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What kind of culture is it, when some serious analysis appears and is almost at once placed as another installment of "doom and gloom"? What kind of culture is it which pushes distraction, in its ordinary selection even of news, to the point where there is hardly any sustained discussion of the central and interlocking issues of human survival?

—Raymond Williams
The Year 2000

Over the past twenty years, the doomsday, apocalyptic perspective has characterized much of the environmental literature. At its most extreme, this literature warns, in the words of Bill McKibben, that we are witnessing "the end of nature" as we know it. The metaphor of "the apocalypse" has captured much attention. As Lawrence Buell points out, "apocalypse is the single most powerful master metaphor that the contemporary environmental imagination has at its disposal" (Buell 1995, 285).¹

Underlying this perspective is a belief in resource scarcity. Resource scarcity generally manifests itself in two ways. At the broadest level, resource scarcity refers to a scarcity of planetary resources, including clean water, air, and energy sources at affordable prices. At a more...

¹. My thanks to Steven Lee and David Ost for their thoughtful suggestions in response to an earlier draft of this chapter.
narrow level, resource scarcity indicates the kind of budgetary scarcity that has transformed American politics over the past fifteen years. As deficits mounted throughout the late 1970s and 1980s, politicians from both parties were forced to confront the reality of declining resources to pay for myriad social and economic programs, especially given the American public's aversion to raising taxes. This has increasingly led to a political and social environment that the economist Lester Thurow has identified as a "zero-sum society," where there are clear winners and losers in the distribution of scarce resources (Thurow 1980). It is this zero sum dilemma that underlies much of the doomsday, apocalyptic literature, though much of the focus is on the broader conception of resource scarcity.

This chapter provides a critical evaluation of the doomsday, apocalyptic literature regarding the future of the planet, with a specific focus on energy and environmental concerns. In doing so, several questions are addressed: What is the purpose of this literature? To what extent does the doomsday, apocalyptic perspective undermine possible meaningful political and policy responses addressing resource scarcity issues? In what ways does the doomsday perspective prevent serious grassroots mobilizing efforts in response to the distribution of energy and environmental resources? In other words, if the future is so bleak, why do anything at all? How useful is it to frame a discussion of the future of the planet within the broader context of resource scarcity? How should one teach the doomsday, apocalyptic perspective in the classroom? In addressing these questions, I argue that there is value in teaching the doomsday perspective and its critique. Students are forced to confront serious questions regarding values underlying our political and economic order as well as how various analysts on the left and the right have attempted to interrogate questions that should be at the center of our public discourse. Before these issues can be addressed adequately, however, we must first outline the central tenets of the doomsday, apocalyptic perspective.

The Doomsday Perspective: An Overview

At the core of the doomsday view is a belief that "the economic and social development of the United States over the last two centuries might better be characterized as extraordinary, fortuitous, and nonsustainable" (Miles 1976, 1). Recognizing the limits to economic
growth is of the utmost importance if we are to survive as a planet over the long term. The emphasis here is on long-term planetary survival and what we can and should be doing to provide for ecological sustainability and stability.

Most doomsday theorists also embrace a Hobbesian conception of humanity, positing that only a centralized state, one that embraces some form of government coercion, can adequately provide for societal stability in both the short and long term, because heightened inequalities in a time of increased resource scarcity will foster class conflict and ultimately threaten the stability of the political and economic order. Doomsday theorists also believe that the environmental problems we face are so severe that those in power must respond to them in a decisive and timely manner. If the goal is planetary survival, such decisions cannot possibly be made through the kind of democratic procedures associated with liberal democracy. For analysis I have chosen the work of William Ophuls and Stephen Boyan, Jr., and Robert Heilbroner as representative of the doomsday perspective.

Like almost all doomsday theorists, Ophuls and Boyan have a Hobbesian conception of humanity. They raise this question: How do we protect or advance the interests of the collective, when the individuals that comprise it behave in a selfish, greedy, and quarrelsome fashion? Their solution is government coercion, as government must give way to elite rule. They offer this justification for what many would regard as an extreme solution: “It is simply not true that, once they are aware of the general gravity of the situation, men will naturally moderate their demands on the environment” (Ophuls and Boyan 1992, 202). Like the other doomsday theorists, Ophuls and Boyan’s primary concern is to provide collective stability for the long term.

Robert Heilbroner frames his doomsday analysis by posing this question: “Is there hope for man?” (Heilbroner 1991, 20). In answering his query, Heilbroner offers a bleak analysis: “The outlook for man is painful, desperate, and the hope that can be held out for his future seems to be very slim indeed” (Heilbroner 1991, 20). He identifies two basic reasons for his grim prognosis—mankind’s struggle for individual

2. Like all other doomsday authors whom I have met, Heilbroner is insensitive to gender in his use of language. When discussing the doomsday perspective, I have adopted the doomsday authors’ use of “mankind,” rather than the more acceptable, more inclusive, and gender-neutral “humankind.”
achievement and man’s inherent self-centeredness. The second, in particular, is a human nature argument. Heilbroner embraces a Hobbesian conception of humanity when he raises these concerns.

When men can generally acquiesce in, even relish, the destruction of their living contemporaries, when they can regard with indifference or irritation the fate of those who live in slums, rot in prison, or starve in lands that have meaning only insofar as they are vacation resorts, why should they be expected to take the painful actions needed to prevent the destruction of future generations whose faces they will never live to see? Worse yet, will they not curse these future generations whose claims to life can be honored only by sacrificing present enjoyments; and will they not, if it comes to a choice, condemn them to nonexistence by choosing the present over the future? (Heilbroner 1991, 169)

Like Ophuls and Boyan, Heilbroner rejects the notion that citizens can and will sacrifice now to promote long-term planetary stability.

What are some of the specific global problems according to the doomsday perspective? As one representative of this view, Heilbroner identifies four external challenges to the human prospect that warrant immediate attention if the doomsday scenario is to be avoided—overpopulation, the threat of nuclear war, the greenhouse effect, and science and technology. For Heilbroner the demographic trends over the next two to three generations suggest that the planet will not be able to adjust to the consequences of overpopulation. Heilbroner contends, for example, that “in one century, the underdeveloped world[,] which today totals 2.5 billion, will have to support something like 40 billion by that date if it continues to double its numbers approximately every quarter century” (Heilbroner 1991, 33). Indeed, overpopulation will lead to serious environmental problems. What factors might check the overpopulation problem? Heilbroner recognizes that the ability of overpopulated areas to introduce effective and stringent birth control programs might begin to address overpopulation. In the second edition to his book, he points out that China has begun to make progress through these sorts of measures (Heilbroner 1980), but he is not optimistic that such measures will deal adequately with the full gravity of the problem. Instead, Heilbroner grimly concludes that “the eventual rise of iron governments” that practice “government coercion” may be the only way to halt “the descent into hell.” For Heilbroner and the
other doomsday theorists, "hell" is the fundamental instability that will arise as members of an overpopulated planet compete for increasingly scarce resources.

A second external challenge is the threat of nuclear war. In addressing this challenge, Heilbroner raises this question: Will the twenty-first century be an era of annihilation? His chief concern here is that poor nations might use the threat of nuclear power as blackmail of rich nations for food and other resources in a time of heightened scarcity.

The greenhouse effect is Heilbroner’s third external challenge. He worries that we are already “encroaching on the environment beyond its ability to support the demands made on it” (Heilbroner 1991, 47). For Heilbroner “the inescapable need to limit industrial growth” and prevent the heating up of the earth’s atmosphere deserves immediate global attention, as does the depletion of the ozone layer (Heilbroner 1991, 54). His analysis thoughtfully addresses the capability of both capitalist and socialist societies’ abilities to curb the growth imperative. Not surprisingly, Heilbroner concludes that both systems will have difficulty limiting growth over the long term, though socialist societies will do a better job in the short term. Indeed, both systems will have to address environmental problems, such as the greenhouse effect and air pollution, over the long term.

Heilbroner cites science and technology as a fourth challenge that must be confronted. He recognizes that many skeptics have invoked science and technology to address the challenges facing the human prospect. For Heilbroner and other doomsday theorists, however, science and technology provide society with a false sense of security, a security that is not warranted given the intractability and seriousness of the external challenges that he outlines throughout his book.

William Ophuls and A. Stephen Boyan, Jr., elucidate several additional components of the doomsday analysis. Like Heilbroner, they raise serious questions about the capability of liberal democratic societies to address larger resource-scarcity issues. They contend that the political implications of heightened scarcity include greater inequality and conflict among classes, conflict that poses a serious threat to system stability. Furthermore, they believe that the unpleasant reality of heightened scarcity is that “the golden age of individualism and liberty is all but over” (Ophuls and Boyan 1992, 192).

Their most significant contribution to the doomsday perspective is their claim that the American political and economic system will not
be able to make the sweeping changes needed to deal with the challenges of scarcity. This inability is due to a larger political culture that embraces radical individualism as the hallmark of liberal democracy. They also worry that our Madisonian system of checks and balances and separate political institutions sharing power is far too fragmented and dispersed to arrive at the kind of timely consensus needed to address the challenges to the human prospect that Heilbroner describes. They cite two additional problems—disjointed incrementalism and policy decision making that inevitably lags far behind events (Ophuls and Boyan 1992, 247–48). For Ophuls and Boyan “the external reality of ecological scarcity has cut the ground out from under our own political system, making merely reformist policies of ecological management all but useless” (Ophuls and Boyan 1992, 3). Working within the broader structure of the American political and economic system as we know it constrains our ability to respond in a meaningful way.

In the end, they believe that mankind’s political, economic, and social life must once again become thoroughly rooted in the realities of diminished planetary resources. This imperative cannot be met under a system that adheres to liberal democratic values. As a result, democracy must give way to elite rule and a society where state coercion is the norm. Ophuls and Boyan are not alone in arguing that government coercion is the only vehicle for promoting global stability over the long term. Heilbroner, for example, believes that “the most successful governments may be governments capable of rallying obedience far more effectively than would be possible in a democratic setting. If the issue for mankind is survival, such governments may be unavoidable, even necessary” (Heilbroner 1991, 134).

Clearly, the doomsday, apocalyptic perspective provides a grim analysis of the future and the capability of governments to respond to global challenges, but there are occasional glimpses of hope. For example, in the most recent edition of his book (updated in 1991), Heilbroner finds “it hopeful that we know we live in difficult times—a necessary state of mind if we are to appraise the prospect before us with clear eyes” (Heilbroner 1991, 30). He points out that ecology is now a household word and believes that the 1990s might “become a ‘turnaround decade’—not in the actual extent of environmental deterioration, but in taking action to prevent further deterioration” (Heilbroner 1991, 76). In the end, Heilbroner is hopeful that a “survivalist ethic,” sown in the nature of humankind, will prompt us
to confront the external challenges to the human prospect with meaning and force.

As might be expected, the doomsday critique has provoked an array of critical responses. Those on the Right who criticize the doomsday perspective from a modern conservative\(^3\) vantage point find that it exaggerates our global dilemma and ignores reasons to believe that progress can be achieved working within existing political and economic institutions. On the Left, critics point to the serious problems with embracing the paradigm of resource scarcity associated with the doomsday perspective. Leftist scholars also criticize the doomsday perspective for failing to confront global inequalities in the distribution of property, wealth, and resources. To feminist leftist critics, a central flaw of the doomsday perspective is its failure to confront global gender inequities. To a discussion of these perspectives we now turn.

**The Critique of the Doomsday Approach**

One vocal conservative critic of the doomsday approach is Julian Simon, whose ideas are well articulated in his 1981 book, *The Ultimate Resource*. To Simon, the doomsday scenario can be avoided if we adhere to the following four principles rooted in neoclassical economics:

1. the federal government should play a limited role in the energy development arena;
2. the economic marketplace, through Adam Smith's notion of the law of supply and demand, can and will deal with resource-scarcity concerns;
3. an increase in demand for energy resources will lead to an increase in new discoveries of such resources;
4. our present use of resources has little negative effect upon future generations, because current prices make an automatic allowance for future generations (Simon 1981).

Embracing the principles of neoclassical economics, Simon believes that market forces and present prices already take into account expected future developments, thus automatically conserving scarce resources for future consumption. Hence, he rejects calls for shared sacrifice and

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3. I use "modern conservative" to refer to thinkers who embrace the free-market principles associated with neoclassic economics. Modern conservative thought is distinct from the organic conservatism associated with Edmund Burke and Michael Oakeshott.
extreme conservation measures. In the end, Simon is optimistic that the doomsday scenario can be avoided, especially if we rely on the science, technology, and human ingenuity that Heilbroner believes provide a false sense of security against serious external challenges to the human prospect. Simon concludes optimistically by suggesting that "the ultimate resource is people—skilled, spirited, and hopeful people who will exert their wills and imaginations for their own benefit, and so, invariably, for the benefit of us all" (Simon 1981, 348).

Like Simon, Ronald Bailey embraces a conservative perspective when he identifies serious weaknesses in the doomsday perspective and criticizes the culture that devotes much attention to such faulty analyses. Bailey singles out books such as Rachel Carson's *Silent Spring* (1962), Paul and Ann Ehrlich's *The Population Bomb* (1968), and the Club of Rome's *The Limits to Growth* (1972) for describing the future in hopelessly bleak terms. These books have had negative consequences, not the least of which is affecting public policy in ways that led to the slowing of economic growth, thus unnecessarily increasing human misery. Unlike the doomsday theorists, Simon and Bailey believe that economic growth is the hallmark of a vital and stable society.

Bailey also contends that the doomsday theorists (whom he identifies as "environmental alarmists") "must be held accountable for their faulty analyses, their wildly inaccurate predictions, and their heedless politicization of science" (Bailey 1993, xi-xii). To Bailey the world faces some real problems, but they do not call for the draconian measures embraced by the doomsday theorists. He is particularly critical of the media for focusing on the doom-and-gloom analyses warning of ecological collapse, which he believes have motivated voters and policy makers to adopt "environmentalist policies." Like Simon's work, Bailey's analysis is rooted in a sense of hope and optimism that the American political system can tackle virtually any problems now and in the future. He suggests that "human history shows that our energy and creativity will surmount whatever difficulties we encounter" (Bailey 1993, xii).

For those who embrace the critique from the Left, the doomsday, apocalyptic perspective is misguided to the extent that it fails to confront global gender inequities and inequalities in the distribution of property, wealth, and resources. This critique manifests itself in the response to overpopulation concerns. For example, Joni Seager believes that what is needed is a "feminist rethinking of population/environment issues." She supports her belief in this way:
Women want access to reproductive planning services; they do not want to be instruments of population control. Global population growth may well be a "problem," but not in the ways that most of us are encouraged to believe. . . . There is good reason to be concerned about the environmental pressures exerted by population growth, just as there are good humanitarian and feminist reasons to promote programs that provide women everywhere with access to reproductive planning services. What is disturbing, though, is the manner in which men have framed the public environmental debate on population, and the extent to which women's lives are, once again, made invisible within the debate. (Seager 1993, 217).

Seager perceptively recognizes that it is easier for doomsday theorists to call for strict birth control measures than confront the social and economic structures that perpetuate global inequality. The next section argues that Seager's critique is useful for pedagogical purposes because it asks students to explore global inequities and how they intersect with power and gender concerns. To more fully understand the critique from the Left, we turn to John Bellamy Foster's critique and explore how to incorporate his perspective in the classroom.

**Reflections on Teaching the Doomsday View**

If the doomsday, apocalyptic perspective contains serious weaknesses, does it deserve serious consideration in the classroom? The short answer is yes, as there is much value in asking students to evaluate this perspective. To engage this perspective effectively, however, it is crucial to explicate its basic tenets and then offer a critique from different vantage points. I have been doing so for the past fourteen years at the college level, in my American political system, environmental policy, and public policy courses.

If this perspective is to be taught, it seems to me that it should be in ways that enable students to make important connections to the broader values of radical individualism, equality of opportunity, acquisition of private property, and emphasis on procedural democracy, all of which underlie liberal democratic systems. Indeed, I cannot think of a better way to ask students to evaluate the consequences of adhering to radical individualistic impulses, such as material acquisition associated with an emphasis on economic growth. Just what are the consequences of adhering to such values for the collective in the short
and long term? In a recent essay, John Bellamy Foster provides a useful metaphor for engaging the doomsday view and the values associated with liberal democracy.

What is all too often overlooked in such calls for moral transformation is the central institutional fact of our society: what might be called the global “treadmill of production . . . .” A defining trait of the system is that it is a kind of giant squirrel cage. Everyone, or nearly everyone, is part of this treadmill and is unable or unwilling to get off. Investors and managers are driven by the need to accumulate wealth and to expand the scale of their operations in order to prosper within a globally competitive milieu. For the vast majority the commitment to the treadmill is more limited and indirect: they simply need to obtain jobs at liveable wages. (Foster 1995, 2).

Foster’s analysis provides an excellent vehicle for responding to the doomsday perspective in the classroom, as it forces students to recognize that the global problems that we currently face are hardly worthy of mere individual responses. Indeed, “our wants are conditioned by the kind of society in which we live.” The central enemy of the environment, then, “is not individuals acting in accordance with their own innate desires, but rather the treadmill of production on which we are all placed” (Foster 1995, 3). Foster’s analysis is important because it enables instructors to raise important questions about the relationship between the individual and the collective. It also affords students the opportunity to challenge the underlying Hobbesian conception of human nature underlying the doomsday perspective. Virtually all of the doomsday theorists embrace a deductive analysis, much like Hobbes uses in Leviathan. This deductive analysis begins with negative assumptions about human nature and links these assumptions to the importance of maintaining system stability. Students need an opportunity to examine the core assumptions underlying an array of perspectives regarding the future of the planet, and the doomsday view provides a particularly useful opportunity for doing so.

I have found, as well, that the institutional analysis offered by Ophuls and Boyan raises compelling questions concerning the capability of the American political system to respond to the zero sum environment of resource scarcity. Before raising such questions, I devote much attention to explaining the basic principles of Madisonian

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4. I am grateful to Christopher Gunn for bringing Foster’s essay to my attention.
democracy as outlined by James Madison in "Federalist 10." It is then possible to explore the ability of an incremental policy characterized by separate institutions sharing power to respond with the sweeping changes needed to address energy and environmental concerns. Can a political and economic system that was created more than two hundred years ago in a time of relative plenty respond to the demands of heightened scarcity? What institutional changes might allow the system to respond in a more timely and effective manner? For example, would it be useful to adopt changes that would move our system of government in a more parliamentary direction? And what are the criteria for policy "effectiveness"? These are just some of the questions that might be addressed as we explore broader questions of change that might be occasioned by the doomsday analysis.

Much of the analysis here has suggested that the doomsday perspective is useful for teaching because it enables the instructor and students to raise broad considerations regarding the political and economic system and the cultural values emanating from that system regarding the relationship between the individual to the larger society. Students also see that scholars from the political Left and Right are exploring questions that should be at the core of public discourse today. At the same time, the doomsday approach asks the citizenry to confront its own responsibilities vis-à-vis the planet.

It is useful to ask students to recognize that much of what is associated with the doomsday view embraces a top-down approach to the world, one that lodges many decision-making responsibilities with a small group of policy elites who hold power. Indeed, note that Heilbroner and Ophuls and Boyan all suggest (albeit reluctantly and unhappily) that democracy must give way to elite rule if the interests of the collective are to be protected over the long term. To what extent is such a view compatible with democratic principles? And does the doomsday analysis suggest, unequivocally, that participatory democratic opportunities are destined for failure? Can we envision a participatory democratic society that links individual interests with the interests of the collective in routine decision making? If so, what might such a society look like in practice? These questions can also be engaged by discussing the doomsday perspective and its critics.

Those who worry that the doomsday perspective paralyzes citizens who might otherwise mobilize politically have a legitimate point. We should not forget that in the early 1980s the Brown University student body voted to have cyanide tablets in every student's dormitory in case
of a nuclear holocaust. Much was made at the time regarding the resign­
ignation, futility, and passivity associated with the Brown student body’s
response. The reasons for this passive response need to be engaged in
the classroom as a part of any discussion of the doomsday perspective.

The response to the doomsday view need not be resignation, fu­
tility, or passivity. C. B. Macpherson, for one, believes that environ­
mental awareness and concern about the future of the planet may well
inspire the larger citizenry to get more involved politically, especially
at the grass roots. In this way, environmental problems may well in­
spire a more participatory democratic society. Writing in the late 1970s,
Macpherson contends that more people are recognizing the deleteri­
ous environmental consequences associated with economic growth,
such as pollution, “the depletion of natural resources and the likeli­
hood of irreversible ecological damage” (Macpherson 1977, 102). To
Macpherson recognizing that these problems are associated with eco­
conomic growth is one of several conditions that must be met if a more
participatory democratic society is to be achieved.

Macpherson’s analysis is important and worthwhile to share with
students for several reasons. It allows students to connect the broader
values of Western society with environmental policy making and citi­
zenship. In doing so, students will be forced to confront their roles as
global citizens as well as their responsibilities as citizens within the
American political system. Finally, Macpherson’s analysis enables
important connections to be made between democratic theory and
environmental policy. The following questions might be addressed:
Who makes global environmental policy? Who should make global
environmental policy? Who makes environmental policy in the United
States? Who should have the most say in formulating U.S. environ­
mental policy? Should the citizenry be more active in environmental
policy making and in policy implementation? If so, how? What are the
barriers to citizen participation in environmental decision making and
policy implementation? Can the barriers be overcome? If so, how?
What are the arguments against having citizens be more active in
environmental decision making? What are concrete examples of envi­
ronmental organizations at the grass roots that adhere to participatory
democratic principles? These are just some of the rich questions that
I have asked students to consider as they respond to the doomsday,
apocalyptic perspective.

Much attention should be focused, as well, on global inequities in
the distribution of property, wealth, and resources and how these in­
equities structure and affect people's lives. As we know, the doomsday perspective largely ignores these concerns. To the extent that it does, it neglects an element of the global condition. Instead, the doomsday view merely embraces the language of scarcity. Students should be given an opportunity to break out of the scarcity paradigm and explore ways to redistribute the world's resources in a more equitable manner.

Finally, it seems to me that students should confront a paradox, one that is not unique to America, but one that is surely prominent in the United States. Lawrence Buell describes the paradox.

For more than a century the United States has been at once a nature-loving and resource consuming-nation... The earth's most suburbanized citizens, we like being surrounded by greenery but ignore our reliance on toxic substances that increase the comfort of our surroundings until waste disposal becomes a local issue—whereupon we are relieved when the incinerator gets built in the less affluent and politically weaker county fifty miles downwind. (Buell 1995, 4)

A discussion of this paradox is important because it enables students to address important questions pertaining to the sources of American attitudes and values regarding the environment as well as compelling issues of environmental justice. They can then interrogate broader values growing out of the American political culture and connect these values to political, social, and economic change affecting our planetary future. I have found, as well, that discussion of the paradox enables students to reflect upon their lives critically as they confront their relationships to the planet.

In the end, the most valuable response that educators can have to the doomsday, apocalyptic perspective is our daily work in the classroom and in curriculum development. In the past twenty years, we have made progress at all levels of education in asking the young to confront the true meaning of economic growth, the sources of our belief that "human domination is good," and the notion that material acquisition and progress is crucial for a productive society (Orr 1994, 32). But we still have much work to do as we ask our students to challenge the underlying assumptions of the doomsday, apocalyptic perspective. In doing so, we will ask students to challenge years of political socialization and ultimately focus their attention on what it truly means to be a citizen.