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International Environmental Politics: The Limits of Green Diplomacy

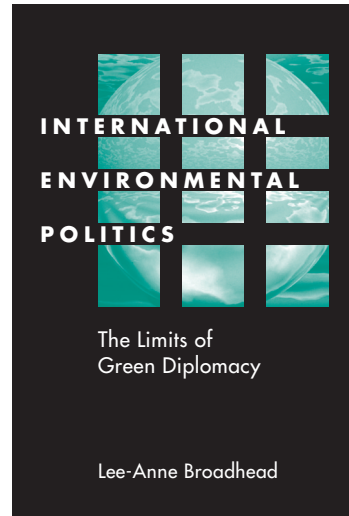
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Situation Critical

IN THE LAST QUARTER OF THE TWENTIETH CENTURY, INTERNATIONAL political processes have, apparently, become increasingly concerned with a wide range of environmental problems. A common argument can now be heard from the politicians' offices as well as from within the walls of academe and even corporate boardrooms: the previously unchallenged notion of state sovereignty has given way to new and better forms of international cooperation in the face of environmental problems. Few, if any, of the exponents of this view would argue that the management of this acknowledged interdependence has been straightforward, but hope is continually held out that increased awareness of the fragility of the natural environment has necessitated greater effort on collective measures to halt destructive practices.

The governing arrangements established in this more rational system, we are frequently told by international relations scholars, demonstrate a new reality in interstate relations—one in which state power has been diminished and restructured along more cooperative lines to meet the obviously transnational dimensions of the crisis. If we move carefully and base our arguments on solid knowledge, it is argued, we will continue to take steady steps toward a more ecologically sound world order. Incremental change may not be dramatic, but it is, these scholars reassure, having the inevitable effect of shaping the freedom of maneuverability of both states and institutions. From this perspective we can clearly see the dawn of a new, norm-rich world order from which we will all benefit.

In the view of the defenders of incremental change and international "regime formation,"¹ we are encouraged to believe in the persuasive

ability of scientific knowledge about both the causes and the cures of environmental degradation to lead even the most recalcitrant of polluters into agreements that will limit their actions. We are reassured that, when faced with domestic pressure and scientific evidence, state leaders will make concessions that are in the greater interests of the natural world rather than in their narrower national interest. Furthermore, we are asked to be optimistic about scientific research itself: in its ability to provide us with a neutral, value-free picture of the state of the world's environment and to point to the specific action necessary to turn the corner toward environmental sustainability. And finally, we are asked to celebrate the new forms of technology that are held out as the savior of our currently destructive practices: technology transfers to the developing world will assist with pollution reduction, and our own continuing efforts will guarantee that we will find solutions to ongoing problems.

The way forward, argues the incrementalist, is to focus on one limited and therefore manageable problem at a time. Let us not take on too much at a time; let us take sure steps based on scientific fact and not bite off more than we can chew. Green diplomacy—by which I mean the process of ordering the international governance issues dealing with the natural world and its myriad problems and challenges—is now a regular part of the international scene, and as long as we do not push too hard or too fast we can make steady progress. By focusing on one specific and limited issue at a time we will triumph. Small steps are needed to establish a body of law to guarantee environmental standards. It may not be a perfect scenario but we are told to be realistic about the international system and the very obvious difficulties in attempting to negotiate instruments of governance when states define their national interests judiciously while guarding their sovereignty jealously. Machiavelli—taken as shorthand for the brute reality of state power—may be greener now,² but cooperative interdependence has its limits and sovereignty must be protected. If we set our sights too high and attempt to link issues, we will achieve little, if anything, of substance.

Not only is the state presented as being increasingly imbued with this new, Green Enlightenment, but corporations have also, so we are told, turned the same hue, a claim reinforced by their bombardment of consumers with advertisements and merchandise designed and labeled as ecologically sound. Now, if governments and business leaders are indeed serious converts to the cause of saving the environment, what need is there for alternatives, in thought or deed, to incrementalist green

diplomacy? We are told that not only are such alternatives superfluous, they are at best naïve and at worst counterproductive. This is not the terrain for grassroots movements or small-scale projects; these are huge problems demanding overarching, intergovernmental activity. We are directed to “leave it to the specialists”—those with the oversight of the whole issue—and we need not worry, because we can relax in the knowledge that an agreed framework has been found: that of sustainable development.

REFRAMING THE ISSUE

Not everyone, of course, is happy with this presentation of the necessary rules of engagement. Increasingly, we see the claims of the international institutions—especially, but not exclusively, those of the economic variety—being contradicted by the results of their policies. As a result, students, farmers, industrial workers, and others from around the world are meeting up: they meet on the streets to protest, at international conferences to think through strategies, and over the Internet to share ideas about tactics. The claims of the international incrementalists ring hollow in these ears, and the responses of the state leaders in their own locale when challenged by the protesters display remarkable similarities: send in the riot police wearing what appears to be standard-issue crowd control gear (the globalization of riot fashion?) and carrying a hefty supply of pepper spray.

What sense are we to make of this? Which claims are correct and what is the appropriate approach to adopt to deal with the myriad environmental problems that we collectively face? Can we not just adopt the methods that have apparently been used so successfully to gain multilateral agreements on ways to deal with serious problems such as global warming and ozone depletion and turn our attention to the other severe tasks at hand? What need is there for a fundamental rethink or critique?

The beginning point to answering all of these questions is of necessity a consideration of whether the promised transformation of the international rules has indeed occurred. Calling into question the reality of this supposed transformation is the topic of this inquiry. My inquisition stems from a belief that the presentation of such optimism—which is based on the supposedly scientific answers to so-called rational problems—is not only misleading but is actually blinding us to the radical transformation in our thinking and subsequently to the prevalent forms

of social organization that must take place before any qualitative improvement in the condition of the natural world can result. Such radical thinking, I argue, is not to be limited only to specific technical issues of separate environmental problems but rather must be more wide-ranging and more integrated into a consideration of the social context within which these problems exist.

Drawing on the insights of Critical Theory,³ I seek to highlight the way in which the framing of the environmental issue can be seen as both a product and a way of perpetuating a form of societal organization that represses the real possibilities that exist to liberate individuals and establish the preconditions for ecologically sound existence. The argument that will be presented in this book is that the optimism demonstrated by the supporters of green diplomacy is misguided and serves only to maintain environmentally destructive political, economic, and social structures. The very way in which we regard the world has led to—and continues to deepen—the destruction of the environment. The existing social structures, based as they are on the perpetuation of the growth model and continual profit seeking, are connected to, embedded in, and act as a reaffirmation of this worldview. Many of the advocates of the incrementalist approach are well intentioned and believe wholeheartedly that we must work within the limitations as we find them; others have a vested interest in ensuring that the questions and issues are not framed in such a manner that they call into question the status quo view of markets, science, and progress.

The argument used by those academics who support and encourage the regime formation approach to environmental politics is that we must work toward the goals that can be “realistically” achieved within the boundaries of the current international system. It has been acknowledged by at least one scholar of regime formation that “an emphasis on regimes can be criticized by those for whom anything other than clearly transformatory agendas are inadequate.”⁴ Instead of then looking closely at what such a critique would lead to, it is inevitably dismissed because “the scope of such agendas soon extends far beyond specifically environmental issues.”⁵ This inquiry into international environmental problems, which extends beyond the specifics of the individual problems, is in fact the point of such critiques, and this book will argue that it is the green diplomats and their champions who are on the wrong track, a road to environmental hell paved with their overly limited intentions. We need to stop looking at the “new” Machiavelli—the modern

state and its business friends—through green-tinted spectacles. The reality is far uglier and the situation far worse than presented.

THE NATURAL WORLD AND INTERNATIONAL RELATIONS

The treatment of the global environmental crisis in the field of international relations is limited by the weakness of the theories that have generally been used to guide both its scholarship as well as the practical construction of international agreements. It can also be said with certainty that reflexivity—an essential self-consciousness about the process of theorizing itself—has not traditionally been greatly valued within the field, and although there have been theoretical battles between those holding different perspectives for as long as the discipline has existed, until relatively recently there has been a decided lack of recognition of the role of knowledge claims and the power inherent in the framing of the questions for study. Needless to say, outside academe in the “real world” of international relations, the movement has been even slower.

Before turning our attention to the impact that such reflexivity might have on the problem at hand, let us consider the mainstream thinking of the discipline as it pertains to the natural world. The exploitation of natural resources has long played a central part in the musings on interstate power struggles. The dominance of the realist school of thought in the aftermath of World War II echoed the widely held belief that the natural world could be considered as nothing more than stocks of resources that could be brought under control in the interests of industrial production (including war-fighting capability) and therefore as an important element in the calculation of power. Hans Morgenthau—widely regarded as the grand master of realist thinking—argued (correctly) that “as the absolute importance of the control of raw materials for national power has increased in proportion to the mechanisation of warfare, so certain raw materials have gained importance over others.”⁶ The objective then was to ensure the national interest of the state by protecting the existing resources and ensuring access to those that were not plentiful within a state’s boundaries.

The recognition of the changing need for raw materials did not, needless to say, lead realist international relations scholars to a discussion of the environmental costs of militarism precisely because the major tenet of this theory is that we must take the world as we find it;

normative wishes to change the natural order of interstate relations merely cloud issues with potentially disastrous effects. Realism recognized, as Morgenthau informed us, that “politics, like society in general, is governed by objective laws that have their roots in human nature. . . . The operation of these laws being impervious to our preferences, men will change them only at the risk of failure.”⁷ Much of the literature that now exists on the security costs of environmental degradation reproduces this logic when it refers to water or other resource shortages in terms only of struggles and potential war.⁸

By the 1970s, a challenge was being mounted against the perceived limitations of the realist model of power politics. Framed originally in terms of *complex interdependence*,⁹ this revision of the realist model was inspired by the inability of scholars and practitioners alike to deal with a world order that no longer seemed to fit into the easy patterns of prediction offered by the preeminent international relations theory. The debacle in Vietnam, the influence of the Organization of Petroleum-Exporting Countries (OPEC), transborder environmental problems, and a range of other issues seemed to beg fundamental questions about the ordering of the international system and the relationship between military might and international influence and the calculation of power. The critics of realism challenged the orthodoxy of the state-centric model and demanded that to be understood properly, power in international relations would have to be conceived in broader terms and consideration would have to be given to the relative roles of a range of actors (including multinational corporations and other nonstate actors) and an increasingly complex web of interrelationships between (and even within) states. This newer school of thought entered into the discipline determined to be taken seriously as a theory to guide action at the practical level of engagement—they were keen to stress that they were not *idealists* merely presenting a picture of the world that they wished existed.

It was out of this challenge and in the space created by the early critics that the focus landed on *regime* formation as a fresh approach to institutional management. The debates in the journals soon became fixed on the ways and means to conceptualize institution building with a view to understanding the relations of power at the international level. What had begun as complex interdependence developed further in these debates and has been variously referred to as neoliberalism, neoliberal internationalism, and neoliberal institutionalism, and although there are subtle differences in the various approaches collected under these labels, it is fair to say that an important aspect of the work was directed to understanding the extent to which coordinated effort comes about and

the impact that such action has on the international system.¹⁰ Realists were also part of the debates, and although a different picture emerged about the ways and means of institution building, a newer approach to the older theory took on some of the challenges and engaged fully in the discussions. Indeed, by the early 1990s, some scholars were arguing that there was a growing together of perspectives and despite some lingering areas of emphasis a shared research project should be encouraged.¹¹

But why mention these abstract debates in such detail? As we shall see throughout this book, the concept of management is extraordinarily important and it is at the level of institutional management that the green diplomat is so eagerly engaged. The advent of the language of regime building led to the easier acceptance, on the part of practitioners, of the feasibility of the international activity that has become central to the issues of concern here.

In terms of the depiction of the natural world, however, little had changed. Regardless of whether the realist was considering the power behind building institutions and considering the means to utilize such activity to the full benefit of maximizing power, or whether the liberal institutionalist was promoting the benefits of cooperation and articulating the promise of legal norms and regulations, the underlying thinking about the natural world was one of management and control. That world remained a storehouse of resources and commodities around which conflict or cooperation revolves. There was, for realist and institutionalist alike, a clear separation between the external controllable world and the rational political world of hard decisionmaking: a view of the *use* of nature based on instrumental reason was the order of the day.¹² Later chapters will consider at length the basis, evolution, and implications of this view. Here, it is crucial to recognize that the differences between these two theoretical models are primarily concerned with the institutional mechanisms that can be established to “deal with” the natural world. These mechanisms could consist of collective arrangements (e.g., to protect the ozone layer), the joint protection of a natural resource (e.g., the Antarctic), or rules and regulations with regard to scientific breakthroughs (e.g., genetic modification). Each school of thought believes itself to be presenting the tools with which the policymaker can deal with the actually existing world. Institutionalists are merely attempting to provide a more accurate and subtler picture on the basis of which to evaluate policy options: to refine rather than redefine realism. In neither school of thought is there a basic awareness of the constitutive nature of knowledge, despite a recognition of the role of ideas in the formulation of policies.

We have had decades of institution building, however, and the environment has continued to deteriorate. Those articulating the incrementalist management solution will respond that, while we have not gone far enough fast enough, we must work within the boundaries as they exist in the messy world of interstate competition. The activity around regime formation continues to be examined by international relations experts in the hope that the existing case studies will help us to better understand the institutional mechanisms and thereby lead us to more effective and efficient institution building.¹³ Research priorities are determined accordingly, and the resulting application of such research allows for the strengthening and deepening of the arrangements. The legal norms become more rigorous and the codification of common standards continues apace. At the same time we lose biodiversity, the hole in the ozone layer grows, the ocean continues to be polluted, and a whole host of other environmental problems make themselves known to us. Crucially, there are additional issues—such as genetic modification and gene mapping—that demand a level of moral and critical reflection extraordinarily difficult to achieve when the guiding theories are merely providing tools for dealing with “reality.” Perhaps there is indeed more to the world’s environmental problems than merely the intransigence of a few state leaders or the ill-informed actions of a few transnational capitalists. Could there be something fundamentally wrong with the way in which the questions are being posed and the problems are being answered?

This reflection returns us to the point made earlier that international relations theory has not been terribly good at reflecting upon the process of theorizing itself. If theories are seen as merely maps of existing reality, the framing of the issues is limited at the outset. A different type of theory is perhaps necessary.

Inspired by Critical Theory, some international relations scholars have in recent years attempted to broaden the discussion of the interstate system so that it becomes more than merely a picture of reality. By drawing on Max Horkheimer’s insights into the nature of knowledge, Robert Cox has been most articulate in describing the various roles of theory:

Beginning with its problematic, theory can serve two distinct purposes. One is a simple, direct response: to be a guide to help solve the problems posed within the terms of the particular perspective which was the point of departure. The other is more reflective upon the process of theorizing itself: to become clearly aware of the perspective

which gives rise to theorizing, and its relation to other perspectives (to achieve a perspective on perspectives); and to open up the possibility of choosing a different valid perspective from which the problematic becomes one of creating an alternative world. Each of these purposes gives rise to a different kind of theory.

The first purpose gives rise to *problem-solving theory*. It takes the world as it finds it, with the prevailing social and power relationships and the institutions into which they are organized, as the given framework for action. The general aim of problem-solving is to make these relationships and institutions work smoothly by dealing effectively with particular sources of trouble. Since the general pattern of institutions and relationships is not called into question, particular problems can be considered in relation to the specialized areas of activity in which they arise. . . .

The second purpose leads to *critical theory*. It is critical in the sense that it stands apart from the prevailing order of the world and asks how that order came about. Critical theory, unlike problem-solving theory, does not take institutions and social and power relations for granted but calls them into question by concerning itself with their origins and how and whether they might be in the process of changing. It is directed toward an appraisal of the very framework for action, or problematic, which problem-solving theory accepts as its parameters. Critical theory is directed to the social and political complex as a whole rather than to the separate parts.¹⁴

By adopting a methodology and epistemology that accepts the existing world order as a given and that seeks merely to solve problems within it, the realists and the neoliberal institutionalists—be they academics, activists, diplomats, or state leaders—are thus fulfilling a conservative agenda, for it is no less ideological to seek the maintenance of a system than it is to seek to change it. Cox is correct to argue that the assumption of an unchangeable structure is more than a methodological convenience and indeed extends to an ideological bias. Indeed, it should be clear that such theories serve the interests of those who are comfortable with the given order.¹⁵ If the incremental environmental action advocated by the problem-solvers is seen as a demonstrable failure, the case is more easily made for a critical approach.

CRITICAL THEORY AND THE NATURAL WORLD

Reflexivity has increased within the discipline of international relations. Not surprisingly, the theoretical input from feminist, postmodern, and

neo-Gramscian perspectives (to name but three) has greatly improved the state of the discipline generally: the “restructuring of international relations theory” has, it would appear, begun in earnest.¹⁶ Many scholars interested in international environmental issues have begun to critique what can safely be called the status quo presentation of the international environmental agenda, and their works will be drawn on throughout this book. This book, however, is not intended as an examination of a particular theoretical model. Nor does it limit its consideration to theories of international relations. I believe that in order to offer a comprehensive critique of the issues included in the presentation of green diplomacy, it is fruitful to draw on a range of insights made initially by certain members of the Institute for Social Research (commonly referred to as the Frankfurt School) and their own (albeit not uniform) brand of Critical Theory. Many of these insights have indeed already helped to direct the turn to greater reflexivity within the academic discipline of international relations.

Established in 1923, the Frankfurt School emerged as a dynamic and influential center of scholarship under the leadership of its third director, Max Horkheimer, appointed in 1930. By drawing on a wide range of disciplines, the school attempted to transcend the normally accepted disciplinary divisions of those seeking an understanding of the operation of modern society. Insights from philosophy, sociology, social psychology, political science, economics, and cultural studies were all brought to bear on the relationship between theory and practice with the express desire to explore the potential for political, social, and economic transformation of modern societies.¹⁷

To undertake this critique of green diplomacy, I want to draw mainly on the writings of Max Horkheimer, Theodor Adorno, and, perhaps especially, Herbert Marcuse. Together, their writings offer insights into a range of areas impacting dramatically on the operation of power relations within society and, by extension, to problems of social organization and environmental destruction. The thoughtful considerations presented by these writers on science, technology, language, aesthetics, capitalism, and perhaps especially on the modern bureaucratic state’s ability to absorb and diffuse dissent, are of import for today’s consideration of global environmental problems.¹⁸

Some may consider the application of such concepts and tools to the international realm a slightly dubious exercise given the fact that these writers, concerned as they were with the fate of the individual in advanced industrial societies, had little explicit to say about the realm of

political activity known as international relations. They did, however, have much to say about the linkages between knowledge and power, the impact of instrumental rationality, and the destructive practices (in human psychological, environmental, and economic terms) of capitalism. In attempting to understand social processes, and possibilities for transformation, we should surely remain open to useful maps wherever we might find them. More specifically, however, aside from the generally useful conceptual tools they offered, the efficacy of these critiques stems from the fact that the global order is currently in a period of flux not dissimilar to that which prompted the Frankfurt School into action in the first instance. Many of the ideological, cultural, and technical mechanisms of domination that were of interest then have strong and increasing relevance for those seeking a deeper understanding of international political relations now.

These writers were inspired to work across disciplinary boundaries—to *reintegrate* them—in an attempt to understand the changing configurations of economy, society, and culture that they saw developing within capitalism. They believed that orthodox Marxism needed reinvigorating, not rejecting, in order to truly comprehend the modern world and the transition to the new stage of capitalist development that they were witnessing. Attempting to understand the apparent failure of the socialist project to materialize as expected (and predicted) by Marxian orthodoxy, they drew on Marx's early work and on the writings—in particular—of Freud, Weber, Hegel, and Lukács in an attempt to understand prevalent techniques and structures of domination.¹⁹ Equipped with a multidisciplinary understanding of the role of culture, science, technology, and capital in the reproduction and transformation of society, the brand of Critical Theory developed by the Frankfurt School offered insight into the very different forms of social control and exploitation utilized in different stages of capitalist development. Douglas Kellner has argued persuasively that it is precisely Critical Theory's interest in responding to succeeding crises of capitalism and Marxism that should be of special interest today as we attempt to understand the dramatic changes from state capitalism to what he refers to as "Techno-Capitalism"²⁰ and what I will refer to as transnational or global capitalism, which results, I argue, from the currently fashionable and dramatically preponderant policies of neoliberal economics.

The discourse of globalization, with its air of inevitability—President Clinton's "great tide, inexorably wearing away at the established order of things"²¹—serves to mystify the fact that state structures have

long served the interests of capital. While its internationalization may be a qualitatively new phase, the power of the state to control and influence developments—in addition to its role as a facilitator and defender of the free flow of capital, a glorified transmission belt for capital mobility—is both ever-changing and ever-present.²² Although my focus is on the environment, and my critique will be confined to those aspects of modern society (state and global) that impact on that issue, the general mystique surrounding globalization itself constitutes such an impact. The failure of both realist and neoliberal institutionalist theory to demystify and critique the myriad and interlinked processes that have been collected under the buzzword *globalization* translates directly into inadequate prescriptions for saving the natural environment threatened by the form of international capital exchange that constitutes neoliberal orthodoxy. The realists argue that states compete, as they always have, to protect their national interest. The addition of so-called environmental security issues (by which they really mean nothing more than an old-fashioned competition for scarce natural resources) does not fundamentally change their calculation of power in the international realm.²³ The institutionalists seek to impress on us their belief in the efficiency of rules-based economic and environmental regimes as a protection of our interests; they accept the myth of the demise of state sovereignty and see in it an opportunity to limit the more environmentally destructive practices of previous eras. There is, in fact, as we shall explore, the development of the most intriguing argument at the basis of the incrementalists' views that economic regimes to establish rules for trade are in and of themselves "green."

The belief that economics plays a central role in all social processes is the thread that ties together the attempts of the Critical Theorists to illustrate and understand new and evolving forms of domination and destruction. It is, I believe, essential that we continue to seek deeper understandings of attempts to make existing market logic appear inevitable and beyond contestation and also that we maintain a critical interest in the role of science, technology, language, and technical rationality, in order to properly understand the contradictions and containments in modern forms of capitalism and state/interstate organization. It is not within the scope of this work to undertake a comprehensive critique of the current shape of so-called international society.²⁴ It is my belief, however, that a consideration of global politics with a focus on green diplomacy and with these issues in mind will assist us in our

efforts to critique the failed promise of the incrementalist in addition to seeing the possibilities inherent in the system that, if released, would lead to a greener future. The variety of ways in which the tools offered by the Critical Theorists will be used are set out below.

There are a number of interesting works available that draw on the insights of the Frankfurt School to consider environmental degradation specifically, pointing to the broader political, social, economic, and indeed theoretical roots of the problem.²⁵ At the level of global political relations, however, this analysis is not as well developed as it could be, especially given the nature of today's global environmental problems and the proposed interstate solutions. Indeed, the protesters against globalization make the links, but the academic community has thus far largely failed to present a sustained multidimensional analysis of the modern way of thinking and its international manifestations vis-à-vis the environment.²⁶ My intent is to offer such a critique of status quo international relations and to destabilize the rationale presented by those writers on global environmental problems who defend an incrementalist approach toward sustainability and seek to work within existing structures for change.

TOOLS FOR THE CRITIQUE

The early Frankfurt School theorists offered a rich and complex set of tools with which they sought to understand and critique the society in which they lived. There are inevitable problems in attempting to apply their ideas to the international level, but they are certainly not insurmountable.

The most important contribution these writers made was to rethink the roots of our technical-rational way of viewing the world—both natural and social. Although they did not have their critique focused specifically on the environmental impact of the modern way of thinking, it certainly pointed to the myriad problems that its adoption has led to. Developed in relation to this central problematic, the Frankfurt School writers also considered the role of language, capitalism, and forces for stabilizing dissent. Marcuse added to this critique by looking for the possible sources of resistance to the status quo forces. Each of these areas of critique are considered briefly below and will be developed throughout the following chapters.

Modernity and Ways of Thinking About the Natural World

The body of ideas identified as the Enlightenment—which took as its core concepts science, rationality, and progress—had become firmly established by the eighteenth century. Central to its powerful worldview was a belief in the need to dominate nature. Stemming from a radical critique of the power of superstition and myth, and building on latent socioeconomic tendencies within Western civilization, Enlightenment thinkers presented the exhilarating possibility of knowledge being used to free human beings from the limitations of an unreasonable social order. The application of science to this project was expected to be completely objective and, as such, able to answer effectively questions of import for sustaining and improving the human condition.

The promise of liberation inherent in these ideas was a powerful one and its impact profound. One of the most influential advocates of the Enlightenment worldview was the seventeenth-century British scientist, philosopher, and politician Francis Bacon. Bacon argued that there could be a progressive march toward certain knowledge and that each generation would build on the findings of the previous one. Central to his belief of scientific progress was a view of the importance of dominating and molding nature, wresting from it the secrets of the working of the universe. Bacon was clear that the benefits of scientific knowledge would be extended to the entire human race. Through its scientific endeavors, “the human race [could] recover that right over nature which belongs to it by divine bequest.”²⁷ Humankind could return to the Garden of Eden through the power of knowledge; this was to be the goal. Bacon was not the only—or even the most scientifically proficient—advocate of the new rationality; his significance rests upon his ability to popularize the main ideas.

This radically revised view of science was further transformed when linked to a mechanistic view of nature and Cartesian rationality. Descartes’s dictum “I think, therefore I am” succinctly sums up the central concept of the separation of humans from their natural surroundings, a split widely regarded as a major source of the modern understanding of our place in nature and our resulting, widespread alienation from the natural world.²⁸

By the twentieth century, it was apparent to some that the emancipatory promise of the Enlightenment had not only not been fulfilled, but also was leading to a new level of human captivity and barbarism. It was to this issue that the Critical Theorists directed their attention. In

their pathbreaking *Dialectic of Enlightenment* (1944), Adorno and Horkheimer provided a sustained and intelligent critique of science, technology, and instrumental reason.²⁹ Beginning their inquiry with the ancient world and its myths, they presented a nuanced understanding of the development of objectification and the inevitable domination of the natural world that results. Adorno and Horkheimer argued that the form of knowledge and its attendant methodology cannot be considered separately from social and political structures. The uses to which the exercise of knowledge are put are more likely to serve the interests of the few, with the application of science to find new and better ways to exploit natural resources or to improve industrial technologies a more likely outcome than a better existence for all. Despite its failure to fulfill its promise of liberation, however, the privileging of this form of instrumental rationality had become pervasive and deeply embedded. The dominance of this way of seeing the world, and the corresponding elimination of all forms of thought that ran counter to it, had serious repercussions for the natural environment. The role of science and technology in society became, as a result of the supremacy of instrumental reason, a method establishing domination as both norm and goal. “What men want to learn from nature is how to use it in order to dominate it and other men. That is the only aim. Ruthlessly, in despite of itself, the Enlightenment has extinguished any trace of its own self-consciousness.”³⁰

Once embedded, the technical control of all aspects of human existence became accepted: a new myth was inevitable. In Douglas Kellner’s words: “All other modes of thought, ranging from myth and religion to critical and speculative philosophy, were deemed by enlightenment rationality as inferior and ineffective in the struggle to dominate nature. Against this position . . . Horkheimer and Adorno argue that, while enlightenment is often posed against myth, enlightenment itself becomes myth, and myth is itself permeated with enlightenment rationality.”³¹

This critique of the modern form of rationality was not intended to lead to a glorification of a supposedly simpler past—the call of Critical Theory is explicitly *not* for a return to a romantic prehistory: “we are the heirs, for better or worse, of the Enlightenment and technological progress. To oppose these by regressing to more primitive stages does not alleviate the permanent crisis they have brought about. On the contrary, such expedients lead from historically reasonable to utterly barbaric forms of social domination. The sole way of assisting nature is to unshackle its seeming opposite, independent thought.”³² I cite this appeal to be clear about the intention of my critique of green diplomacy.

This book does not offer a solution based on green romanticism. Rather, it suggests that the answers lie not so much in the past as in the liberating of possibilities masked by existing social relations.

The status quo theories of realism and neoliberal institutionalism, each deeply imbued with the ethos and assumptions of instrumental rationality, accept unquestioningly Enlightenment logic and method and seek to frame environmental issues solely in terms of problems to be solved or managed separately from a consideration of social and economic processes. Both schools believe there is a world of knowable facts and that normative values cannot—indeed must not—enter into the consideration of politically possible options. In international relations—as in other disciplines—the existing mainstream approaches serve to maintain the system, never to liberate the potential existing within it. It is, as a result, doomed from the start in its quest to deal successfully with the fundamental causes, or even consequences, of environmental destruction.

A critical theory approach takes us beyond the false fact-value split of Enlightenment thought. From the beginning of his time as director of the Institute for Social Research, Horkheimer sought to make clear the high costs of the disciplinary divisions so commonly accepted in the social sciences. In calling for the reintegration of the disciplines, the institute's program then became one of attempting to think about specific problems in more complex and holistic ways. In the case of environmental politics, I will demonstrate that not only do artificial intellectual divisions continue, but also that the continual carving up of specific problems serves to obfuscate the linkages that must be recognized. We need to evaluate the human, ecological, economic, and psychological costs of current environmental problems; this is extraordinarily difficult given the continued supremacy of instrumental reason. The solutions put forward by regime theorists and advocates of liberal economic relations will be treated as an example of the limited way of thinking hindering efforts at restoring ecological health.

Herbert Marcuse's work reaffirmed the broad lines of his colleagues' conclusions while helping to bring the repressive social institutions that go hand in hand with the objectification of external nature into sharper focus. Marcuse clarified the ways in which the dominant scientific method operates in the service of the prevailing interests of a society, and how problems solved through this method thus stemmed from and reinforced those interests. His writings point to the way in which the individual rationality that triumphed over forms of myth and superstition—and

thereby placed the individual in a critical stance outside social organization—during the Enlightenment period was subsequently undermined by the basis of instrumental rationality itself. Furthermore, Marcuse argued, the application of scientific thought is prevalent in everyday discourse and behavior, leading irrevocably to the same logic and rationality of domination.³³ In this way Marcuse's interest in the costs of technical rationality are directly applied to the practices of modern society—including those of ecological destruction. For this reason, Marcuse's understanding of the irrationality of seeking scientific-technical solutions to society's problems will be of great import to my critique of green diplomacy.

It is the preeminence of the scientific method, privileged as it is in all areas of inquiry, that has the inevitable effect of pushing any consideration outside the realm of problem solving and into the world of values, the very concept of which then takes on a pejorative connotation. Subjectivity may be provided for in a metaphysical manner but, as such, it cannot be proven rationally, and cannot therefore rise to equal standing with objective findings. Any attempt to raise moral or ethical justifications for doing—or not doing—something becomes caught in this logic. Increasingly, then, values—however morally pressing they might be seen to be—became secondary to the *real business of life*.³⁴ Inevitably, any idea that raised questions about the rational project for societal organization—or sought to suggest that there might be a moral, divine, or merely humane reason for pausing for reflection that could not be verified by scientific method—became suspect, perceived as an attempt to distract attention from the “guaranteed” progress of modern society, or dismissed as a mask for a hidden agenda. In terms of green diplomacy, as we shall see, even a supposedly value-laden concept such as sustainable development is dramatically undermined by the reliance on scientific answers and the quest for technological solutions.

Again, it is wrong to consider these early members of the Frankfurt School as anti-science or anti-technology—their insights were into the social uses of each via the mode of rationality. The domination of nature is not a foregone conclusion of science; what we need to concentrate on is the structure of knowledge, which, given its technical rationalist formulation, is indeed destructive. The structure of science is socially bound and a change in social relations could lead to a different kind of science.³⁵ Marcuse has been criticized for not taking his ideas about new science far enough, and while it may be true that he did not provide the specifics of what such a framework might look like, the arguments

he presents most certainly offer a fruitful vein of inquiry. Marcuse's arguments about science and technology can most usefully be considered alongside the arguments of those scientists who have taken issue with the prevailing hegemony of instrumental methodologies.³⁶ I will return to Marcuse's writings on science in Chapter 5 to demonstrate the importance of new thinking within scientific method itself in any quest for an environmentally sound path of development.

In sum, it is the unquestioned acceptance of the use of instrumental reason as a means for dealing with serious ecological problems that is the problem—not science or technology itself. The reason why most current efforts to resolve serious environmental problems are gravely limited before they even begin is precisely because of their inability to move beyond damaging and unreflexive forms of rationality. The rules and regulations (the regimes) with which the state system is content are, in fact, mere applications of a science and technology deliberately and artificially delinked from social and political considerations. This should not be seen as a conspiracy—it is merely the acceptance of a form of rationality that is so deeply embedded in our society as to make a challenge to it very difficult without recourse to the tools and ideas presented by these critical theorists.

Language of Total Administration

In addition to recognizing the extent of the domination of technical rationality, it is also important to consider the way in which the very language we speak serves to reinforce the status quo by becoming closed to the potential dynamic inherent in discourse. The language of fact and description, Marcuse argues, leaves no space for a discussion of potentially disruptive alternatives. Marcuse examines in illuminating detail the ability of the closed language of the type of discourse so often seen in modern societies to unify opposites and to assimilate potentially critical terms in a manner that deprives them of any critical intent.³⁷ Language, Marcuse argues, reflects the technical and rational, but it also becomes an instrument of control precisely because it reduces activity and relationships to operational terms. Acronyms take on loaded and fixed meaning, and concepts sanctioned by intellectuals shape the discourse in predetermined ways that “govern the analysis of human reality.”³⁸ Language can become a key means of silencing critical dissent when concepts are deployed to reduce the tension between the existing reality and radical challenges to it. The operational treatment of the concept of sustainable

development will be shown to assume such a political function and will be analyzed as an example of a “therapeutic and operational concept” designed to pacify protest and absorb critical thinking.³⁹

Economics and the Environment

Although the manner in which the environmental crisis is considered vis-à-vis instrumental logic is of crucial import, so too is the reality of the capitalist system. Here the early Frankfurt School writers can assist with a consideration of the economic roots of environmentally destructive practices. The ecological impact of capitalist logic, with its inbuilt celebration of consumption and waste, was of major interest to the Critical Theorists. It is, however, a concern almost entirely absent from mainstream green diplomacy. Indeed, the focus of the green incrementalist demonstrably fails to theorize the true interconnections of capital, science, and technology. The hope held out for collaborative arrangements—regimes—is telling indeed; the theory of regime formation contains within it no clear conceptualization of the state or any special interest in the role of capital exchange. Perhaps of even greater import, due to its carefully partitioned realm of study (the impact of disciplinary limits among other things), regime theory absolves itself of responsibility to consider—to any extent—the global restructuring of capital and the possible ramifications this might have for the environmental health and well-being of the planet. Indeed, the only time the economic relations between states is considered in terms of environmental issues is when multilateral economic institutions (such as the World Trade Organization, the Organization for Economic Cooperation and Development, and the like) posit the claim that the “freeing of trade” will undoubtedly result in higher environmental standards around the world.

As mentioned above, we are living in an age of contradiction comparable to that of the early Frankfurt School writers. Whereas they attempted to come to terms with a dramatic shift in the nature of production in the movement toward monopoly capitalism, we are witnessing a profound shift toward the transnationalization of capital. A constant factor in the two situations is the ecological cost involved. As Marcuse argued three decades ago: “The process by which nature is subjected to the violence of exploitation and pollution is first of all an economic one (an aspect of the mode of production), but it is a political process as well.”⁴⁰ The success of the cheerleaders for “free” trade in convincing us that more trade and economic growth necessarily equals a cleaner

environment—the irrational presented as rational—means that this debate must be revisited in both its economic and its political contexts.

Containment

Critical Theory also provides the necessary tools for examining the many ways in which the prevailing order maintains its control of the debate by masking dangerous practices and packaging the debate in ways that obscure the destructive forces at work in the system; by containing, in short, the impact and radicalism of critiques aimed at it. As mentioned above, economics is considered only to the extent that its relations are seen to be beneficial to the environment. In addition to a critique of the dubious logic utilized to make that claim, it is also important to destabilize the popular concept of sustainable development so favored by the advocates of green diplomacy. It is with the widespread acceptance of this concept that the status quo has had the most success in containing and stabilizing earlier green critiques of society and in supporting and reaffirming existing structures and power relations—both at the state level as well as at the level of global relations. Indeed, the response to mass protest movements in a number of (mostly western) states in the 1960s and 1970s, movements that examined the environmental costs of economic growth, was the suggestion that the way to avoid ecological destruction was to trade more and ensure the continued economic growth patterns of the world system. Thus defined, sustainable development is an interesting concept and has been adopted by international organizations, multilateral economic bodies, governments, and even many environmental organizations. It bears a staggering resemblance (as I shall demonstrate in greater detail in Chapter 2) to Herbert Marcuse's concept of *one-dimensional thought*.

Resistance

In addition to a careful examination of the strategies of containment, a critical theory of international environmental relations must consider as well the areas of contestation and struggle. Where there are attempts to stabilize and unify, so too are there underlying struggles and challenges to the existing social order. On the one hand, international and domestic institutions possess the determination and resources to contain and absorb demands for a qualitative change to both the way we perceive the natural world and the demands for changes to social structures that necessarily stem from such altered worldviews. But on the other hand,

we can clearly see the tendencies that threaten to break through the containment and look at the potential masked by the presented logic of the status quo. To argue that the two tendencies exist is not a contradiction, and this is most obvious in the debates surrounding the direction of international economic relations.

It seems clear that the current attempts to contain the contradictions of transnationalized capital are being challenged by forceful movements (the plural is deliberate and accurate) seeking to make links about the social, economic, and political costs of the supposedly inevitable and desirable process of globalization. Not finding it to be such a desirable set of policies, protesters take to the streets around the world and are a force of contradiction to—and negation of—the promises of the international institutions with the power to make macropolicies and dictate micropolicies for the states that make up the neoliberal community. Of course the power to contain is tremendous, but we must look at the resistance to it as well. Liberating potential exists within the system and, by drawing on the insights of critical social theory, we can seek to understand the potential for the existing struggles in addition to where/when and in what fashion they could be strengthened. Marcuse's concept of the "Great Refusal" will be used to draw out the "protest against that which is" vis-à-vis the environmental crisis, and this will, of necessity, take us to the anti-globalization debates.⁴¹

Long before the advent of postmodern critiques of the severe limitations of language and presentations of reality, the early writings of the Frankfurt School sought to remind us that there are levels of domination and exploitation that run much deeper than those of economic and/or political control. In an age of the celebration of the globalized marketplace and its reification as an inevitable, desirable outcome of human progress, the Frankfurt School's reminder of the price we pay for an acceptance of instrumental reason is worth returning to as its celebration and affirmation finds its way into the governance literature of international relations writers and practitioners.⁴²

While it remains the case that the bulk of regulation and control that individuals face continues to be within the state, protest groups are focusing more and more on the impact of regulations and control exerted by institutions of international governance. The exposure of the limits of green diplomacy *should* allow for the illumination of some serious flaws within the international governance literature. The extent to which the global system has become administered along the lines of those presented by the Critical Theorists is a necessary component of this critique.

It is also important to recognize the contradictions within the very logic presented by green diplomacy, and this is an interesting prospect if we undertake an “immanent critique” of the promises of it. The method, as defined by David Held,

starts with the conceptual principles and standards of an object, and unfolds their implications and consequences. Then it re-examines and reassesses the object . . . in light of these implications and consequences. Critique proceeds, so to speak, “from within” and hopes to avoid, thereby, the charge that its concepts impose irrelevant criteria of evaluation on the object. As a result, a new understanding of the object is generated—a new comprehension of contradictions and possibilities. The original image of the object is transcended and the object itself is brought partly into flux.⁴³

This form of critique will be undertaken throughout the book, and the promises and concepts of the status quo approach to environmental degradation will be examined with a view to revealing the contradictions and tensions inherent in them. It is a result of these contradictions—experienced at a commonsense level by the anti-globalization protesters—that an important element of destabilization of status quo logic can be clearly witnessed. It is the unkeepable promises (the so obviously *unsustainable* sustainable development of international growth patterns) and the irrationality of the supposedly logical and reasonable responses of the incrementalists and fixers (new chemicals to deal with destruction wrought by old chemicals originally introduced for exactly the same purpose)⁴⁴ that can both feed the existing protest movements and demonstrate what is necessary for the promises to be fulfilled.

Resistance comes from and informs the structures of the system and the force of ideas. We need to be concerned with what Marcuse referred to as the “historical alternatives which haunt the established society as subversive tendencies and forces.”⁴⁵ Neither the forces of stabilization nor those of destabilization—or negation, to use Marcuse’s concept—are predetermined but rather play themselves out in opposition to each other. The struggle of those against the status quo view of international environmental issues will be viewed in this light.

CONCLUSION

This book is not an in-depth examination of Critical Theory, but it does seek to put the tools and ideas presented by its early articulators to work

in order to destabilize the standard presentation of the incrementalist approach to global ecological health. Supported by many academics, governments, international organizations, and business elites, the mainstream route for dealing with shared environmental crises is based on a number of assumptions: (1) the role of instrumental logic will provide answers to scientific and technological questions, ensuring that ecological balance is sustained; (2) market structures—if properly managed—can respond to such problems that present themselves as ecological externalities; (3) the concept of sustainable development provides us with the framework within which the market can develop along ecologically sound lines; and (4) green diplomacy—that is, the multilateral efforts at finding collaborative agreements (regimes) to place effective limits on human action—will succeed in establishing the necessary bureaucratic mechanisms to ensure environmental protection.

Each of these assumptions will be examined in relation to one another, in the following pages. All are consequences, in fact, of the same unreflexive rationality—a fundamentally unenlightened worldview—that Horkheimer, Adorno, Marcuse, and others saw as leading the modern world to disaster. For exponents and practitioners of this unreflexive rationality—such as the status quo international relations theorists—there is a basic assumption that we already know how to think clearly and effectively about the problems facing us: the assumption, in other words, that *how* we think is *not* one of those problems. For Critical Theory, however, it is the core of the problematic: existing ways of thinking are indeed a major obstacle blocking our escape route. How can we begin to find the best way out if we do not even know we are trapped? Understanding—demystifying—the given situation is the essential first step, but it must go further. A critical theory of international environmental relations should also make clear the contradictions and failures of green diplomacy and, perhaps most important of all, move beyond the critique to point in the direction of alternatives. And finally, we should keep remembering that “what is denounced as ‘utopian’ is no longer that which has ‘no place’ and cannot have any place in the historical universe, but rather that which is blocked from coming about by the power of the established societies.”⁴⁶

NOTES

1. The concept of *regime* is complex and will be explored in great depth in Chapter 4. In basic terms, regimes are the institutionalized agreements that

provide the rules and norms governing state behavior in a specific issue area. In international legal terms, they are held to be binding. For a good introduction to the concept, see Little, "International Regimes," pp. 231–247. See also Vogler, *The Global Commons*.

2. I borrow this concept from Brenton, *The Greening of Machiavelli*.

3. I use capital letters here to distinguish the Frankfurt School theory from other theories that are referred to as critical theories in a more generic sense (e.g., postmodernism and feminist theories).

4. Greene, "Environmental Issues," p. 324.

5. *Ibid.*

6. Morgenthau, *Politics Among Nations*, p. 111.

7. *Ibid.*, p. 4. There are tensions within Morgenthau's work, however, about the scientific nature of realism. Subsequent realist theorists—most notably Kenneth N. Waltz—attempted to rid the theory of its ambiguities and make it more "scientific." See Waltz, *Theory of International Politics*.

8. For a critique of this literature, see Barnett, "Destabilizing the Environment-Conflict Thesis."

9. Keohane and Nye, *Power and Interdependence*.

10. I will adopt the title of neoliberal institutionalist at this point, but the variations within the broadly defined liberal school of international relations will become more important in later chapters. The internationalists, for example, believe more strongly in the potential of international trade to deliver global peace and prosperity. The institutionalists, however, believe that although a free trade regime will provide incentives for environmental improvement, they are skeptical about the claims. See Little, "International Regimes." The views on free trade and the environment have come to the fore in the international monetary institutions and in the declaratory policies of government leaders and therefore become very important in Chapter 3, where I discuss the claims made about the "green benefits" of global trade relations.

11. Baldwin, ed., *Neorealism and Neoliberalism*.

12. For a fulsome critique of the limitations of these theories from an ecological perspective, see Laferriere, "Emancipating International Relations Theory." Doran, "Earth, Power, Knowledge," offers an introduction to the subfield of international relations referred to as global environmental politics and the development of a critical dimension to it. Saurin, "Global Environmental Degradation, Modernity, and Environmental Knowledge," looks at global environmental degradation and its relationship to modernization.

13. For an excellent example of looking at case studies to learn how better to formulate policies, see Young and Osherenko, eds., *Polar Politics*.

14. Cox, "Social Forces, States, and World Orders," pp. 207–208. For Horkheimer's distinction between traditional and critical theory, see his *Critical Theory*, pp. 188–243.

15. *Ibid.*, p. 209.

16. For a clear and interesting presentation of the attempts in this direction, see Neufeld, *The Restructuring of International Relations Theory*; and George, *Discourses of Global Politics*.

17. The key participants in these early years included Max Horkheimer, Theodor Adorno, Herbert Marcuse, Erich Fromm (until his later break with the

school), Franz Neuman, Leo Lowenthal, Friedrich Pollock, and Walter Benjamin (until his untimely death in 1940). Jürgen Habermas is the major figure in this tradition today. For an excellent collection of essays, see Bronner and Kellner, *Critical Theory and Society*. For useful introductions to the project of developing a critical theory of society, see Held, *Introduction to Critical Theory*; and Kellner, *Critical Theory, Marxism, and Modernity*.

18. There are problems, however, with some of the arguments and views of these writers. The sharpness of Horkheimer's critique dulled in later years, and Adorno's pessimism got the best of him. Although Marcuse continued to modify his views and deal with changing circumstances throughout his life (i.e., he continued to *apply* critical theory to his own work), there are several aspects of his work with which I disagree. This being said, it is important to reclaim some of the critiques and demonstrate their validity to today's issues.

19. For discussion of the influences on the early members of the Frankfurt School, see Kellner, *Critical Theory, Marxism, and Modernity*; and Held, *Introduction to Critical Theory*. For the debates within Marxism about its usefulness in understanding the ecological consequences of capitalism, see, for example, Benton, "Marxism and Natural Limits"; Foster, "Marx and the Environment"; Grundman, "The Ecological Challenge to Marxism"; and Leiss, *The Domination of Nature*.

20. See Kellner, *Critical Theory, Marxism, and Modernity*, especially chap. 7. Kellner, writing in 1989, speaks of technocapitalism as a means of identifying new configurations of capitalism, but he does not see a shift to a different stage of capitalism. While I, too, am not convinced of the argument that we have moved to a new stage, it does seem that the increasingly global nature of capital formation, witnessed in the decade since Kellner conceived of the idea of technocapitalism, justifies the use of a concept that points to its essential quality—that is, its transnationalization.

21. Clinton, "Remarks by the President to the Fifty-second Session of the United Nations General Assembly," p. 2.

22. For an excellent consideration of the role of the state in the globalized economy, see Panitch, "Globalisation and the State." I do not wish to enter the debates over the meaning of *globalization* in detail. Suffice it to say that for the purposes of the argument presented in this book, *globalization* can be used as a shorthand way of referring to a transnationalization of capitalism that is presented as inevitable but that is, in fact, the result of specific policy directions and is driven by international institutions with market liberalization as their objective.

23. Scholte, "Beyond the Buzzword." Scholte provides an interesting introduction into the ways in which a variety of international relations theories conceptualize the "phenomenon" of globalization.

24. The concept of "international society" is in itself dubious. In my opinion, the current neoliberal institutionalist uses this concept as part of its obfuscation of transnational capitalism. The concept of "global civil society" is interesting to consider in this context. See, for example, Colas, "The Promises of International Civil Society."

25. See, for example, Merchant, *Ecology*; Leiss, *The Domination of Nature*; and Luke, *Ecocritique* (especially chap. 7). For a critique of the Frankfurt

School's engagement with environmental issues, see Eckersley, *Environmentalism and Political Theory*.

26. An exception to this is Paterson, *Understanding Global Environmental Politics*.

27. Bacon, as quoted in Merchant, *The Death of Nature*, p. 172. See also Bacon, *The New Organon and Related Writings*.

28. For a discussion of the way in which Descartes's failings have been discussed without shaking our view in the basic split, see Evernden, *The Natural Alien*.

29. Resistance to the dualism that Enlightenment thought advocates has existed throughout the period. For a consideration of the response of the Romantic movement and the way it "nourishes ecocentrism," see Pepper, *Modern Environmentalism*, pp. 188–205. See also the interesting discussion of the Romantics in Bate, *The Song of the Earth*. For an explicit view of one Romantic writer's rejection of the Baconian view of mastering nature, see Mary Shelley's *Frankenstein*. Shelley's Dr. Frankenstein proclaims: "So much has been done, exclaimed the soul of Frankenstein—more, far more, will I achieve; treading in the steps already marked, I will pioneer a new way, explore unknown powers, and unfold to the world the deepest mysteries of creation" (p. 33). Shelley points to the costs of a scientific view that proclaims nature the mere subject of inquiry. For further consideration of Shelley and a critique of Enlightenment science, see Mellor, "A Feminist Critique of Science."

30. Adorno and Horkheimer, *Dialectic of Enlightenment*, p. 4. For another critique of this way of thinking and its implicit responsibility for the Holocaust, see Bauman, *Modernity and the Holocaust*. Bauman sums up the argument thus: "from the Enlightenment on, the modern world was distinguished by its activist, engineering attitude toward nature and toward itself. Science was not to be conducted for its own sake; it was seen as, first and foremost, an instrument of awesome power allowing its holder to improve on reality, to re-shape it according to human plans and designs, and to assist it in its drive to self-perfection" (p. 70). Note that Bauman's argument is that the Nazi project was a product of our commonplace way of seeing the world—not something separate and opposed to it.

31. Kellner, *Critical Theory, Marxism, and Modernity*, p. 90.

32. Horkheimer, *Eclipse of Reason*, p. 127.

33. Marcuse, *One Dimensional Man*, especially pp. 154–166. See also his much earlier explication of the issue in "Some Social Implications of Modern Technology."

34. *Ibid.*, p. 149.

35. I am not using Jürgen Habermas's critique precisely, because he attempts to rehabilitate Enlightenment rationality in such a way as to deny the possibility of a different kind of science. Habermas's view is that instrumental reason is essential in the human treatment of the natural world; it is misapplied when it is used in the sphere of human communication. This, it seems to me, is a retreat from the important critique offered by the first generation of Frankfurt School members and does not offer us sufficient insight either into the roots of the environmental problem or, indeed, for possible ways forward. For

Habermas's critique of Marcuse as a "romantic hangover of German Idealism," see his *Toward a Rational Society*, chap. 6. For a full and interesting discussion of the comparison between Habermas and Marcuse in this regard, see Alford, *Science and the Revenge of Nature*. And see also H. T. Wilson, "Science, Critique, and Criticism." Wilson offers interesting insights into the debate between Habermas and Marcuse and considers this debate in relation to Habermas's ideas in relation to Popper. For a straightforward presentation of the central arguments of the first-generation Frankfurt School, see Agger, "On Science as Domination."

36. See, for example, Bohm, *Wholeness and the Implicate Order*, and Lewontin, *Biology as Ideology*.

37. Marcuse, *One Dimensional Man*, pp. 90–104.

38. *Ibid.*, p. 106.

39. For a further discussion of the so-called therapeutic concept, see *ibid.*, pp. 107–108.

40. Marcuse, "Ecology and Revolution," p. 52.

41. Marcuse, *One Dimensional Man*, p. 63. In this passage, Marcuse is referring to art and its "rationality of negation." The aesthetic dimension that was of great import to Marcuse will also be examined with reference to the current protest movements, but the concept of the "Great Refusal" will be used in a more general sense to draw out the broad-based forces of negation.

42. See, for example, Commission on Global Governance, *Our Global Neighbourhood*.

43. Held, *Introduction to Critical Theory*, p. 184.

44. The efforts to deal with the problems of ozone depletion are startling in their contradictions and the blind spots they display. For example, the chemical compound chiefly responsible for the problem—chlorofluorocarbons (CFCs)—were developed by General Motors in 1931 as an answer to toxic chemicals in the atmosphere. CFCs were seen to be inert and nontoxic in the lower atmosphere. Now we are asked to "celebrate the progress" of the institutional arrangement to phase out the use of these chemicals, which have been replaced by hydrochlorofluorocarbons (HCFCs), which are only 1–10 percent as destructive of the ozone layer and will be phased out themselves as we approach the middle of the twenty-first century! We are, in the meantime, awaiting the development of new chemicals to fulfill the same functions, which science will assure us are not harmful to the stratosphere. For the origins of CFCs, see Haas, "Banning Chlorofluorocarbons," and Vogler, *The Global Commons*, pp. 124–126. For a discussion of the destructiveness of HCFCs, see Porter and Brown, *Global Environmental Politics*, p. 66. The case of ozone depletion will be dealt with comprehensively in Chapter 4.

45. Marcuse, *One Dimensional Man*, pp. xi–xii.

46. Marcuse, *An Essay on Liberation*, pp. 3–4.