political tools at their command for furthering their concerns. . . . [rather than] mainly in ideas about people's assumed closeness to nature (or culture) or in their biology, . . ." <sup>1</sup> Sharing this understanding, I also concur with her view that the key to increasing women's participation in environmental decision-making is enhancing their bargaining position both within the household and the greater society, which will, in turn, lead to changes in the division of labor, the ownership of property, and the level of women's participation in government and decision-making. <sup>2</sup> I have developed a habit of passing out to students, to brides-to-be at wedding showers, and whomever I can think to give it to a recent book written for a popular audience, *Kidding Ourselves: Breadwinning, Babies, and Bargaining Power*, which clearly spells out the ways in which women's choices, beginning early on in their lives, detract from or support a strong position with respect to intrahousehold and external bargaining. It is quite striking, and telling about the fundamental challenge facing women, that an Indian economist reflecting on deforestation in South Asia and a Harvard Law School-educated journalist when reflecting on male-female dynamics in the context of the U.S. economy come to the same bottom line with respect to the role women's bargaining position plays in social and economic outcomes.

Having said all of this, however, it is also the case that I part company with Dr. Agarwal, at least the Agarwal of this particular paper, in one very important respect. While I disagree with the ecofeminists in that I think it possible to conceive of a feminist ethic that does not

include an environmental ethic, I disagree with Dr. Agarwal in that I think the ecofeminists and feminist theologians are correct that a true environmental ethic must be an ecofeminist ethic.

With regard to the former, it is conceivable that women, assuming they can successfully sever the historical conceptual link that has been established under patriarchy between them and nature, can achieve gender equality without this implying that a new relationship has been forged between humans and nature. One can conceive of a world in which there is no longer a gendered division of labor, power, and property but in which both men and women—or for that matter, Black and White and rich and poor—view nature through an arrogant eye, an “eye that objectifies the other for its own benefit.”<sup>3</sup>

Yet, while a feminist ethic lacking in an environmental ethic seems under particular conditions logically possible, the reverse—an environmental ethic lacking in a feminist ethic—does not. Although one might be able to find local-level examples of newly emergent institutions of resource management that exclude women and yet function fairly well in terms of achieving greening, there are limits to this effectiveness. When multiplied and including their global-level counterparts, such institutions will not carry humanity a sufficiently long way toward addressing the environmental challenges we face. From a philosophical standpoint, an environmental ethic and institutional designs for environmental management that continue to be sexist, racist, or classist still represent a hierarchical, subject-object worldview, and hence are unlikely to sufficiently alter our relationship to nature to bring about the necessary changes—a level of change sufficient, for example, to stabilize global climate. Moreover, from a practical standpoint, models for environmental decision-making and resource management that exclude the majority of the world’s citizens are doomed to failure from sabotage and inefficiency.

## **II. On the Theme**

As I noted in my introduction, providing an economist’s perspective on the theme of the Roundtable, or even the myriad of perspectives embodied in the presentations, is a Herculean task. I have, of course, had to be selective, so I have chosen three areas on which to focus my response.

### **A. Environmental Impact = Population × Affluence × Technology**

First, one framework for thinking about both that which the core papers have and have not addressed, or have addressed only tangentially, with regard to our human impact on the environment is a now famous formula referred to as IPAT.<sup>4</sup> IPAT gives our human impact (I) on the environment as a function of three variables: population (P), affluence (A), and technology (T). The equation basically states that our impact on the environment depends on technology (defined as pollution or damage to the environment per unit of production), times affluence (defined as output per person), times the number of people. I will comment briefly on each of the three components of the equation with an eye to the content of the core papers presented at the Roundtable and to the potential role of economists and policymakers in addressing that component.

Environmental economics focuses primarily on the technology variable. Economics can prove quite useful in designing policies that encourage innovation directed at reducing pollution per unit of output. As Thomas Lovejoy conveyed in the more optimistic portion of his presentation, when faced with appropriate incentives, the limits of human ingenuity are unknown. A tremendous panoply of new pollution-reducing and resource-conserving technologies are now available, more are emerging every day, and if economists could help to move government toward intervening in markets in ways that would “get the prices right,” history has shown us that we should expect to see a further burst of innovation along these lines.

Economists play a much smaller role with regard to the first two variables—population and affluence—and yet these two elements are equally important in confronting the environmental challenge we collectively face. If we were able to halve the pollution per unit of output, while output per capita doubles and population doubles, we would still double our impact on the environment. Improvements achieved through technological change will only lead to amelioration of the environmental problems before us if we cap or decrease the other two components of the equation.

Economists can, of course, also apply their “getting the prices right” perspective to the design of policy that will decrease the production and consumption of the goods and services associated with environmental degradation and pollution. This involves providing the conceptual basis for, at a minimum, getting the government—both the U.S.

government and many others around the world—out of the business of subsidizing overgrazing, soil erosion, deforestation, etc. and into the business of intervening in markets in ways that will lead to the price of goods and services reflecting their true social cost, including environmental externalities. Under the national Green Plan in the Netherlands, for example, included in the price of every new car is a fee of approximately \$160 that covers the future cost of dismantling the car and recycling as many of its components as possible when it is retired.<sup>5</sup>

Economists are not the impediment to “getting the prices right.” Dr. Lovejoy gave one specific example of the problem involved in “getting the prices right” toward the end of his remarks: in the United States, proposing an increase in gasoline taxes is political suicide. Just recently, we were once again witness to the potency of the anti-gas-tax lobbies and the inability of political leadership to overcome them. In October 1997, President Clinton and top administration officials sponsored and participated in a daylong set of hearings on global warming held at Georgetown University. At these hearings, scientists, economists, and others were mostly in agreement on the need for new and effective policies to curb greenhouse gas emissions. Yet, the very next day, President Clinton (despite having an unabashedly pro-environment vice president) issued a statement indicating that a U.S. government position involving the raising of gas prices was not acceptable. The impediment to getting this price right (having the price of gasoline reflect its true social costs—including the contribution of its combustion to producing the greenhouse gas carbon dioxide and local air pollution and their attendant damages) is the politicians who, in turn, are responding to pressure from both producers and consumers. Arguments around the regressivity of increased gas taxes (their disproportionate impact on lower-income drivers) are a smoke screen; that problem could be addressed fairly easily.

I am less pessimistic than Dr. Lovejoy, however, about the longer-term prospects for passing higher gasoline taxes, or the initiation of carbon taxes on a wide array of fuels, or of removing subsidies for the use of virgin materials. As he and Sallie McFague so eloquently point out, the pace and magnitude of the challenges we will face due to global warming are unprecedented. Rising to meet these challenges will eventually bring about spurts of unprecedented change in policy. Although, given the human propensity for denial, it is unlikely that this will occur before we witness numerous human and ecological disasters. If forward-thinking economists, ecologists, conservation biolo-

gists, theologians, and others band together in support of policies aimed at getting the prices right, and the environmental and other aligned movements are able to mobilize people politically to support the actions of courageous political leadership on this front, we can experience significant shifts in environmental management and policy. We have already seen this with the Green Plan in the Netherlands and the realignment of political jurisdictions to correspond with catchment areas in New Zealand. And if nations, including the United States, do agree at the United Nations Framework Convention on Climate Change (COP3) in Kyoto, Japan (December 1–10, 1997), to particular targets and timetables for reducing greenhouse gas emissions, a time will come in each of these countries when they will have to design a set of policies to meet those commitments. And increased gas taxes, or carbon taxes, will most likely eventually be components of a multi-pronged set of policies for meeting these goals.

Having expressed some optimism about the road not frequently enough traveled — getting the prices right — let me qualify that optimism. This market-oriented brake on consumption and production may not be nearly enough to sufficiently reduce the flow-through of material inputs and waste in the more developed countries while allowing economic growth in less developed countries without the pollution attendant to that development (such as the additional carbon dioxide emissions from China's growing number of new coal-fired electricity-generation plants) posing a major threat to the global community.

Second, our progress on the environmental and social fronts continues to be hampered by the use of measures of economic activity as indicators of progress. The Gross Domestic Product was never intended to be employed in the all-pervasive manner that it is today — as a barometer by which to measure human progress.<sup>6</sup> But governments, politicians, economists, and the media continue to use it and other measures in this manner. For several years now, however, a number of groups, both fringe and official organs of governments, have been developing alternative indicators of progress that range from including a full accounting of natural capital in the national accounts to a wholly different type of index.<sup>7</sup> One measure falling under the latter category is the Genuine Progress Indicator (GPI)—an index that includes over twenty categories currently ignored by the GDP that have to do with the value of household and community work, crime and defense expenditures, the distribution of income,



resource depletion and degradation of habitat, and the loss of leisure. The GPI, which is presented by its creators as a much more accurate measure of well-being than the GDP, has for the United States declined every year since 1973 while the GDP has risen.<sup>8</sup> The GPI has found support among some economists but has come under attack by others.

Economists have expressed serious reservations about our ability to accurately construct an index of well-being because so many of the items it should rightfully contain are hard, if not impossible, to measure. While this may be true, it seems obvious to me that as a society we cannot possibly begin to move in the right direction in terms of social and environmental well-being unless we can track our progress with measures that answer the right questions. We must commit ourselves to innovation on this front; besides, it poses a wonderful intellectual challenge to social and natural scientists to consider the components of such an index. If one measure of our progress as a global community is how well the representative person of the twentieth century is faring, we might want also to have an index of the well-being of Sallie McFague's representative person — the Third World woman of color. It is conceivable to me that we could construct such an index, and it would certainly serve to focus our attention on a different set of issues than the reporting of changes in GDP statistics. Can you imagine Peter Jennings or Dan Rather leading off the evening news with the just-released quarterly figures on the movement in the "Third World woman of color" index? What a shift in orientation that would reflect.

Finally, with regard to affluence, we are not as affluent as we think (due to inadequate measures) and, since we are members of a society that tends to measure personal achievement in comparative terms, we are able to psychologically experience deprivation under circumstances that by global standards and in absolute terms would be considered wealthy. I grew up in Los Angeles and passed through Watts on a number of occasions in and around the time of the Watts riots of the 1960s, when urban unrest among the Black community flared up into a summer of riots. In this community and others like it today, while there existed an intense sense of deprivation, the actual material standard of living included rows of two- and three-bedroom homes, cars, televisions, indoor plumbing, and running water—a standard far superior to that observable in Black communities in the South of the United States during that same period and far above that which is achieved by the majority of the world's population today. And yet

they were poor—relative deprivation was pervasive. I sense that much of what is at the root of violence among the young, especially gang members, in our culture is the raw anger born of this intense sense of deprivation.

On the subject of the third component of the IPAT formula—population—if asked, economists certainly could apply their tools to the design of government policies containing disincentives to having more children. But if you think gas taxes are political suicide, take a look at the politics of population control. This is not to say governments have not historically been in the business of providing incentives that affect childbearing decisions; it's just that most of these policies, other than a few exceptions like those of China, have been aimed at increasing childbearing. As a first step in the right direction, economists and environmentalists (not to say these are mutually exclusive) could at least work for the removal of the most explicit pronatalist policies reflective of nationalistic desires to grow political clout or guarantee the holding of territory by adding to their number, and work to remove pronatalist features of policies that have other objectives but that are inadvertently pronatalist.

To sum up this particular line of argument related to IPAT, as Ali Memon underscores in his paper, “[t]he roots of environmental problems are social rather than environmental, and they are not amenable to technical solutions...”<sup>9</sup> Economists can work through the design of environmental policy to meet environmental targets in the most cost-effective manner, and endeavor to get the prices right. However, the setting of the targets, and the diminution of value we attach to pollution and environmental degradation—that for which we must design policies forcing private agents to internalize—emerge from the political sphere and reflect the underlying values of societies.

## **B. Appropriate Level of Decision-Making**

A second key point I would like to make has to do with the appropriate role of government and the current trend toward devolving power to lower levels of control, e.g., in the United States from federal to state or local, or, in the New Zealand case, from the central government to the newly formed catchment-defined elected regional councils.

I argue that internationally, as well as in the United States, we are undergoing a redrawing of the relevant jurisdictional boundaries with regard to public decision-making. Largely driven by environmental

and social imperatives, in the United States, for example, the traditional city/state/nation breakdown is being supplanted by local (e.g., block clubs, neighborhood councils), regional (e.g., our own Twin Cities-area Metropolitan Council), and globally oriented decision-making processes and forums (e.g., United Nations conventions). The old structure may still exist, but it is becoming increasingly irrelevant; in order to effectively respond to the current challenges, its units are having to, on the one hand, make all kinds of cooperative and joint agreements, while, on the other hand, devolve other functions to lower levels of jurisdiction.

As we see in political discourse in this country, and as was evident in the congruence of “traditionalist” and “ecofeminist” thought critiqued in Dr. Agarwal’s analysis, the movement for a return to more local, decentralized control comes from both the political right and the political left. In my own research, I have come to understand, for example, how the history of the formation of conservation and irrigation districts in the United States derived as much as, or more, from the desire of private actors to stave off government intrusion into their affairs as it did from an understanding that the decentralized decisions of individual agents could not possibly produce socially optimal forms of resource management. Moreover, to the extent that the actions of these local resource management institutions create positive or negative externalities — benefits or damages experienced by those outside the purview of the institution — economic theory tells us that these institutions will continue to undersupply those activities that produce external benefits and oversupply those activities that produce external damages.

The nexus of decision-making with regard to a particular environmental or resource management issue must reflect the scope and features of the problem. Some problems may be appropriately addressed at a local level, but as we increasingly understand the interconnectedness of pollution prevention and biodiversity preservation, for example, the extra-local features of the problems confronting us become increasingly apparent. Hence, we cannot possibly expect that decentralized, local, community-based decision-making, even when well designed and inclusive, would produce globally optimal outcomes.

One positive effect of the need for a realignment of jurisdiction, as well as what Danilo Antón refers to as the positive opportunities presented by the information flow improvement aspects of globalization, is to provide a window of opportunity for the increased representation

of women in decision-making. But as Dr. Agarwal so eloquently points out, in no way should we expect such a result to be automatic. Women's groups, all levels of government, foundations, and nonprofit organizations must *insist* on the full participation of women. And individual women must take the steps necessary to ready themselves to participate.

My office files contain descriptions of Minnesota and other state plans for moving to landscape- and ecosystem-based resource management;<sup>10</sup> they contain the description of a grazing land management district in Colorado that defines stakeholders broadly enough to include a representative of a Boston-based environmental group on its board;<sup>11</sup> they contain a plan for the management of resources within the Central Coast (Santa Cruz area), California, watershed that evolved from years of meetings with all the "stakeholders."<sup>12</sup> In all of these materials, there is not one mention of women; moreover, the number of women involved in these efforts is very small.<sup>13</sup> This did not have to be the case, and it does not have to be the case. But women need to enter the arenas of power if we are to insure that a gendered perspective be incorporated into these new institutional arrangements and that, as Dr. Agarwal warns us, these new institutions do not serve to reinforce existing structures of domination.

### C. Governments, Corporations, and Markets

Finally, and this is the most challenging of all, not only are we experiencing a shift in what might be seen as the reasonable geographic scope of different levels of government decision-making, but as Dr. Antón states, with globalization we have experienced a further erosion of the power of governments (especially national) relative to multinational corporations.

As David Korten has pointed out in his book *When Corporations Rule the World*,<sup>14</sup> one can find numerous corporate executives with high ethical standards who would like to do good. But these executives' decisions are ultimately constrained by what the market will reward. And in today's world, the market rarely rewards what Dr. McFague refers to as the "loving eye": an eye that sees "[a]ll other beings—certainly all other human beings but also mountains, rivers, animals, and plants—... [as] subjects, different kinds of subjects, each with its own reason for being, which is *not* simply its use by us, the Sole Subject."<sup>15</sup> This is not to say, however, that the market could not reward the loving eye. If the

consuming public, in sufficiently large numbers, placed a value on how products were produced, i.e., whether child labor was employed or whether the company had signed on to international standards regarding sound environmental management, and expressed these values in their market choices when selecting products, then corporations would respond. The impact of globalizaton on the availability of information can help to facilitate this role of the consumer in rewarding the loving eye. Both governmental and private movements for social and eco-labeling of products represent one mechanism for facilitating this by lowering the information search costs of individuals wishing to use loving-eye criteria when deciding whether to purchase products. And we are now witnessing such movements: for example, national governments as well as private initiatives are experimenting with multicriteria eco-labeling of products, and a new rug label certifies that child labor was not employed in its construction.<sup>16</sup>

Yet, while such movements should be welcomed, as a sole solution to our dilemma, this solution places too much of the burden for reform of business on the backs of citizens in their role as consumers. If we did not have big corporations, we would not need big government; but we do have big corporations and as long as we do, we will need government (and big government at that) to circumscribe their behavior in a way that reflects social values as to what is in the public interest. In my view, fifty years ago when we in the United States bestowed upon corporations many of the same legal rights we ascribe to individuals in relation to government, philosophically and ethically, we took a wrong turn. It is absurd to afford corporations, for example, the same First Amendment rights as citizens.<sup>17</sup> Their freedom of speech should rightfully be limited to such venues as forms of advertising that provide useful and truthful information to the public about their products and services. Yet, because we do not have such limits on the speech rights of corporations, we can be subjected to massive misinformation campaigns (“mis” as judged by a consensus of over 2,000 of the world’s scientists) through the media that aim at protecting private commercial interests rather than the public good. The corporate campaign to ward off caps on greenhouse gas emissions has included three-page spreads in the *Washington Post* and internationally disseminated television commercials.<sup>18</sup>

Finally, business and corporations, although we might want to quibble at what scale and in what ways they should be allowed to operate, are here to stay. And women—women who work to maintain

their “loving eye” while at the same time making personal choices that enhance their bargaining positions and hence render them effective agents of change—need to enter this realm in large numbers in order to transform these institutions from the inside out, while others work on the external changes that will allow “loving eye” corporations to survive in the marketplace.

In conclusion, I thank the authors of the core papers of the Roundtable, the ecofeminists, the theologians, the geographers, the political scientists for providing me much food for thought, for calling me as a human, a woman, and possibly most important, as an economist to reflect more deeply on my relation to nature, my fellow humans, and to globalization. As a scholar, I have come to reflect on what an ecofeminist economics might look like, how it would differ from feminist economics and neoclassical mainstream economics; I have come to consider what feminist environmental policy would look like under a variety of concrete situations, etc. And this experience has inspired me to move forward on a teaching agenda that more thoroughly exposes students to critical perspectives on economics.

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## Notes

1. Bina Agarwal, “Gender and Environmental Management in South Asia: Can Romanticized Pasts Help Model Desirable Futures?” *Macalester International* 6 (Spring 1998): 154.
2. For a review of the bargaining literature, see Bina Agarwal, “‘Bargaining’ and Gender Relations: Within and Beyond the Household,” *Feminist Economics* 3, no. 1 (1997): 1–51. For a popular treatment of the issue, see Rhona Mahony, *Kidding Ourselves: Breadwinning, Babies, and Bargaining Power* (New York: Basic Books, 1995).
3. Sallie McFague, “The Loving Eye vs. the Arrogant Eye: A Christian Critique of the Western Gaze on Nature and the Third World,” *Macalester International* 6 (Spring 1998): 80. The concept of the “loving” versus the “arrogant” eye was first introduced by Marilyn Frye in an essay titled “In and Out of Harm’s Way: Arrogance and Love,” in her *Politics of Reality: Essays in Feminist Theory* (Trumansburg, N.Y.: The Crossing Press, 1983).
4. An early form of this equation first appeared in Paul R. Erhlich, *Population, Resources and Environment: Issues in Human Ecology* (San Francisco: W. H. Freeman and Company, 1970). A full discussion of its more recent formulation can be found in Paul R. Erhlich and Anne H. Ehrlich, *Healing the Planet: Strategies for Resolving the Environmental Crisis* (Menlo Park, Calif.: Addison-Wesley, 1991).
5. Information on this feature of the national Green Plan in the Netherlands and related efforts is available from the Resource Renewal Institute (Building A, Fort Mason Center, San Francisco, California 94123). The Institute disseminates information about green planning, including a video—*Green Plans* (The Video Project, Media for a Safe and Sustainable World, 200 Estates Drive, Ben Lomond, CA 95005, 1-800-4-PLANET) — that describes efforts in the Netherlands and New Zealand.

6. Simon Kuznets, creator of the national accounts and its accompanying measures, GDP and GNP, in his very first report to Congress upon completion of the project (1934), warned of its limitations: "The welfare of a nation [can] scarcely be inferred from a measurement of national income as defined above." Quoted in Clifford Cobb, Ted Halstead, and Jonathan Rowe, "If the GDP Is Up, Why Is America Down?" *Atlantic* (October 1995), 67.

7. Much progress has been made during the 1990s on alternative indicators. The United Nations Development Programme now publishes a series of indicators in its Human Development Reports (1991–94), among them the Human Development Index (HDI), the Gender-Related Development Index (GDI), and the Gender Empowerment Measure (GEM). The World Bank now provides alternative indicators in both its World Development Reports and Social Indicators of Development report. The World Resources Institute, Washington, D.C., has conducted a number of studies integrating environmental accounting into an analysis of sustainable growth rates in developing countries. Redefining Progress, the organization that produces the Genuine Progress Indicator (GPI) also oversees a project—the Community Indicators Network—that has identified over 150 communities around the country that are developing new measures of long-term health and sustainability.

8. Cobb, Halstead, and Rowe, "If the GDP Is Up, Why Is America Down?" 71. A comparison of the GPI and GDP indexes, 1950–present, can be obtained from Redefining Progress, One Kearny Street, Fourth Floor, San Francisco, CA 94108, (415) 781–1191, or see its website: <http://www.rprogress.org>.

9. Pyar Ali Memon, "Nature, Society, and State: An Antipodean Perspective," *Macalester International* 6 (Spring 1998): 195.

10. Alex Danovitch, "Landscape-based Forest Resources Management: An Examination of Two Landscape-based Initiatives in Minnesota" (final report of the Environmental Studies Internship for the Minnesota Forest Resources Council, Department of Economics, Macalester College, May 1996).

11. William E. Riebsame, Department of Geography, University of Colorado at Boulder, personal conversation, 28 April 1995.

12. William Brooks, "Building Regional Partnerships through Coordinated Resource Management Planning in California's Central Coast Watersheds" (paper presented at the Western Social Science Association 39th Annual Conference, Albuquerque, New Mexico, Central Coast Resource Conservation and Development Council and USDA-NRCS, 23–27 April 1997).

13. Michael Kilgore, Executive Director, Minnesota Forest Resources Council, telephone conversation, 3 November 1997; Beth Greenwood, director, Common Ground: Center for Cooperative Solutions, which oversees numerous cooperative landscape-based resource management projects throughout California, telephone conversation, 3 November 1997.

14. David Korten, *When Corporations Rule the World* (West Hartford, Conn. and San Francisco, Calif.: Kumarian Press, 1996).

15. McFague, "The Loving Eye vs. the Arrogant Eye," 81.

16. For a review of the literature and more on eco-labeling, see Eileen O. Van Ravenswaay, "Emerging Demand on our Food and Agricultural System: Developments

in Environmental Labeling," Michigan State University, Department of Agricultural Economics (staff paper 96-88, September 1996), and Eileen O. Van Ravenswaay and Jeffrey R. Blend, "Using Ecolabeling to Encourage Adoption of Innovative Environmental Technologies in Agriculture," Michigan State University, Department of Agricultural Economics (staff paper 97-19). These papers are available online at <http://agecon.lib.umn.edu>.

17. For brief discussions of the evolution of the rights of corporations under the law and the subsequent rise in power of the corporation relative to the nation-state and to citizens, see Jonathan Rowe, "Reinventing the Corporation," *Washington Monthly* (April 1996): 16–19, and David Morris, "Could Declaring Corporations 'Nonpersons' Restore Real Persons' Power?" *Saint Paul Pioneer Press*, 3 December 1996, 7A .

18. For more discussion of the corporate media blitz against caps on greenhouse gas emissions, see David Helvarg, "The Greenhouse Spin: Energy Companies Try the 'Tobacco' Approach to Evidence of Global Warming," *The Nation* (16 December 1996): 21–24.