

*The Limits of Law as Technology for Environmental Policy:
A Case Study of the Bronx Community Paper Company*

by

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(ABSTRACT)

This thesis examines environmental law as a social technology, using approaches from science and technology studies, including methods for studying controversies as well as actor-network and technology transfer concepts. Legal technologies, including statutes, regulations, and lawsuits, have become significant participants in United States environmental policy. That policy developed during the twentieth century in response to contrasting concerns about nature (development of natural resources vs. protection of native species and wilderness), along with growing concern about urban environmental issues (such as air and water quality, and waste disposal). The environmental movement that began after World War II gained power with provisions incorporated into 1970s environmental legislation allowing citizens to sue polluting industries and corporations. Opposition to environmentalism developed in the 1980s, as wise use and property rights movements seeking to expand development of natural resources, and an environmental justice movement concerned with issues and constituencies not addressed by mainstream environmental organizations. As a result of that opposition, the environmental movement in the United States has strengthened, and broadened both the memberships in varied organizations and the range of issues addressed. A case study of the Bronx Community Paper Company provides an example of the current state of environmental law and policy in the United States, and the limited ability of legal technologies to resolve increasingly complex environmental controversies.

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Introduction: Law as Technology for Environmental Policy

Public policy in the United States develops in large part through legal mechanisms such as statutes, regulations, and lawsuits. Making policy on environmental issues thus requires an understanding of the social technology of law. A multidisciplinary perspective for exploring legal issues enables a broader analysis of policy decisions than is possible from the academic perspective of a single discipline. For example, the interdisciplinary academic program of science and technology studies (STS) combines sociological, historical, and philosophical analyses of science and technology. Using STS methods and concepts, this thesis examines interaction between legal technology and environmental policy.

Law as a Social Technology

I have described law as a social technology. This reflects my understanding of law as a system of social tools developed to control the behavior of large groups of people, as a structured form of dispute resolution. This conceptualization of law resembles the "political technology of the body" in Michel Foucault's examination of prisons as instruments of power.¹ A more restricted definition of technology has predominated in STS research, however. STS combines older academic fields of history and philosophy of science with recent developments in sociology of scientific knowledge. Because of this focus on science, initial STS research on technology tended to analyze technology as "applied science" producing physical artifacts such as tools and mechanical systems.

Broader conceptions of technology exist, however. In the introduction to *The Control Revolution*, James Beniger argues that "the term 'technology' is intended not in the narrow sense of practical or applied science but in the more general sense of any intentional extension of a natural process, that is, of the processing of matter, energy, and information that characterizes all living systems."² In a policy-making context, a broader definition of technology reflects the impact of legislation and regulation on the work of scientists and engineers. Legal technologies restrain and redirect this activity, and provide an intentional system for processing social and scientific information.

¹ Foucault, *Discipline and Punish*, pp.26-30.

² Beniger, *The Control Revolution*, p.9.

In his upcoming book about a philosophy of technology, Joe Pitt states "there is no one single thing called 'technology,'" and offers to replace the "standard notion" of technology, of "tool-as-mechanical-mechanism," with "humanity at work."³ Pitt argues that his definition

should be seen as punctuating the need to stop talking about *Technology* and start focusing on the specific problems we encounter and the techniques, materials, etc., we employ to solve those problems as well as the consequences of using these techniques and materials to solve those problems.⁴

Citing Emmanuel Mesthene's characterization of "technology as 'the organization of knowledge for the achievement of practical purposes,'" Pitt comments that "[t]he important part of Mesthene's account is his insistence on the *use* to which the tools we invent are put; *technology is using tools*."⁵

The tools of technology include social tools, according to Pitt. He states that "[i]f something can be used to achieve a goal it is a tool, and in so being used can become a technology."⁶ Pitt specifically cites law as one of his examples of technology: "Social tools like ... legal systems ... count as technology."⁷ In an even stronger statement, Pitt writes:

Lest there be objection to using the courts in the context of technology, I remind the reader that the judicial system is a tool for adjudicating social conflict, a technology if there ever was one!⁸

³ Pitt, *Technology and Science: Foundations of the Philosophy of Technology*, pp.5, 18.

⁴ Ibid.

⁵ Ibid, pp.19-20.

⁶ Ibid, p.17.

⁷ Pitt, *ibid.*, p.54.

⁸ Ibid, p.80.

Researchers in the sociology of technology have also begun to address the idea of "social technology."⁹ In a discussion of budgeting systems for medical clinics, Trevor Pinch, Malcolm Ashmore, and Michael Mulkay state that "such a technology has its origins in the social sciences, and ... although it *may* incorporate some material artifacts such as computers, ultimately its purpose is to produce changes in human behavior."¹⁰ In a footnote, Pinch, Ashmore, and Mulkay refer to prison management as a "social technology designed to produce changes in human behavior and also incorporating material artefacts."¹¹

John Law and Wiebe Bijker comment on this concept in their conclusion to *Shaping Technology/Building Society: Studies in Sociotechnical Change* "Technology is never purely technological: it is also social. The social is never purely social: it is also technological."¹² Given this extension of technology to include social factors, and a willingness to examine technical factors in social systems, the definition of social technology should include legal systems in which technical legal records comprise the main artifacts.

Other arguments also support the perception of law as a social technology. In *Technopoly*, Neil Postman states that "social institutions of all kinds function as control mechanisms."¹³ Postman uses a court of law as an example of an information control mechanism:

In even the simplest law case, thousands of events may have had a bearing on the dispute, and it is well understood that, if they were all permitted entry, there could be no theory of due process, trials would have no end, law itself would be reduced to meaninglessness.¹⁴

⁹ Pinch, Ashmore, and Mulkay, "Technology, Testing, Text: Clinical Budgeting in the U.K. National Health Service," ch.10 in Bijker and Law, eds., *Shaping Technology/Building Society*, p.266.

¹⁰ Ibid., emphasis added.

¹¹ Ibid., n.2, p.287; see also Foucault, *Discipline and Punish*.

¹² Law and Bijker, eds., *Shaping Technology/Building Society*, pp.305-306.

¹³ Postman, *Technopoly*, p.73.

¹⁴ Ibid, p.74.

Governmental bodies use law to circumscribe the actions of large, diverse populations, and members of the society use law in formal attempts to resolve disputes.

Postman comments that the stability of legal rules "may account for Americans' overuse of the courts as a means of finding coherence and stability. ... [T]he courts stand as a final arbiter of truth."¹⁵ Although I agree that Americans overuse the legal system, I disagree with the latter part of Postman's statement. Does the legal system reach a point of closure in every dispute, or merely a temporary resolution? Does a court find "truth" in a given situation, or merely establish the current winners and losers on the disputed issue? Isn't this truth, like scientific truth, based upon contingencies, temporary, and subject to an alternative construction?¹⁶

In a legal dispute, one side wins, the other side loses. Environmental disputes have followed this pattern through most of the twentieth century. The boundary between the disputing parties has remained distinct, although legal technologies resolve environmental conflicts only temporarily, as the discussion in chapters 1 and 2 demonstrates. I believe that U.S. environmental policymakers have reached the limits of the effectiveness of law as a technology to resolve environmental disputes, and depend excessively on formalistic legal communication for dispute resolution.

While law provides an effective means to achieve social control and resolve disputes in a complex society, that effectiveness decreases when, as in most environmental disputes, the opposing parties also have strong moral claims of right. Negative legal rulings do not cause environmentalists to abandon their belief in the necessity to protect nature from human destruction, or property owners and developers to abandon plans to use their land as they wish. Given the process of the legal system, with appeals and reversals of court opinions, and revision or repeal of statutes and regulations, law may provide only temporary (and expensive) solutions to a dispute. Neither side will likely concede their moral claim based solely on a temporary loss for their legal argument.

¹⁵ Ibid.

¹⁶ Latour and Woolgar, *Laboratory Life: The Construction of Scientific Facts*, pp.69-70.

STS and Environmental Policy

STS research on environmental issues has generally focused on the activities of environmental scientists and engineers in environmental controversies.¹⁷ In a 1995 article, "The Environmental Challenge to Science Studies," Steven Yearley reviews "the small but growing science studies literature on the environment," with a particular focus on studies of "science and the environmental movement' or 'the greening of science.'"¹⁸ Yearley argues "that the environment should be recognized as a key site for social studies of science."¹⁹ Examining the pervasiveness of science in environmental discourses, Yearley concludes in part that STS research on environmental issues has demonstrated "how tenuous and contested are the claims of science to serve as the sole legitimate depicor of reality."²⁰

Although I agree with Yearley's assessment of the state of STS research on environmental issues, I believe that the research he describes gives an incomplete assessment of environmental policy-making practices. Yearley addresses only science in relation to the environment, using the term "science studies" throughout his discussion, ignoring the technology component of STS (except, perhaps, as an implicit "technoscience"). The studies Yearley reviews focus mainly on "deconstructing" scientific claims about the environment to account for conflicting research results and interpretations of results, or on examining attempts to use science to control environmental controversies.²¹

I contend that STS research should include consideration of the role of law as a social technology in the environmental policy-making process. That process involves analysis and comparison of scientific and engineering data; it also requires analysis and comparison of legal tools and practices. Making environmental claims and defending them requires expertise in environmental law. A complete body of STS research on environmental policymaking

¹⁷ See, e.g., Keller, *A Feeling for the Organism: The Life and Work of Barbara McClintock* (San Francisco: Freeman, 1983); see also Yearley, "The Environmental Challenge to Science Studies," in Jasanoff, et al., *Handbook of Science and Technology Studies*, p.457.

¹⁸ Yearley (1995), in Jasanoff, et al., *Handbook of Science and Technology Studies*, pp.457-458.

¹⁹ Ibid.

²⁰ Ibid., p.478.

²¹ Ibid., pp.465-468.

processes in the United States should include explicit consideration of impacts of this social technology.

Chapter 1 below describes twentieth-century disputes in the United States pitting environmental protection against development of natural resources. Opponents in these disputes have used legal tools, such as statutes and regulations, to achieve their goals. Thus, law itself has become an actor in environmental controversy, as an unavoidable participant that influences the structure and tone of the debate and the eventual outcome.

In his discussion of STS environmental research, Yearley notes that "both industry and environmental groups [have] pursued their regulatory interests through the courts, marshalling counterexpertise to combat the judgments and technical assessments adopted by" environmental regulatory agencies.²² Yearley describes controversy studies and assessments of boundary-making between the technical and political aspects of agency decisions. In chapter 2, I argue that law, as a social technology, should provide a comparable venue for analyses of environmental disputes.

The case study of the Bronx Community Paper Company (BCPC) in chapter 3 illustrates this argument. The case involves a legal dispute embedded in an environmental controversy. The Natural Resources Defense Council (NRDC), a national environmental organization, and the Banana Kelly Community Improvement Association, a Bronx community organization, made a joint proposal to include a paper recycling plant, the BCPC, in the development planned for an abandoned rail yard in the South Bronx. This project combines urban environmental concerns with an effort to address economic issues. Another Bronx community organization, the South Bronx Clean Air Coalition, filed a lawsuit claiming insufficient consideration of environmental impacts on the community from the proposed development. The lawsuit delayed the project for a year, forcing revisions in the plans for the paper mill.

In a lawsuit, opponents mobilize legal technologies to support their arguments. The effectiveness of available legal technologies has an impact on the outcome. The opposing parties in the case study based their arguments on claims of rights, including both legal and moral rights claims. The case study suggests that the structured interaction imposed by legal technologies may actually create barriers to resolving disputes over issues that reflect conflicting value systems. As in the literature on scientific controversies, in legal controversies something more than a conflict between rational, "computable" positions occurs: beliefs,

²² Ibid., p.465.

values, and entrenched moral issues are at stake.²³ Dependence on legal technologies to resolve emotional, value-laden issues entices people to ignore potential areas of negotiation and compromise. In such situations, law becomes a technology gone awry.

²³ See, e.g., Laet, *Vaders, Sterren, en Hormonen* (1994) and Brante, Fuller, and Lynch, *Controversial Science* (1993).

Chapter 1. A History of U.S. Environmental Policy and Law

"Go west, young man." "Give me a home where the buffalo roam." "Oh, beautiful, for spacious skies, for amber waves of grain, for purple mountain's majesty, above the fruited plain." The self-image of the United States contains "wide open spaces" and limitless natural resources. Of course, there remains no farther west to go, and buffalo now roam within fences, while continually expanding urban populations increase pressure to develop any remaining open spaces within commuting range, or as vacation sites. How have the legal technologies described in the introduction become enmeshed in environmental controversies? This chapter considers the evolution of environmental law and policy in the United States.

Attitudes about Nature before the Twentieth Century

Before Europeans settled in North America, native populations had remained sparse and scattered, making minimal impact on their natural environment.²⁴ Historians debate whether these pre-European inhabitants made conscious efforts to preserve their habitats, but little doubt exists about the extent of human impact on the environment following European colonization and settlement.²⁵ Pioneers interpreted the following Biblical injunctions:

And God said, Let us make man in our image ... and *let them have dominion ... over all the earth* ... So God created man in his own image ... and God said unto them, *Be fruitful, and multiply, and replenish the earth, and subdue it*²⁶

as commands to dominate and domesticate their natural surroundings. With missionary zeal, the pioneers set out to conquer the environment and the native populations. They proceeded to eradicate native species of flora and fauna in their efforts to tame a wild land.

According to Clayton Koppes, little change occurred in "the way Americans dealt with the natural world" from the first settlements in the 1600s through the nineteenth century.

²⁴ See Terrie, "Wilderness: Ambiguous Symbol of the American Past," p.132 in Browne, et al., eds., *Dominant Symbols in Popular Culture*; and Callicott, "American Indian Land Wisdom?"

²⁵ See, e.g., Cronon, *Changes in the Land*; Callicott, "American Indian Land Wisdom;" Darnovsky, "Stories Less Told: Histories of US Environmentalism," pp.21-24; Nash, "Old World Roots of Opinion," ch.1 in *Wilderness and the American Mind*; Terrie, "Wilderness: Ambiguous Symbol of the American Past;" and White, "The Historical Roots of Our Ecologic Crisis."

²⁶ *Genesis* 1:26-28 (King James version, emphasis added); see discussions in Nash, *Wilderness and the American Mind*, and White, "The Historical Roots of Our Ecologic Crisis."

Koppes cites three "reigning assumptions" during that period: (1) abundant natural resources lay unclaimed, and a combination of economics and religion compelled Americans to make those resources productive; (2) the natural resources of the United States were considered "inexhaustible," at least until a timber shortage occurred in the late 1800s; (3) the people who made the wilderness productive in a capitalist economy should benefit from their labor immediately.²⁷

Nineteenth-century writers and artists romanticized nature and began to draw attention to the negative impacts of the frontier mentality on the country's natural resources. John James Audubon produced his *Birds of America* (1827-38), which "marked him as a leader in calling attention to natural beauty."²⁸ As Audubon observed the loss of wilderness and wildlife in the United States, he predicted "that in a century the noble forests ... should exist no more."²⁹

Mid-nineteenth-century American Transcendentalists, led by Ralph Waldo Emerson and Henry David Thoreau, postulated a different relationship between humans and nature from that held by the pioneers. Those early settlers feared the wilderness as a "moral vacuum" providing no restraints on the "innate sinfulness of human nature." In contrast, Transcendentalists regarded wilderness as "the environment where spiritual truths were least blunted," arguing "that one's chances of attaining moral perfection and knowing God were *maximized* by entering wilderness."³⁰

Thoreau's *Walden*, published in 1854, praised the freedom and solitude provided by wilderness that could still be found near urban areas.³¹ In 1859, Thoreau's defense of wilderness took the form of advocating the maintenance of wild areas near settled communities. According to Thoreau, each town "should have a park, or rather a primitive forest, of five hundred or a thousand acres."³² Such proposals remained at the level of individual philosophy

²⁷ Koppes, "Efficiency, Equity, Esthetics: Shifting Themes in American Conservation," in Worster, ed., *The Ends of the Earth*, pp.231-232.

²⁸ Nash, *Wilderness and the American Mind*, pp.96-97.

²⁹ Ibid.

³⁰ Ibid., p.86.

³¹ Ibid., ch.5.

³² Ibid., p.102.

and personal commitment, however, and did not represent government policy. For example, air pollution problems were considered private disputes and handled by the courts "under the nuisance and trespass provisions of the common law."³³

With the Progressive Era, beginning in the late nineteenth century and lasting into the early twentieth century, two seemingly unrelated movements emerged, one concerned with use of natural resources and the other with urban reform.³⁴ These movements have become intertwined in the environmental debates of the late twentieth century.³⁵ Historical accounts of U.S. environmental attitudes generally focus on issues related to wilderness and wildlife, and the loss of "wild" nature has remained an environmental issue through the twentieth century.

However, a revisionist account cites urban reform as an "environmental" issue ignored by traditional accounts of the development of environmentalism in the U.S.³⁶ The urban reform movement began at the end of the nineteenth century, focusing on issues affecting life in large cities, such as public health, workplace hazards, city planning, housing shortages, water supplies, and sewer systems.³⁷ The nature conservation and urban reform movements remained separate; however, during the latter half of the twentieth century, successors to these movements began to combine their efforts on issues of the urban environment and environmental justice.

The 1890 census officially announced the end of the American frontier.³⁸ By the late nineteenth century, attention turned to the growing demands on natural resources, as well as the loss of wilderness and extinction of non-human species. The idea that the United States was losing its wilderness, that the "wide open spaces" that greeted the first European settlers now

³³ Portney, "EPA and the Evolution of Federal Regulation," p.11.

³⁴ See Hays, *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890-1920*.

³⁵ Gottlieb, "Urban and Industrial Roots: Seeking to Reform the System," *Forcing the Spring: The Transformation of the American Environmental Movement*, ch.2, pp.47-80; Darnovsky, "Stories Less Told: Histories of US Environmentalism," *Socialist Review*, 1992, pp.26-28.

³⁶ See Darnovsky, "Stories Less Told: Histories of US Environmentalism."

³⁷ *Ibid.*, pp.26-27.

³⁸ Nash, *Wilderness and the American Mind*, p.xii.

had fences, buildings, and roads through it, prompted the initiation of efforts to salvage as much of wild nature as possible.

John Muir led an effort to preserve remaining wilderness in the United States. A Scottish immigrant and inventor, Muir attended the University of Wisconsin during the 1860s and became inspired by Thoreau's transcendentalist philosophy. After an accident in a machine shop temporarily blinded him, Muir began an odyssey to explore the wilderness of the United States.³⁹ He became an archetypal mountain man, spending extended periods on wilderness expeditions and leading trips into the mountains. Muir wanted people to experience the wilderness and to understand what would be lost with unrestrained development. Muir founded the Sierra Club in California to extend this effort and to create a political base for his campaign to preserve wilderness.⁴⁰

The federal government began to enact legislation to protect natural resources in the 1890s, responding to nascent environmental organizations such as the Audubon Society and the Sierra Club, as well as those who wanted to make industrial use of natural resources. Early statutes included: the Yosemite Act (1890), the first deliberate protection of wilderness in the United States, establishing Yosemite as a national park;⁴¹ the Forest Reserve Act (1891), withdrawing over thirteen million acres from the public domain to create a national forest system;⁴² the Forest Management Act (1897), opening the forests for timber production, mining, and grazing;⁴³ and the Lacey Act (1900), banning "the shipment across state lines of wild animals killed in violation of state laws" in order to protect native wildlife.⁴⁴

³⁹ Ibid., pp.122-125.

⁴⁰ See, e.g., Nash, "John Muir: Publicizer," chapter 8 in *Wilderness and the American Mind*; and Strong, "John Muir," chapter 4 in *Dreamers and Defenders*.

⁴¹ Nash, *Wilderness and the American Mind*, p.132.

⁴² Ibid., p.133.

⁴³ Ibid., p.137.

⁴⁴ Dunlap, *Saving America's Wildlife*, p.14.

Early Twentieth Century Environmentalism -- Preservation versus Conservation

As the twentieth century began, concern for nature continued to increase as urban areas expanded and people sought escape from their industrial surroundings. This concern pitted advocates of wilderness protection against those who favored the use and development of natural resources. Parallel conceptions of nature and of human interaction with nature crystallized into these two distinct positions on appropriate uses of public lands, positions representing opposite philosophies about nature.

"Conservationists" were inspired by the "wise use" proposals of Gifford Pinchot, the first head of the National Forest Service. A Yale graduate who pursued graduate study in forestry in Europe, Pinchot developed a "philosophy that natural resources should be *used*, albeit wisely."⁴⁵ Pinchot applied the term "conservation" to this regulated use of public lands, with three main goals:

- (1) to develop America's natural resources and make the fullest use of them for the present generation, (2) to prevent waste (from forest fires, for example), and (3) to develop and preserve the country's natural resources "for the benefit of the many, and not merely for the profit of a few."⁴⁶

Implementing Pinchot's proposals would impose some restraints on the "reigning assumptions about the use of natural resources since the early 1600s."⁴⁷ Although Pinchot's first goal supports development in the present, the second and third goals set some limits on that development, requiring governmental regulation and oversight.

"Preservationists" held a very different view of nature and argued to preserve wilderness for its own sake. They were inspired by the writings of Emerson and Thoreau, and by John Muir's charismatic example.⁴⁸ "[B]est remembered for his poetic sensitivity to nature and his leadership in preserving the land,"⁴⁹ Muir's philosophy of conservation clashed with Pinchot's.

⁴⁵ Nash, *American Environmentalism* (1982), p.137.

⁴⁶ Strong, *Dreamers and Defenders* (1988), p.76.

⁴⁷ See note 27 and accompanying text.

⁴⁸ Nash, *Wilderness and the American Mind*, pp.96-107.

⁴⁹ Strong, *Dreamers and Defenders*, p.86.

Although Muir accepted the necessity for the wise use of natural resources to benefit people, he contended that "providing opportunity for recreation and for the enjoyment of scenic beauty constituted a legitimate use of the land" and advocated wilderness protection in national parks.⁵⁰

In contrast to Muir, Pinchot favored regulated commercial use of natural resources, rejecting the idea of land preservation in national parks.⁵¹ Similarities did exist between the positions of the two men -- "both focused on wilderness protection" and both opposed abuses by "special interests" including "railroad promoters and lumber kings, land speculators and mine owners, stockmen and farmers," and advocated "wise use of forests, water supplies, and other natural resources."⁵² However, Muir's "zeal for wilderness protection" and Pinchot's "fervor for resource management constituted incompatible logics, if not contrary impulses."⁵³

The political contrasts between Muir and Pinchot became explicit during Theodore Roosevelt's presidency at the start of the twentieth century. With his enthusiastic self-promotion as a big game hunter and outdoorsman, Theodore Roosevelt had a great deal of influence on U.S. attitudes toward nature during the period, and his philosophy has entered and influenced American attitudes about the natural environment. Roosevelt saw wilderness as the source of "that vigorous manliness for the lack of which in a nation, as in an individual, the possession of no other qualities can possibly atone."⁵⁴

At times, Roosevelt sounded like a preservationist, as in the following quote:

There are no words that can tell the hidden spirit of the wilderness, that can reveal its mystery. ... The nation behaves well if it treats its natural resources as

⁵⁰ Ibid., p.101.

⁵¹ Ibid.

⁵² Darnovsky, "Stories Less Told," pp.17, 21.

⁵³ Ibid., p.17.

⁵⁴ Excerpt from "The Strenuous Life," Roosevelt's 1899 men's club speech, in Seltzer, "The Love-Master: The Anthropology of Boys," part V in *Bodies and Machines* (1992), pp.149-150.

assets which it must turn over to the next generation increased and not impaired in value.⁵⁵

Roosevelt supported Muir's efforts to expand and protect national parks and national monuments. However, in increasingly acrimonious disputes over land and water policy, Roosevelt favored Pinchot's proposals for regulated use of public lands over Muir's calls to prevent wilderness development. Roosevelt appointed Pinchot head of the newly created National Forest Service in 1905, and consulted regularly with Pinchot on issues involving natural resources.

In a period of social upheaval bracketed by the presidencies of Theodore Roosevelt and Franklin Delano Roosevelt, the United States experienced two world wars, prohibition, and depression in addition to the agricultural, economic, and environmental catastrophe of the Dust Bowl. Governmental economic priorities influenced the national debate over the best uses of the country's natural resources. The Reclamation Act of 1902 began a national crusade to increase crop production; by the 1930s no politician dared challenge the policies of agricultural development and reclamation.⁵⁶

During the twentieth century, the United States developed into an agricultural powerhouse, with the central plains states promoted as the nation's "breadbasket." After the land rush into this relatively arid region, American self-promotion pictured industrious family farms producing grain for a growing population. By the 1930s, poor farming practices had destroyed the native plains and increased topsoil erosion, leaving dust to blow across the country in huge clouds during the mid-1930s, in the midst of the economic depression.⁵⁷

Franklin Delano Roosevelt's New Deal response to the depression included attention to conservation, reflecting a Pinchot-style pragmatism. "New Deal conservation reflected in large measure Roosevelt's own priorities," with primary concern focused on providing resources for human use, followed by protection of wildlife, and least concern for national parks and wilderness.⁵⁸ The Tennessee Valley Authority (TVA) and the Civilian Conservation Corps

⁵⁵ Haraway, "Teddy Bear Patriarchy," ch.3 in *Primate Visions* (1989), pp.27-28.

⁵⁶ Worster, *Dust Bowl: The Southern Plains in the 1930s*, p.187.

⁵⁷ See Worster, *Dust Bowl: The Southern Plains in the 1930s*.

⁵⁸ Stephen Fox, "FDR & New Deal Conservation," *The American Conservation Movement: John Muir & His Legacy*, pp.183-184.

(CCC), frequently cited as examples of New Deal conservation efforts, both "refashioned the natural landscape for human uses."⁵⁹ The TVA harnessed a river system to produce fertilizer and electrical power.⁶⁰ The CCC employed 2 million men during the depression.⁶¹ Pinchot's philosophy had become embedded in government policy prior to World War II.

The Impact of World War II on American Environmental Consciousness

The Japanese bombing of Pearl Harbor on December 7, 1941 forced the United States into World War II. By the end of that war, a new element entered the environmental policy debate in the United States: the fear of nuclear fallout. Along with the rest of the world, the United States learned the long-term consequences of any further use of nuclear weapons after the bombing of Hiroshima and Nagasaki in Japan. The United States entered the Cold War and developed a nuclear testing program as other nations also began efforts to develop nuclear weapons.

The increased expenditure on Cold War military production brought a rising standard of living in the United States. More people could afford to own homes and cars in the developing suburbs, and outdoor recreation grew rapidly during the 1950s. A growing middle class had enough time and extra income to turn their attention to issues such as the impact of contaminated air and water on their health and that of their children. In *Beauty, Health, and Permanence*, Samuel Hays describes this "transformation of values" in the United States after World War II, as environmentalism replaced Pinchot-style conservation "amid a rising interest in the quality of life beyond efficiency in production."⁶²

Marcy Darnovsky examines this post-World War II shift in U.S. attitudes toward nature in a 1992 article, "Stories Less Told: Histories of US Environmentalism." She states that after World War II, people began to relate "environmental hazards to everyday life" on "such issues as air and water pollution, public and occupational health, pesticides, and land use."

⁵⁹ Ibid., p.189.

⁶⁰ Ibid.

⁶¹ Nash, *American Environmentalism* (1990), pp.140-141.

⁶² Hays, *Beauty, Health, and Permanence: Environmental Politics in the United States, 1955-1985*, pp.2-5; see also Dunlap, "Public Opinion and Environmental Policy," in Lester, ed., *Environmental Politics and Policy*, pp.95-96.

Wilderness advocacy was not abandoned ... [b]ut wilderness and wildlife issues lost their exclusive hold on U.S. conservationists. ... In a shift that accelerated between the mid-1960s and the early 1970s, what had been a movement to protect or manage wilderness and natural resources became what today is called environmentalism.⁶³

Combined with the fear of nuclear devastation, the American public began to take seriously the potential damage we do to ourselves when we allow unthinking destruction of the environment.

A 1985 article by Ralph Lutts details the fears of nuclear fallout during the early years of the Cold War. When the Soviet Union detonated an atomic weapon in 1949, the United States lost its complacency as the "only nation possessing the atomic bomb."⁶⁴ In the resulting arms race, both countries conducted extensive tests of increasingly powerful nuclear weapons.⁶⁵ Interest in fallout shelters grew during the 1950s, reflecting public anxiety over media reports about the dangers of nuclear fallout.⁶⁶ People believed the doomsday scenario in the movie *On the Beach*, which premiered in 1959, depicting the aftermath of a nuclear war as fallout circled the globe, destroying all life on the planet.⁶⁷

Rachel Carson's *Silent Spring*, published in 1962, had a profound impact on American attitudes about nature, in part because of the timing of its publication. *Silent Spring* focused public attention on damage to people and other species from pesticides, which came into wide use after broad military application during World War II. Carson's imagery linked the application and impacts of pesticides to the wide fear of nuclear clouds and fallout.⁶⁸

Silent Spring presented the spectre of a world without birds, plants, or wildlife. Carson argued that we were destroying ourselves by embracing toxic chemicals in the form of

⁶³ Darnovsky, "Stories Less Told," pp.28-29.

⁶⁴ Lutts, "Chemical Fallout: Rachel Carson's *Silent Spring*, Radioactive Fallout, and the Environmental Movement," pp.212-213.

⁶⁵ *Ibid.*, p.213.

⁶⁶ *Ibid.*, p.218.

⁶⁷ *Ibid.*

⁶⁸ *Ibid.*, p.222.

pesticides. Carson testified before Congress and also made her case effectively through the media. Her campaign to inform the public about the dangers of pesticides eventually proved more effective than her actual impact on pesticide use. After 1972, the United States had phased out its use of DDT, the main pesticide Carson cited in *Silent Spring*, while "newer pesticides had already largely supplanted the increasingly ineffective DDT in the marketplace."⁶⁹

Environmentalism became one of a number of 1960s social movements, including anti-nuclear, civil rights, women's rights, and the anti-(Vietnam) war movements. Countercultural social movements exemplified concerns about social inequities in government policies. The "civil rights and antiwar activism" of the 1960s mobilized "widespread support for environmental protection,"⁷⁰ and the federal government began to pay attention to environmental concerns. John F. Kennedy "rejected the notion that environmental issues were state and local responsibilities," and made "a commitment to more federal funding."⁷¹ The Johnson administration pushed important legislation through Congress that emphasized "quality-of-life issues and environmental protection."⁷²

The 1970s Explosion of Environmental Regulation

The 1970s became a regulatory decade for environmentalists, following the first Earth Day celebration on April 22, 1970.⁷³ This "mega-event" stressed consensus on the need to protect and preserve the environment, and inspired many young people to seek careers in environmental law, engineering, and sciences.⁷⁴ Its timing -- almost a year after the Woodstock rock festival and five months after a "massive Vietnam moratorium organized by moderate

⁶⁹ Strong, *Dreamers and Defenders*, p.194.

⁷⁰ Dunlap, "Public Opinion and Environmental Policy," in Lester, ed., *Environmental Politics and Policy*, pp.95-96.

⁷¹ Melosi, "Lyndon Johnson and Environmental Policy," in Divine, ed., *The Johnson Years, Volume Two*, pp.118-119.

⁷² *Ibid.*, pp.113-114; Dunlap, "Public Opinion and Environmental Policy," p.95.

⁷³ Darnovsky, "Stories Less Told," p.38; Sale, *The Green Revolution*, p.11.

⁷⁴ Darnovsky, "Stories Less Told," p.36.

antiwar groups" -- served to channel some of the radical energy from 1960s activism into environmental issues.⁷⁵

Data from public opinion polls indicate "a significant decline in public concern for environmental quality in the years immediately following 1970," representing the belief by the general public that environmental conditions had already begun to improve, "presumably because laws were passed, agencies were established, and money was spent to solve them."⁷⁶ As part of this "mainstreaming" of environmental values,⁷⁷ the U.S. Congress approved the plan Nixon submitted on July 9, 1970 to create the Environmental Protection Agency (EPA) by consolidating functions previously performed by other government departments and commissions.⁷⁸

The flurry of environmental legislation produced by Congress during the 1970s included: the National Environmental Protection Act (NEPA), the Clean Air Act, the Clean Water Act, the Endangered Species Act, the Toxic Substance Control Act (TOSCA), the Resource Conservation and Recovery Act (RCRA), and the Comprehensive Environmental Recovery and Cleanup Liability Act (CERCLA, or Superfund). Politicians began courting the environmental vote by supporting legislation to protect the environment, after Earth Day demonstrated the potential strength of that constituency. However, those politicians generally ignored the fact that all these statutes intrude to some extent on land owners' rights to act in certain ways, even on their own land.

Much of this regulatory activity occurred during the presidency of Richard Nixon. A 1990 history of the EPA describes Nixon's "contradictory decisions" on environmental issues: "On the one hand, he signed into law landmark legislation like ... NEPA and the Clean Air Act Amendments of 1970," and created the EPA, while "[o]n the other hand, he presided over a

⁷⁵ Ibid., pp.36-39.

⁷⁶ Dunlap, "Public Opinion and Environmental Policy," p.105.

⁷⁷ Hirsh, "The Mainstreaming of Conservation," ch.7 in *Power Loss: Regulation, Technology, and the Destruction of Consensus in the American Electric Utility System, 1965-1996*, pp.16-19; see also, Hirsh and Serchuk, "Momentum Shifts in the American Electric Utility System," pp.297-298, 303; Darnovsky, "Stories Less Told," pp.40-42; Dunlap, "Public Opinion and Environmental Policy," pp.105, 112.

⁷⁸ Portney, "EPA and the Evolution of Federal Regulation," pp.8-9.

series of efforts to keep environmental regulators in check."⁷⁹ Nixon had to balance his concern for economic growth against his desire for the votes of the growing environmental movement. He also responded to Congressional pressure for environmental legislation, under the leadership of Edmund Muskie.⁸⁰

Membership expanded rapidly in established environmental organizations (such as the Sierra Club, the Wilderness Society, and the Audubon Society) during the 1970s. Environmental organizations proliferated along a spectrum from conservative (Nature Conservancy, League of Conservation Voters) to activist (Greenpeace).⁸¹ Many of these groups made extensive use of lawsuits (invited by citizen suit provisions in the federal statutes) to define and enforce their environmental arguments. The Natural Resources Defense Council (NRDC) began in 1970 as a small group of environmental lawyers offering their expertise to environmental groups without staff lawyers. "Washington became the chief battleground and legal reformism the main effort" of the environmental movement during the 1970s, "guided by a dark new perception of approaching doomsday and the human as an endangered species."⁸²

Established, conventional environmental organizations did not attract everyone who wanted to improve the environment. Radical environmental activists began to practice "monkeywrenching," a term popularized by Edward Abbey's 1975 novel *The Monkey Wrench Gang*, describing efforts to slow particular types of land development activity.⁸³ Other activists initiated grassroots efforts to address issues of urban decay, public health, and social injustice.⁸⁴ The latter efforts reflected the concern that people least able to escape environmental pollution,

⁷⁹ Landy, et al., "The Origins and Development of the Environmental Protection Agency," in *The Environmental Protection Agency: Asking the Wrong Questions*, p.30; see also Portney, "EPA and the Evolution of Federal Regulation," *Public Policies for Environmental Protection*, p.9.

⁸⁰ See Landy, et al.

⁸¹ See, e.g., Sale, "Timeline," *The Green Revolution*, pp.xi-xx; Nash, "An American Environmental Chronology," *American Environmentalism*, pp.xi-xix.

⁸² Sale, *The Green Revolution*, p.8.

⁸³ Abbey, *The Monkey Wrench Gang*; Scarce, *Eco-Warriors: Understanding the Radical Environmental Movement*, pp.57-58; see also Abbey and Foreman, "Monkeywrenching," from Nash, *American Environmentalism*, pp.299-308 (first printed in a 1987 Earth First! publication, *Ecodefense: A Field Guide to Monkeywrenching*).

⁸⁴ Darnovsky, "Stories Less Told," pp.37-40.

including minorities and the urban poor, were also "most likely to bear the burden" of polluted air and water, and problems of waste treatment and disposal.⁸⁵

Mainstream environmental groups continued to draw most of their members from the educated, white middle and upper classes in the United States. In the early 1970s,

student environmental enthusiasts affected by the Earth Day fervor in the colleges and universities had high hopes that they might bring environmental benefits to the urban poor. They developed the view that they should become advocates for the poor when the poor did not take action on their own. But such strategies were ineffective. Successful urban environmental action seemed to require affluence, interest, awareness, and knowledge that rested on values and skills not widely present in low-income urban areas.⁸⁶

But perhaps those young environmentalists quit too soon, lacking the community organizing skills necessary to involve the poor in the nascent environmental discourse.

The 1980s -- Opposition to Environmentalism

The environmental movement developed considerable political power during the 1970s, but also alienated many individuals and organizations. The 1980s saw grassroots community organizations and national organizations concerned with racial and social justice turning their attention to environmental issues and challenging the mainstream movement for its inattention to their concerns.⁸⁷

A separate challenge came from the political right. The strength of the mainstream environmental movement came mainly from the number of members they could mobilize in support of particular issues, and from citizen suit provisions built into the 1970s environmental legislation and regulation. Business and industrial interests maintained their economic power, however, and reacted to environmental encroachment on their productivity with concerted attacks on environmental regulation in the 1980s.

⁸⁵ Hays, *Beauty, Health, and Permanence*, pp.268-269.

⁸⁶ *Ibid.*, p.269.

⁸⁷ Gottlieb, "Grassroots and Direct Action: Alternative Movements," ch.5 in *Forcing the Spring: The Transformation of the American Environmental Movement*, pp.162-204.

The Environmental Justice Movement. In *The Green Revolution*, Kirkpatrick Sale describes the years 1980-1988 as a period when the environmental movement "divided into an increasingly professional mainstream and an increasingly radical grass roots."⁸⁸ Grassroots community efforts developed as people opposed encroachments on their communities, such as "a neighborhood toxic waste incinerator or a nearby oil refinery."⁸⁹ Activist groups also took on the highly charged political issues of nuclear power and nuclear weapons, while most mainstream environmental groups avoided linking their environmental concerns to the anti-nuclear movement.⁹⁰

The environmental justice movement quickly developed into a national movement, confronting the mainstream environmental movement about links between "civil rights, land rights, class politics, community action, and environmental issues."⁹¹ White middle-class protests against hazardous facilities were "derisively called 'NIMBYs' (Not In My Back Yard)," but "many community antitoxics groups were committed to a broad politics of social justice."⁹² In 1987, the United Church of Christ's Commission for Racial Justice referred to the practice of siting hazardous waste facilities in minority communities as "'environmental racism,' a term that also referred to the exclusionary practices of mainstream and many alternative environmental groups."⁹³

The mainstream environmental movement had focused on informing the public about environmental issues, and on using legal and political strategies to influence national environmental policy. In 1990, environmental justice groups challenged the mainstream groups in an open letter, asking "why no people of color were in top staff positions and why wilderness concerns remained more urgent than urban issues affecting poor people or land rights issues

⁸⁸ Sale, *The Green Revolution*, p.8.

⁸⁹ Darnovsky, "Stories Less Told," p.44.

⁹⁰ *Ibid.*, p.45.

⁹¹ *Ibid.*, pp.46-47.

⁹² *Ibid.*, p.46.

⁹³ *Ibid.*

affecting Native Americans."⁹⁴ As a result of this public dispute, the environmental movement has actually grown stronger and more diverse, including "many different types of organizations with a great diversity of resources and multiplicity of aims."⁹⁵

Conservative Rights Movements. The statutory and regulatory expansion of the 1970s also contributed to a conservative political backlash against environmentalism in the 1980s.⁹⁶ Republican administrations under Presidents Reagan and Bush pursued anti-environmental, pro-industry policies. Kirkpatrick Sale refers to 1980-1988 as "the years of the Reagan reaction" to the environmental movement, and states that the Bush administration "raised to a new high the art of administrative neglect" of environmental issues.⁹⁷ This political climate fostered the development of conservative groups protesting lost rights of land owners.⁹⁸

Initial opposition to 1970s government regulation in western states became known as the "sagebrush rebellion."⁹⁹ Ranchers, "mining interests and users of off-road vehicles" opposed the potential wilderness designation of federal range lands under a program developed by the Bureau of Land Management (BLM).¹⁰⁰ The sagebrush rebellion involved demands to transfer federal lands to western states.¹⁰¹ They argued that public lands were "temporary holdings to

⁹⁴ Ibid., p.47.

⁹⁵ Sale, *The Green Revolution*, p.69.

⁹⁶ Ibid., p.49; Harbrecht, "A Question of Property Rights and Wrongs," *National Wildlife*, p.10.

⁹⁷ Sale, *The Green Revolution*, pp.8, 74.

⁹⁸ Kempton, Boster and Hartley, *Environmental Values in American Culture*, n.2, p.286 and accompanying text, p.22.

⁹⁹ Hays, *Beauty, Health, and Permanence*, pp.104-105; Gottlieb, *Forcing the Spring*, p.316; Yandle, ed., *Land Rights*, pp.3-4; Lehmann, *Privatizing Public Lands*, pp.7-8.

¹⁰⁰ Ibid.

¹⁰¹ Hays, pp.104-105; see also Gottlieb, *Forcing the Spring*, p.316; Bromley, *Environment and Economy: Property Rights and Public Policy*, pp.168-169.

be claimed, privatized, and homesteaded as the nation grew in population."¹⁰² However, such claims ignored federal policies developed throughout the twentieth century, creating preserves for parks, forests, and wilderness areas.

The frustration and resentment over lost land rights that fueled the 1979 sagebrush rebellion continued through the 1980s. A coalition of groups in western states that opposed environmental regulation and expansion of national park lands became known as the "wise use" movement in 1988.¹⁰³ This movement adopted Pinchot's term for use of natural resources on public lands, "although philosophically ... they are direct descendants of the western boomers Pinchot, Muir, and Roosevelt all fought to defeat."¹⁰⁴ The wise use movement expanded the protest against encroachments and restrictions by the federal government on grazing on public lands, mining practices, "free" water to agriculture, and logging in old growth forests.¹⁰⁵

These conservative efforts developed their grassroots among western ranching, agricultural, mining, and logging interests that resented the encroachment of environmental regulation on their profits. The "wise use" movement signaled an aggressive response to this encroachment, with forceful economic arguments to support the industry claims to victimization by environmental regulation.¹⁰⁶ "Wise use" received corporate funding along with political support from Republicans in the White House and Congress during the 1980s.¹⁰⁷ Affected industries enroll their workers in the movement by claiming that burdensome

¹⁰² Marzulla, "The Property Rights Movement," in Yandle, ed., pp.3-4.

¹⁰³ Poole, "Neither Wise Nor Well: Abusers of the Common Trust or Downtrodden Populists? At the Exploiters' Convention, the Wise-Use Movement Frets about its Image," *Sierra*, v.77, n.6, p.60.

¹⁰⁴ Helvarg, *The War Against the Greens*, p.52; see also O'Callaghan, "Whose Agenda for America?" p.83; Stapleton, "Greed vs. Green," pp.32-33; Lewis, "Cloaked in a Wise Disguise," p.7.

¹⁰⁵ Helvarg, *The War Against the Greens*, p.6; Lehmann, *Privatizing Public Lands*, p.12; O'Callaghan, "Whose Agenda for America?" p.83.

¹⁰⁶ Helvarg, *The War Against the Greens*, p.12; Lapp, "Wise Use's Labor Ruse," *Environmental Action*, v.25, n.3, p.24.

¹⁰⁷ Poole, "Neither Wise nor Well," p.88; Stapleton, "Greed vs. Green," p.37; Lewis, "Cloaked in a Wise Disguise," pp.7-8; O'Callaghan, "Whose Agenda for America?" pp.83, 86, 89; Lehmann, *Privatizing Public Lands*, p.17; Stapleton, "A Call to Action," p.37; Lapp, "Wise Use's Labor Ruse," p.24; Kempton, Boster and Hartley, *Environmental Values in American Culture*, n.2, p.286 and accompanying text, p.22.

environmental regulation causes loggers, millworkers, farmers, and ranchers to lose jobs and earnings.¹⁰⁸

Wise use claims about the impacts of regulation ignore other explanations for economic problems in extractive industries. Environmental counter arguments have not convinced them that the major "extractive/exploitive industries" in western states, including "mining, ranching, subsidized water, and timber -- are all in decline," and that loggers and mill workers have begun to lose work "because they are running out of trees to cut."¹⁰⁹ While established environmental groups struggled during the 1980s to retain protections won in the previous decade, they also began to take note of the successful grassroots efforts of wise use groups.¹¹⁰ Some activists began to urge the mainstream environmental movement to extend their efforts to include organizing on the local level.¹¹¹

1990s Attacks on Government Regulation

During the 1990s, the wise use movement has expanded into a national "property rights" movement that promotes legal action and political protest against environmental regulation.¹¹² According to Neil Hamilton, a law professor and farm owner,

[t]he stated goal [of the property rights movement] is to protect private property, but the real goal is to rewrite American law to place private desires to develop land paramount to public welfare, and require compensation whenever regulations reduce values. ... [T]he property rights debate is not just a question of

¹⁰⁸ Helvarg, *The War Against the Greens*, p.12; O'Callaghan, "Whose Agenda for America?" *Audubon*, v.94, n.5, pp.82, 83; Poole, "Neither Wise nor Well," pp.89-90; Lapp, "Wise Use's Labor Ruse," p.24.

¹⁰⁹ Stapleton, "A Call to Action," pp.38-39.

¹¹⁰ O'Callaghan, "Whose Agenda for America?" pp.90-91; Stapleton, "A Call to Action: Environmentalists must learn to fight the Wise Use Movement by putting people back into the ecological equation," *National Parks*, v.67, pp.37-40.

¹¹¹ Stapleton, "A Call to Action," p.39.

¹¹² Bethell, "Property and Tyranny," *The American Spectator*, v.27, pp.16-17; Bovard, "The New Leviathan," ch.1 of *Lost Rights*, pp.1-7; Greve, "The Importance of Property Rights"; Roberts, "Nature is a More Gentle Adversary than the Government;" Echeverria and Dennis, "Takings Policy: Property Rights and Wrongs," p.25.

constitutional law but a clash of political ideology and the direction of national resource protection policy.¹¹³

The concept of "property rights" refocuses opposition to environmental regulation onto a rights claim based on the U.S. Constitution.¹¹⁴

Constitutional claims to property rights relate to the "takings clause" in the 5th Amendment to the U.S. Constitution, which states: "No person shall be ... deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation."¹¹⁵ Debate centers on the phrase "taken ... without just compensation." Traditional definitions of "taking of property" include destruction of the property, rendering it useless, and transfer of rightful possession.¹¹⁶ In a 1964 article, Joseph Sax stated: "all agree that compensation is required only for a governmental 'taking' of property and not for losses occasioned by mere 'regulation.'"¹¹⁷

Despite Sax's claim that government regulation does not comprise a compensable taking of property, the idea of regulatory takings first appeared in a 1922 Supreme Court opinion, *Pennsylvania Coal Company v. Mahon*.¹¹⁸ The property rights movement argues that both business and individual property owners can seek compensation when regulations reduce the economic value of their property.¹¹⁹ Richard Epstein's 1985 book, *Takings: Private Property and the Power of Eminent Domain*, "helped establish the movement's intellectual

¹¹³ Hamilton, "The Value of Land: Seeking Property Rights Solutions to Public Environmental Concerns," *Journal of Soil and Water Conservation*, v.48, p.283.

¹¹⁴ Bovard, *Lost Rights*, p.10; Sowell, "The 'Takings' Issue".

¹¹⁵ U.S. Constitution, Fifth Amendment.

¹¹⁶ Ackerman, *Private Property and the Constitution*, pp.123-145.

¹¹⁷ Sax, "Takings and the Police Power," *Yale Law Journal*, v.74, p.37.

¹¹⁸ Plater, et al., *Environmental Law and Policy*, pp.453-460; Litvan, "A Clash Over Property Rights (When Property is 'Taken')," *Nation's Business*, p.58.

¹¹⁹ Echeverria and Dennis, "Takings Policy: Property Rights and Wrongs," p.25; Levinson, "Give and Takings: When Do Land-Use Rules Trample Property Rights?" pp.50-51; Plater, et al., *Environmental Law and Policy*, pp.442-444; Minter, "You Just Can't Take It Anymore," p.44.

foundation."¹²⁰ Epstein argues "that takings of private property must not be allowed unless compensated and then only for public use."¹²¹ Further, Epstein would allow "the uncompensated regulation of property" only "[i]f a regulation prevents a harm or nuisance to others, or if it offers the owner benefits that offset his losses."¹²²

This reasoning relieves property owners from economic loss due to regulations protecting endangered species, wetlands, and other environmental objectives. However, there are "obvious limits" on property rights, as it could bankrupt the government "if it had to pay compensation every time it diminished property values."¹²³ Some argue that "regulations can actually serve to protect and enhance property rights in many instances."¹²⁴ For example, both zoning and pollution control impose restrictions on property rights, but can also increase property values. Property rights are "subject to the power of government to enact reasonable restrictions to protect public health, safety, and welfare."¹²⁵

The property rights movement opposes environmental restraints on land development.¹²⁶ Its advocates equate property rights with civil rights,¹²⁷ freedom of speech,¹²⁸ and even liberty

¹²⁰ Levinson, "Give and Takings," p.51.

¹²¹ Epstein, *Takings*, p.28; see also Echeverria and Dennis, "Takings Policy," p.28; Hamilton, "The Value of Land," p.283.

¹²² Levinson, "Give and Takings," pp.51-52.

¹²³ Echeverria and Dennis, "Takings Policy," p.26.

¹²⁴ Ibid.

¹²⁵ Hamilton, "The Value of Land," *Journal of Soil and Water Conservation*, p.280.

¹²⁶ See generally, Bovard, *Lost Rights: The Destruction of American Liberty*.

¹²⁷ Yandle, ed., *Lost Rights*, pp.3, 24-27.

¹²⁸ Bovard, p.3.

itself.¹²⁹ They frequently cite John Locke's influential *Two Treatises of Government* (1689),¹³⁰ because of Locke's claim for property as a basic natural right.¹³¹ In one frequently-cited passage from the *Second Treatise*, Locke states:

Whatsoever [a man] removes out of the state that nature hath provided, and left it in, he hath mixed his labour with ... and thereby makes it his property. It being by him removed from the common state nature hath placed it in, it hath by this labour something annexed to it, that excludes the common right of other men. For this labour being the unquestionable property of the labourer, no man but he can have a right to what that is once joined to, at least where there is enough, and as good, left in common for others.¹³²

Proponents of property rights quote Locke selectively, citing his "idea that one makes an unowned resource one's own by mixing one's labor with it,"¹³³ while ignoring Locke's additional limitation to that ownership right, in the proviso that "there is enough, and as good left in common for others."¹³⁴

Recently, extremist groups within the property rights movement have called for the rejection of government regulation and authority. The "so-called 'County Movement'" urges county governments to "enact land-use plans supportive of ranching, logging, and mining" and to demand that federal and state agencies comply with those plans.¹³⁵ Initiated by ranchers who

¹²⁹ Bovard, p.333-335.

¹³⁰ Ely, *The Guardian of Every Other Right: A Constitutional History of Property Rights*, pp.16-17, 29.

¹³¹ Shrader-Frechette, "Four Land Ethics," in Caldwell and Shrader-Frechette, *Policy for Land*, p.44.

¹³² Locke, *Book II. Of Civil Government*, ch.V. "Of Property," sec. 27, from Smith and Grene, eds., *Philosophers Speak for Themselves: From Descartes to Locke*, p.465.

¹³³ Lehmann, *Privatizing Public Lands*, p.103; see also Coyle, *Property Rights and the Constitution: Shaping Society Through Land Use Regulation*, pp.228-230.

¹³⁴ Shrader-Frechette, "Locke and Land Ownership," ch.4 in Caldwell and Shrader-Frechette, *Policy for Land*, p.67; Epstein, *Takings*, p.11.

¹³⁵ Lehmann, *Privatizing Public Lands*, p.11.

"want federal grazing permits recognized as private property," the movement has encouraged actions such as bulldozing roads into national forests.¹³⁶ Other names for the movement include the "home-rule movement" and the "county supremacy movement" because its proponents reject the supremacy clause in the Constitution that gives the federal government supreme authority over public lands.¹³⁷

Environmentalism in the 1990s

Environmentalism has grown and strengthened during the twentieth century, well beyond the initial focus on issues affecting wilderness and wildlife. Nevertheless, both Pinchot's conservation proposals and Muir's exhortations to preserve wild lands continue to resonate in environmental debates. Pinchot's emphasis on economic considerations in the development of natural resources make his wise use proposals appealing both to the business community and to the grassroots challenges to environmentalism in the 1980s and 1990s. Muir's more emotional arguments significantly impacted federal policy at the start of the twentieth century, as well as the mainstream environmental movement in the second half of the century.

The national debate over environmental policy, along with pressure from environmental justice advocates, has forced the environmental community to diversify, expanding the range of environmental issues to address.¹³⁸ These now include public health and the urban environment, along with transportation and disposal of toxic, hazardous, and nuclear wastes. Environmental issues have become interconnected with economic issues and politics. As the case study in chapter 3 demonstrates, mainstream environmental organizations have begun to address the economic concerns underpinning arguments of environmental justice and the grassroots segment of the property rights movement.

Several themes recur throughout this account of the growth and reaction to environmentalism in the United States. Environmental concerns have become intertwined with politics during the twentieth century. Policy decisions about natural resources reflect shifting attitudes about the uses of land -- whether for conservation, preservation, or development. Advocates of different positions on appropriate uses of land make their arguments through legal

¹³⁶ Ibid.; Kenworthy, "Angry Ranchers Across the West See Grounds for an Insurrection," *The Washington Post*, 2/21/95, p.A3.

¹³⁷ U.S. Constitution, art.6, para.2.

¹³⁸ See, e.g., *The Amicus Journal*, v.17, n.4 (1996), listing the current programs of the Natural Resources Defense Council.

technologies, such as environmental statutes and regulation. In chapter 2, the focus turns to concepts relevant to the role of law in environmental disputes.

Chapter 2. Concepts Related to Law as Controversy

Chapter 1 describes the growth of environmental policy in the United States. Legal technology played a prominent role in that growth, setting limits to the available policy options. Attempts to resolve environmental disputes have made use of legal tools such as lawsuits, statutes and regulations, that have proved effective in resolving business disputes, interpersonal arguments, and criminal complaints. Law provides mechanisms for resolving disputes, although legal resolution of environmental issues may be transitory, given shifts in political support for opposing positions, as the discussion in chapter 1 demonstrates. Opponents on environmental issues claim rights based on deep emotions and legal practices ingrained in the culture of the United States.

As I argued in the introduction, law is a social technology developed to resolve disputes and social problems, and plays an important role in the development and implementation of United States environmental policy. This chapter starts with a general consideration of legal technology using concepts from science and technology studies. Because law provides a formal system for dispute resolution, the discussion then turns to studies of controversy and the concept of rights at the base of opposing legal claims in environmental controversies.

An STS Perspective on Environmental Law

How applicable are concepts developed in science and technology studies (STS) to the study of a social technology? The acronym "STS" also refers to studies of "science and technology in society" or "social studies of science and technology." If STS concepts are to be applied to research on a social technology such as law, must that research follow rigidly any research conducted on mechanical technologies? Or can the multidisciplinary approach of STS, which has no set research methodology, adapt to examination of a form of technology with no mechanical artifacts?

I contend that STS concepts provide relevant guides for studying legal mechanisms as social technology. In the introduction to the 1995 *Handbook of Science and Technology Studies*, the editors describe STS as "a still emerging field" and describe themselves as having "reasonable familiarity with most recent strands of sociological, historical, political, and *legal studies of STS*."¹³⁹ The editors note that the *Handbook* contains no "distinct contributions ... on law and science," a result occurring "possibly because there is not yet a sufficient volume of

¹³⁹ Jasanoff, et al., *Handbook of Science and Technology Studies*, p.xi., emphasis added [hereinafter *Handbook*].

work to survey."¹⁴⁰ However, if one accepts the notion that law is a technology of sorts, it becomes plausible to examine law from an STS perspective.

Some STS approaches and concepts applicable to the study of law as a technology include actor-network concepts, processes of technology transfer, and controversy studies. The following discussion describes each process or concept, and how each one applies to an examination of law as a social technology. The case study in chapter 3 examines a legal dispute, focusing on Dorothy Nelkin's approach to the study of controversy. In applying that approach to the case study, I will use concepts and terminology from the actor-network approach to analyzing technology and from research on technology transfer. The case demonstrates the relevance of these interrelated processes and concepts to an analysis of legal technology in an environmental controversy.

Actor-Networks. The actor-network approach within STS research provides a means for assessing complex systems. This *approach* developed from work by Michel Callon, Bruno Latour, and John Law, and "describes sociotechnical ensembles as heterogeneous networks of human and nonhuman actors."¹⁴¹ An actor-network involves the process of actors interacting to enlist or enroll other actants in an effort to achieve some goal, with permutations in the goals as well as the composition of the network in response to conflicting efforts by competing networks.¹⁴²

In the introduction to *Power, Action and Belief* (1986), John Law states that Michel Callon's chapter, "Some Elements of a Sociology of Translation," presents Callon's "approach to social analysis -- the so called theory of the 'actor-network'."¹⁴³ Callon describes an effort to reverse the decline of a population of scallops, with major actors including the scientific researchers, fishermen in the bay, and the scallops themselves. To Callon, this episode demonstrates that "the capacity of certain actors to get other actors -- whether they be human

¹⁴⁰ Ibid., p.xiv.

¹⁴¹ Bijker, "Sociohistorical Technology Studies," *Handbook*, p.251.

¹⁴² See Law, ed., *Power, Action and Belief*, pp.15-16, 196-233; Latour, *Science in Action*.

¹⁴³ Law, ed., *Power, Action and Belief*, p.15.

beings, institutions or natural entities -- to comply with them depends upon a complex web of interrelations in which Society and Nature are intertwined."¹⁴⁴

Law's comment above, that actor-network is a "so called" theory, indicates his preference for the term "approach," which implies a less rigid structure than the term "theory." Using an approach or model, it becomes possible to examine the structure and interrelationships among a complicated network of people, objects and ideas, without imposing preordained hypotheses about relationships or outcomes of processes under observation.

One idea in this approach that I find compelling is that of the actors, or as Latour and others frequently refer to them, actants.¹⁴⁵ According to Law, "[t]he actor-network approach is based on the assumption that as actors struggle with one another they first determine their existence and then ... define their characteristics. An actor that exists is thus one that is able to exert itself upon others."¹⁴⁶ I prefer the term "actant" to the more anthropocentric "actor" or "agent" because it conveys a sense of diversity, a recognition that anything that interacts in a technological process becomes a participant in the network.¹⁴⁷

Legal practice has similarities to practices of making scientific fact described in the actor-network approach. The notion of human and non-human actants in a network can apply to an examination of an environmental legal controversy. Human actants with conflicting beliefs about the uses of nature must react to non-human actants such as the legal technologies of statutes and regulations, and also to shifting input from institutional actants such as legislative and judicial bodies. The concept of "actant" itself suggests the idea among environmental advocates that non-human nature should have acknowledged rights in the debate over its fate. One limitation of using legal technology to resolve environmental controversies is the failure of the legal system to recognize a role for non-human actants in the policy-making process.

¹⁴⁴ Callon, "Some Elements of a Sociology of Translation," in Law, ed., *Power, Action and Belief*, p.201.

¹⁴⁵ Latour, *Science in Action*, p.84; Latour, *The Pasteurization of France*, pp.159-160, 252n.11; see generally Bijker and Law, eds., *Shaping Technology/Building Society*; Callon, "Some Elements of a Sociology of Translation: Domestication of the Scallops and Fishermen of St. Brieuc Bay," in John Law, ed., *Power, Action and Belief* pp.53-55, and Knorr Cetina, *Handbook*, p.159.

¹⁴⁶ Law, ed., *Power, Action and Belief*, p.15.

¹⁴⁷ A term borrowed from semiotics; see Latour, *The Pasteurization of France*, p.35; Callon, "Four Models for the Dynamics of Science," *Handbook*, p.53.

The actor-network approach incorporates a black box analogy from the work of Bruno Latour to indicate the point of closure in the development of a technological network.¹⁴⁸ Although he credits others with creating the term "black box" and its analogy to scientific knowledge, Latour has explored the analogy extensively,¹⁴⁹ and later discussions generally cite Latour.¹⁵⁰ In *Laboratory Life* (1979), Latour and Woolgar describe "the activity of creating black boxes" as "rendering items of knowledge distinct from the circumstances of their creation."¹⁵¹ *Science in Action* (1987) gives an origin for the term: "The word *black box* is used by cyberneticians whenever a piece of machinery or a set of commands is too complex. In its place they draw a little box about which they need to know nothing but its input and output."¹⁵²

The term's definition expands with use in different contexts. In his discussion of translation networks (stable relationships between "technical devices, statements, and human beings"), Callon relates the idea of a network's irreversibility to "black-boxing":

A translation network ... enrolls an increasing number of diverse actants. ... The lengthening of a network is generally accompanied by "black-boxing" in which entire chains of translation are folded up and embodied in sentences, technical devices, substances, or skills. ... In this way ... networks ... are maintained, but in an easily manipulable and durable form. Furthermore, they contribute to the production of ever more statements, themselves doomed to pursue their existence silently in the bodies or machines that ensure the enterprise's continuity.¹⁵³

¹⁴⁸ Misa, "Controversy and Closure in Technological Change," in Bijker and Law, eds., *Shaping Technology/Building Society*, pp.109-111; Bijker, Hughes, and Pinch, eds., *The Social Construction of Technological Systems*, pp.12-13.

¹⁴⁹ Latour and Woolgar, *Laboratory Life*, n.15, p.259; Latour, "Opening Pandora's Black Box," *Science in Action*, pp.1-17; see also Pinch and Bijker, "The Social Construction of Facts and Artifacts," in Bijker, Hughes, and Pinch, *The Social Construction of Technological Systems*, pp.21-22.

¹⁵⁰ See, e.g., Callon, "Four Models for the Dynamics of Science," *Handbook*, ch.2, p.59; Watson-Verran and Turnbull, "Science and Other Indigenous Knowledge Systems," *Handbook*, ch.6, pp.128-129.

¹⁵¹ Latour and Woolgar, *Laboratory Life*, n.15, p.259 and accompanying text, p.242.

¹⁵² Latour, *Science in Action*, pp.2-3.

¹⁵³ Callon, "Four Models of the Dynamics of Science," *Handbook*, pp.50, 59.

Black boxes have also been called "obligatory passage points in vastly different enterprises," or processes that become standardized, unquestioned, "transparent technology" over time.¹⁵⁴

Because of this unquestioning acceptance, it becomes difficult to challenge the notion of black-boxed technology. In *Laboratory Life*, Latour and Woolgar describe a controversy underlying the description of the structure of a hormone.¹⁵⁵ This process, of deconstruction or reopening of black boxes, requires "'thick description,' that is, looking into what has been seen as the black box of technology (*and, for that matter, the black box of society*)," resulting "in a wealth of detailed information about the technical, social, economic, and political aspects of the case under study."¹⁵⁶ Such a wealth of information would also be useful to an examination of a legal dispute, assuming black boxes exist among legal technologies.

Lawyers attempt to create legal black boxes similar to those Latour describes for scientific theories and technological hardware. Legal black boxes take the forms of legal precedent from prior case law, statutes, and regulations. The difficulty in opening a legal black box increases with the level of the precedent -- local, state, or federal -- with the Supreme Court as the final arbiter of federal and Constitutional law. However, the discussion in chapter 1 demonstrates that law creates gray boxes at best, because political shifts can cause radical changes either in statutory law and regulations or in their enforcement. Similarly, changes in the membership of the Supreme Court, as well as other levels of the judiciary, can alter the resulting decisions and make it more or less likely that a court will uphold prior decisions.

When I say that legal technology creates gray boxes, I do not mean to suggest different categories for the products of social technologies and the products of science and engineering technologies. Latour's *Science in Action* contains examples of gray boxes from both science and technology. Particular meanings or functions that technological artifacts take on over time are often vigorously contested by competing actor-networks, each enrolling allies to support its particular claim, until one interpretation gains general acceptance and its proponent gets credit for the discovery. By examining the underlying scientific controversy behind black boxed

¹⁵⁴ Watson-Verran and Turnbull, "Science and Other Indigenous Knowledge Systems," *Handbook*, p.128; see Knorr Cetina, "Laboratory Studies: The Cultural Approach to the Study of Science," *Handbook*, p.148.

¹⁵⁵ Latour and Woolgar, *Laboratory Life*, ch.3.

¹⁵⁶ Bijker, Hughes, and Pinch, *The Social Construction of Technological Systems*, p.5 (emphasis added).

artifacts, Latour demonstrates that each of them can be reopened, like the gray boxes of social technologies.¹⁵⁷

Because law (like science), embodies social and political issues, legal black boxes (like scientific black boxes) come under constant challenge. The U.S. political system facilitates such challenge, with separate branches of government provided with the ability to dispute actions of other branches. The political climate of the 1980s and 1990s has forced a reopening of legal gray boxes on environmental issues. As environmental statutes come up for reauthorization, the Administration and Congress reopen debate over the original intent of, and continuing need for particular protections.

The case study in chapter 3 contains a form of legal black box -- the environmental impact statement (EIS) on which a community group opposing the proposed development of a paper mill in the South Bronx based its original lawsuit. Environmentalists have used EISs effectively since their creation as part of the National Environmental Policy Act (NEPA) in 1969, as tools to delay or block unwanted development affecting natural resources.¹⁵⁸ In the case study, an activist community group turns this tool against an environmental organization, in effect attempting to reopen and redefine this piece of legal technology.

Technology Transfer and Translation. Research on technology transfer includes an examination of the transformation of technology as it moves from one setting or application to another.¹⁵⁹ "Translation" is a key concept in describing the transfer of technology.¹⁶⁰ This term refers both to the traditional idea of linguistic interpretation and to the translation in use and meaning of technological artifacts as they move across boundaries separating those who

¹⁵⁷ See generally, Latour, *Science in Action*; Latour and Woolgar, *Laboratory Life*.

¹⁵⁸ Sale, "Timeline," *The Green Revolution*, p.xiii.

¹⁵⁹ See, e.g., Akrich, "The De-Description of Technical Objects," in Bijker and Law, eds., *Shaping Technology/Building Society*; Shrum and Shenhav, "Science and Technology in Less Developed Countries," *Handbook*, pp.635-638.

¹⁶⁰ Latour, *Science in Action*, pp.108, 132-144; Latour, *The Pasteurization of France*, pp.162, 167, 253n.16, 260n.5; Bijker, Hughes, and Pinch, *The Social Construction of Technological Systems*, pp.14-15, 257; Callon, "Some Elements of a Sociology of Translation," in Law, ed., *Power, Action and Belief*; Bijker, "Sociohistorical Technology Studies," *Handbook*, p.251; see also discussions of translation networks in Law and Callon, "The Life and Death of an Aircraft," in Bijker and Law, eds., *Shaping Technology/Building Society*, pp.45-46; Latour, *We Have Never Been Modern*, pp.3-4; Callon, "Four Models for the Dynamics of Science," *Handbook*, pp.50-60.

develop technology from its users and different groups of users from each other.¹⁶¹ Technology transfer has begun to affect the engineering profession, as engineering schools consider the actual uses made of their equipment, and organizations have developed to facilitate the transfer process.¹⁶²

Environmental law contains examples of both forms of translation involved in technology transfer. Application of legislation and regulation may have vastly different results from those intended by their creators. As law moves off the books and into society, unforeseen consequences occur. When Congress passed the Endangered Species Act in the flurry of environmental legislation during the early 1970s, they did not anticipate the resulting impacts on the logging industry, major construction projects, and economic development.¹⁶³

The practice of law and the implementation of policy also involve a constant process of linguistic interpretation. Supreme Court opinions translate the words of the nation's founding fathers in the Constitution as they apply that law to situations in the present, just as courts at all levels translate common law precedents to determine their continuing applicability. Courts and legislatures translate the legal history documenting the rationale for legislation and regulation in order to uphold or revise those legal tools. Administrative agencies translate law into enforcement practices relevant to their areas of jurisdiction.

This "process of translation" must exist in a functioning legal system.¹⁶⁴ Subjecting court decisions, statutes, and regulations to review, revision, and repeal involves translation as the law is applied in continually changing social, political, and economic contexts. The system has proved effective for two centuries in a country with widely varying geography and natural resources and in a population with no single ethnic, racial, or religious background. However, effectiveness in promoting social order may not translate into effective means for resolving environmental controversies.

¹⁶¹ Latour, *Science in Action*, p.117; Latour, *The Pasteurization of France*, pp.65, 181.

¹⁶² See, e.g., Akrich, "A Gazogene in Costa Rica," and Pfaffenberger, "The Factory as Artefact," chs.10 and 11 in Lemmonier, ed., *Technological Choices*; Etzkowitz and Webster, "Science as Intellectual Property," *Handbook*, p.500.

¹⁶³ Plater, Abrams, and Goldfarb, *Environmental Law and Policy: Nature, Law, and Society*, pp.656-659; see also Sale, *The Green Revolution*, pp.37, 96.

¹⁶⁴ See Law, ed., *Power, Action, and Belief*.

The discussion in chapter 1 demonstrates that terms used to describe opposing viewpoints about appropriate uses of natural resources have also undergone translation over time. These viewpoints, embedded in conflicting discourses, change along with changes in social, economic, and political dynamics. Current environmental debates combine and transform aspects of both Pinchot's and Muir's philosophies. One example is the appropriation of Pinchot's concept of "wise use" by a movement promoting development of natural resources.¹⁶⁵ As a second example, the terms "conservationist" and "preservationist" have become interchangeable with "environmentalist" in popular usage.

The case study in chapter 3 contains examples of translation of legal technology. The discussion above of gray boxes contains one example -- the attempt by an activist community organization to translate provisions of a New York state environmental statute to support their lawsuit opposing the development of a paper mill on abandoned railroad property in the South Bronx. Another example comes from news reports of that legal dispute, translating the opposition to the paper mill as simply a reflection of their attorney's commitment to restore the site to rail use. That interpretation ignored the actual plaintiffs in the lawsuit, comprised of varied groups of local residents concerned about air quality and local control of economic development.

Controversy Studies and Legal Disputes

Controversy studies comprise another approach to STS research.¹⁶⁶ This "strand of STS scholarship" examines disputed claims in science and technology, attempting to provide explanations for the outcomes of cases studied.¹⁶⁷ In the introduction to *Controversy*, Dorothy Nelkin states: "Controversies over science and technology also reflect broader tensions in American society -- the disagreements over the appropriate role of government, the struggle between individual autonomy and community goals."¹⁶⁸ Thomas Brante gives the following definition for the term "controversy," starting with its Latin equivalent:

¹⁶⁵ See, e.g., Poole, "Neither Wise nor Well," *Sierra*, v.77, n.6, pp.60-61.

¹⁶⁶ See generally, Latour, *Science in Action*; and "Science, Technology, and Controversy," *Handbook*, part 6.

¹⁶⁷ *Handbook*, p.11.

¹⁶⁸ Nelkin, *Controversy: Politics of Technical Decisions*, p.xi.

Controversus means "the clash of opposing opinions; debate; disputation." In a controversy, the participants are always highly aware of the situation and act from it, for instance, by assembling resources for the specific purpose of undermining the position of the adversaries (by arguments, allies, and so forth). ... A rapidly passing disunity will not be called a controversy, nor a dispute involving only one single person. *In general* (although not always) a controversy exists over a longer period of time and divides groups of people.¹⁶⁹

Brante also considers "the current intimate links between scientific beliefs and political controversies."¹⁷⁰ He offers the term "science-based controversies" for the situation Engelhardt and Caplan describe as "scientific disputes with a heavy ethical or political overlay."¹⁷¹

According to Brante, "[m]odern welfare societies are riddled by *science-based* controversies," for example, "controversies about nuclear power plants."¹⁷² He suggests "that the study of controversies ... ought to be able to shed new light on current patterns of elite formation and on mechanisms of competition and cooperation between different elites."¹⁷³ In the introduction to *Controversy*, Dorothy Nelkin also comments on the power of elites, citing the "relative political power of competing interests" such as "industrial interests" or "powerful protest groups" that have "sufficient political or economic leverage to determine outcomes" of conflict.¹⁷⁴

Case studies of controversies must also consider public response to disputed topics. In the *Handbook of Science and Technology Studies*, Brian Martin and Evelleen Richards note that "public controversies over scientific and technical issues ... often have profound social, political, and economic implications, and more and more often they feature public

¹⁶⁹ Brante, "Reasons for Studying Scientific and Science-Based Controversies," in Brante, Fuller, and Lynch, eds., *Controversial Science*, p.181.

¹⁷⁰ *Ibid.*, p.180.

¹⁷¹ *Ibid.*, p.181; Engelhardt and Caplan, *Scientific Controversies: Case Studies in the Resolution and Closure of Disputes in Science and Technology*, p.4.

¹⁷² Brante, Fuller, and Lynch, eds., *Controversial Science*, pp.181-182.

¹⁷³ *Ibid.*, p.189.

¹⁷⁴ Nelkin, *Controversy*, p.xxii.

disagreements among scientific, technical, or medical experts."¹⁷⁵ As Nelkin comments in a discussion of "controversy as political challenge," controversies often "represent a decline in public trust. Critics question the ability of representative institutions to serve their interests."¹⁷⁶

Public battles among experts over technical issues have led to increased involvement by the lay public. Commenting on public involvement "in issues they perceive as direct threats to their everyday lives," Susan Cozzens and Edward Woodhouse state that laypeople often "seek and acquire considerable technical knowledge" in response to such threats. They add that "local knowledge is often more accurate or complete, even by conventional scientific standards, than the knowledge imported by 'experts' to a local situation."¹⁷⁷ According to Nelkin, what links the diverse groups involved in public controversies "is their demand for greater accountability and increased public control."¹⁷⁸

Controversy studies increase public awareness of important influences for public policy, in part by identifying the disputing parties and the interests they represent. In addition to advancing the political program of those in power, "changes in policy have also been propelled by public debates and movements around controversial developments in science and technology."¹⁷⁹ But problems exist for concerned citizens who seek information on technical matters. According to Nelkin, "the difficulty of finding appropriate means to expand public choice" relates to "problems of technical feasibility and political acceptability."¹⁸⁰ Nelkin also points to "problems in determining who should be involved in a decision, who really represents the public interest."¹⁸¹

¹⁷⁵ Martin and Richards, "Scientific Knowledge, Controversy, and Public Decision Making," *Handbook*, p.506.

¹⁷⁶ Nelkin, *Controversy*, p.xvi.

¹⁷⁷ Cozzens and Woodhouse, "Science, Government, and the Politics of Knowledge," *Handbook*, p.546.

¹⁷⁸ *Ibid.*, p.xvii.

¹⁷⁹ Elzinga and Jamison, "Changing Policy Agendas in Science and Technology," *Handbook*, p.574.

¹⁸⁰ Nelkin, *Controversy*, p.xxiii.

¹⁸¹ *Ibid.*

Studies of public controversies also examine how and why they end. "The process by which a dispute ends or is resolved is called 'closure.'"¹⁸² According to Thomas Brante, "[s]cience-based controversies ... are not solved but *closed*; that is, an external power intervenes, terminating the controversy."¹⁸³ John Law states that controversies reach closure "when debate and controversy about the form of an artifact is effectively terminated."¹⁸⁴ Artifacts of technological controversy often "achieve their final form when a social group, or set of groups, imposes its solutions on other interested parties by one means or another."¹⁸⁵

The process of analyzing closure in technical controversies reflects the Latourian idea of reopening black-boxed technology and asking how and why the controversy ended, which requires thorough examination of the disputants' actions.¹⁸⁶ Tom L. Beauchamp "characterizes five modes through which controversies end."¹⁸⁷ First, closure may occur through sound arguments demonstrating that opposing views are incorrect. Second, disputing parties may reach a consensus to accept one position to resolve the dispute. Third, closure may result from formal procedures. Fourth, a dispute may come to a "natural death" with a loss of interest by the disputing parties. Beauchamp's fifth mode of closure involves a negotiated settlement among the disputants.¹⁸⁸

Ernan McMullin offers another "classification of the termination of disputes," with three factors: resolution (on rational grounds), closure (on the basis of social forces), or abandonment

¹⁸² Martin and Richards, "Scientific Knowledge, Controversy, and Public Decision Making," *Handbook*, p.518; see also Engelhardt and Caplan, eds., *Scientific Controversies*, p.2.

¹⁸³ Brante, Fuller, and Lynch, eds., *Controversial Science*, pp.188-189 (emphasis added).

¹⁸⁴ Law, "Technology and Heterogeneous Engineering: The Case of Portuguese Expansion," in Bijker, Hughes and Pinch, *The Social Construction of Technological Systems*, pp.111-112.

¹⁸⁵ Ibid.

¹⁸⁶ Misa, "Controversy and Closure in Technological Change: Constructing 'Steel'," in Bijker and Law, eds., *Shaping Technology/Building Society*, p.110.

¹⁸⁷ Engelhardt and Caplan, eds., *Scientific Controversies*, p.5.

¹⁸⁸ Ibid.

(disputants lose interest).¹⁸⁹ In *Scientific Controversies*, H. Tristram Engelhardt and Arthur Caplan state that McMullin's version of closure "perpetually invites the reopening of the controversy on rational grounds" with "the additional problem that over the course of time the grounds for rational resolution themselves change."¹⁹⁰ Engelhardt and Caplan suggest that negotiated solutions based on "principles of procedural fairness" provide the most useful form of closure for controversies in a pluralistic society.¹⁹¹

Controversy studies provide a useful perspective for analyzing legal technology. Legal practice involves structured controversy, in a formal process of dispute resolution. Topics of dispute in environmental law generally fit Brante's definition of controversy.¹⁹² And lawyers seek closure of disputes by constructing sound, rational arguments to support their clients' positions. If negotiation and efforts at consensus don't resolve a dispute, the parties may seek procedural closure through the courts. As in McMullin's version of closure of scientific controversies, the gray boxes resulting from closure in legal disputes invite perpetual efforts to reopen and reexamine their outcomes. Legal technologies also encompass abandonment or natural death closure, if a legal action is withdrawn or dismissed.

In the introduction to *Controversy*, Dorothy Nelkin lists components of case studies that describe the "dynamics of controversy."¹⁹³ Nelkin's approach provides a general format for studying technical controversies, applicable to the case study in chapter 3. According to Nelkin, controversy studies illustrate "the interplay of technical and political factors involved in choices about ... the development and application of technologies" and discuss "the structure of decision-making authority, the nature of alternatives, and the social or ethical sources of conflict."¹⁹⁴

¹⁸⁹ Ibid., p.6.

¹⁹⁰ Ibid., p.8.

¹⁹¹ Ibid., p.16.

¹⁹² See text accompanying note 170.

¹⁹³ Nelkin, *Controversy*, p.xxiii.

¹⁹⁴ Ibid.

I believe that these first two chapters have addressed Nelkin's components of technical controversies with respect to legal technology and environmental controversies in the United States. Chapter 1 describes the development and application of environmental law and policy in the United States and conflicting opinions about appropriate land use and environmental protection as well as the role of law and government in land use controversies. Chapter 2 considers ethical conflicts and opposing rights claims that enter into environmental controversies.

For analyses of specific scientific controversies, Nelkin includes the following components:

They explore the groups engaged in controversies; their diverse social, political, and ideological objectives; and the channels they exploit to influence ... policy. They analyze the role of experts in the disputes and how various groups employ technical information to further their political goals. And finally they deal with the outcomes of disputes and the difficulties of finding acceptable, long-lasting resolution.¹⁹⁵

The case study in chapter 3 completes a controversy study of the type Nelkin describes. It describes a legal dispute, the groups involved, their objectives, the role of experts, and the outcome.

The following study of the Bronx Community Paper Company describes a legal controversy with a "heavy political and ethical overlay" to the underlying urban environmental issue.¹⁹⁶ In a dispute over the best uses for abandoned land in the South Bronx, the opposing parties have conflicting economic and environmental goals. Available legal technology did not resolve, but actually extended the surrounding environmental controversy, although the embedded legal controversy did end. The legal action in this case study ends with a procedural closure, in the form of a ruling by the state appellate court that the proposed development meets the requirements of state environmental statutes.

As in most legal disputes, this one involves opposing rights claims. The social forces that can end a scientific dispute in McMullin's definition of closure invite a perpetual reopening of the controversy. For legal disputes, claimed rights represent these social forces. The following section examines this integral concept within the social technology of law.

¹⁹⁵ Ibid., pp.xxiii-xxiv.

¹⁹⁶ Engelhardt and Caplan, eds., *Scientific Controversies*, p.4.

The Concept of Rights in Environmental Controversies

The concept of "rights" plays a central role in environmental disputes. Many of these disputes involve controversial land use claims -- over issues such as zoning, industrial and urban development, siting of waste dumps, and designation of protected lands for historic preservation, parks, forests, or wilderness. Each side of any land use controversy claims legal or ethical "rights" for their position. Dorothy Nelkin argues that nearly all controversies involve "ubiquitous claims of 'rights'" that impose a "moral rhetoric" on political demands.¹⁹⁷ Nelkin considers this rhetoric firmly rooted in the moralist thinking of the Calvinist religious tradition and the Puritan secular tradition of the United States.¹⁹⁸

According to Nelkin, some rights claims "are based on obligations," such as the claimed right of government agencies "to constrain individual freedom in order to carry out their mandated responsibilities." Other rights take on value "because they maximize the public interest."¹⁹⁹ Conflicting rights claims provide "moral justifications" to limit the freedom of others, as with arguments against unrestrained development that cite "the rights of future generations." Individual rights to privacy have repeatedly conflicted "with the government's need to regulate for social ends. Thus, rights claims inevitably contribute to conflict."²⁰⁰ Nelkin points out that "rights claims may be the central issue in a dispute, or simply a tactic, a way to gain public support in a controversial political context."²⁰¹

Ethical considerations complicate the development and practice of environmental law. Rights claims contain ethical as well as legal elements. However, in the United States we learn to believe in rights as entities with substance, as mechanisms to achieve our goals. Our major founding documents, such as the Declaration of Independence and the Constitution, bestow

¹⁹⁷ Nelkin, *Controversy*, p.xvii.

¹⁹⁸ Ibid.

¹⁹⁹ Ibid.

²⁰⁰ Ibid.

²⁰¹ Ibid.

"inalienable" rights on citizens. The first amendments to the Constitution created a "Bill of Rights" to make certain rights explicit, augmented with later amendments.²⁰²

Not all rights we claim are legally sanctioned, however. Another interpretation of the term refers to the argument that I *have* a right because I *am* right. I may make this claim because I believe that my cause is just, ethical, and moral, or perhaps because I have the strength of numbers or economics to enforce my position. When a sufficient number of people share a similar belief in a particular "right," that claim may gain the sanction of law.²⁰³

The codification of a moral or ethical claim of right into a legal right may increase the likelihood of enforcing that claim. It also sets boundaries on the extent of the claim and refocuses the dispute onto interpretations of the legal definition. Legal rights undergo constant modification as people with opposing positions demand expansion or restriction of the rights they claim. Laws are repealed and revised, court opinions are reversed and reinterpreted, depending on personal and political judgments about who will benefit from the imposition and enforcement of a particular claim of right.

Environmentalists tend to base legal claims on statutes, regulations, and common law. To this they add an ethical obligation, which Aldo Leopold called a "land ethic" in *The Sand County Almanac* (1949). Under various forms of a land ethic, nature has a right to protection from harm due to human development and members of the general public have rights to clean air and water, and to protection from misuse by public or private property owners. They also have a right to enjoy public lands protected by environmental statutes.²⁰⁴

Those who oppose environmentalism, such as members of the property rights movement discussed in chapter 1, claim legal rights associated with land ownership and economic development, based both on the U.S. Constitution and on "nuisance and trespass provisions of common law."²⁰⁵ The ethical and moral commitments to which they give highest priority may differ from those of their opponents, although the strength of their commitment does not.

²⁰² Weber, "The Social Responsibility of Land Ownership," *Earth Ethics*, v.1, n.4, p.1.

²⁰³ See, e.g., Bovard, *Lost Rights* (1994); Coyle, *Property Rights and the Constitution* (1993); Ely, *The Guardian of Every Other Right* (1992).

²⁰⁴ See, e.g., Nash, *The Rights of Nature* (1989), and Leopold, *A Sand County Almanac* (1949).

²⁰⁵ Portney, "EPA and the Evolution of Federal Regulation," p.11; see also Meiners, "Elements of Property Rights: The Common Law Alternative," in Yandle, ed., *Land Rights*, p.290.

Environmentalists in the United States argue that environmental protection demands a focus on the rights of the earth as a whole and that humans must respect the rights of non-human species of plants and animals to continued existence. Courts of law in the United States have rejected this ethical argument in all but one instance -- the Endangered Species Act.²⁰⁶ For all other environmental statutes, the Supreme Court demands harm to some human in order to enforce the law and accompanying regulations. For example, although the Clean Water Act contains a provision setting a national goal "which provides for the protection and propagation of fish, shellfish, and wildlife," that provision focuses on maintaining "fishable," and "swimmable" conditions for people in bodies of water in the United States.²⁰⁷

Environmental legal claims to rights for nature have generally found support outside the rights enumerated in the Constitution and its amendments. Their legal arguments found initial support in statutes passed by Congress and interpreted in the courts. More recently, environmentalists have claimed a right under the common law public trust doctrine. Again their focus differs from that of their opponents, emphasizing the right to protection from abuses of property owners.

As interpreted by United States courts, "rights" belong almost exclusively to people.²⁰⁸ Plants and animals, wind, water, and soil have no legally recognized right to protection from harm, nor rights to possession or ownership. However, in *We Have Never Been Modern*, Bruno Latour advocates rights for non-humans, with a "nonmodern constitution" and a "parliament of things" in which scientists represent nature in disputes.²⁰⁹ Similarly, Roderick Nash argues in *The Rights of Nature* that non-human nature has rights "to life, liberty, and the opportunity to pursue its own kind of happiness" in direct conflict with "human rights to possession and exploitation of real estate and livestock."²¹⁰

²⁰⁶ 16 U.S.C.A. ss.1531 et seq.

²⁰⁷ 33 U.S.C.A. ss.1251 et seq.; the relevant provision is section 101 of the Clean Water Act; Plater, et al., *Environmental Law and Policy*, p.854.

²⁰⁸ Weber, "The Social Responsibility of Land Ownership," *Earth Ethics*, v.1, n.4, p.1.

²⁰⁹ Latour, *We Have Never Been Modern*, p.144.

²¹⁰ Nash, *The Rights of Nature*, p.163.

Arguments such as these reflect the ideas of "deep ecology," a term proposed in the early 1970s by Norwegian philosopher Arne Naess.²¹¹ Deep ecology stresses "the need to bring humans into harmony with the natural environment." To proponents of deep ecology, "all life, nonhuman as well as human, has intrinsic value and should not become subordinate to other needs, such as economic development or growth in general."²¹² This position extends the "Protectionist" argument discussed in chapter 1. Criticisms of deep ecology include the movement's focus on wilderness preservation, and its inability to put a monetary value on its claim of intrinsic value for non-human nature.²¹³

Rights claims, along with their underlying ethical commitments, represent their proponents' strong feelings. They have become mechanisms for legal obstruction, allowing those with current political support to reverse their opponents' earlier victories. Chapter 1 contains examples of this shift, such as Theodore Roosevelt's interaction with Muir and Pinchot, and the rapid growth in political power for environmentalists in the 1970s, followed by conservative attacks in the 1980s for their alleged excesses.

Concepts of rights and ethics complicate the process of a social technology such as environmental law. Conflicting ethical commitments and priorities contribute to the development of opposing movements on environmental issues. When people find they can't get what they want through the legal system, but believe they are right, or that they have a right to what they want, they may resort to extralegal actions such as demonstrations to slow the process. As Nelkin comments, "competing social and political values" contribute to the "persistence of controversy," which she calls "part of a significant tendency in American society to reassess the social values, the priorities, and the political relationships that underlie technical decisions."²¹⁴

²¹¹ See, e.g., Naess, "Sustainable Development and Deep Ecology," ch.6 in Engel and Engel, eds., *Ethics of Environment and Development*; see also Nash, *The Rights of Nature*, p.146; Gottlieb, *Forcing the Spring*, p.195; Guha, "Radical American Environmentalism and Wilderness Preservation: A Third World Critique," pp.73-74; Sylvan and Bennett, *The Greening of Ethics*, ch.4.

²¹² Gottlieb, *Forcing the Spring*, p.195.

²¹³ Guha, "Radical American Environmentalism," pp.75-76, 79; Taylor, *Our Limits Transgressed*, n.55, p.174 and accompanying text, pp.101-103, p.149; Thompson, "A Refutation of Environmental Ethics," *Environmental Ethics*, v.12, pp.151-158.

²¹⁴ Nelkin, *Controversy*, p.xxiv.

Various movements have developed in the United States to represent opposing views and rights claims. The mainstream environmental movement generally seeks different ends from those desired by the environmental justice and deep ecology movements. The property rights and wise use movements have different priorities and opposing rights claims with respect to environmental issues. Some groups (such as Earth First! and the western county supremacy movement) promote increasingly rebellious attitudes in response to their frustrations about lost rights and violations of ethical obligations.

The case study in chapter 3 provides an example of opposing rights claims, with a small but vocal activist community group using legal action to interrupt proposed development that has the backing of a national environmental organization and an established, competing community organization. The land use dispute in the case study also involves the potential for continuing controversy outside the legal system, as the activist group has staged successful demonstrations in the past against industrial development they considered unhealthy for the neighboring community, and one of the group's leaders states that the proposed paper recycling plant will never open.²¹⁵

²¹⁵ Telephone interview with Carlos Padilla, co-founder of the South Bronx Clean Air Coalition; see generally, discussion in chapter 3.

Chapter 3. Case Study: The Bronx Community Paper Company²¹⁶

In this chapter, I consider the involvement of the social technology of environmental law in a controversy over land use and economic development. The previous two chapters demonstrate the tendency in the United States to apply legal technologies to environmental controversies. Chapter 1 describes the development of environmental law and policy as well as the role of law in land use controversies, and chapter 2 considers ethical conflicts and opposing rights claims that enter into those controversies. This analysis of the legal dispute over the Bronx Community Paper Company (BCPC) assesses the actors, their objectives, and the outcome of the controversy, giving a substantive example of the previous historical and conceptual discussion.

The BCPC dispute involves a legal controversy over urban land use, complicated by the social, cultural, and political positions of the opposing parties. The legal strategy adopted by those opposing the proposed paper recycling mill transforms environmental legal technology, applying it in a manner differing from its previous uses. The BCPC controversy also illustrates the expanding focus of environmental concern in the United States, discussed in chapter 1. One environmental journal refers to this case as "'the next phase of environmentalism,' in which [mainstream environmental] groups ... would promote, rather than fight, economic development."²¹⁷

The South Bronx -- Setting for a Land Use Controversy

This legal dispute concerns the appropriate use for an abandoned railroad yard located in the South Bronx of New York City. Given the reputation of the South Bronx as the epitome of urban decay in the United States, this may seem an unlikely site for such a controversy. As the following discussion suggests, many long-term residents and community groups have made commitments to reclaim their neighborhoods. The controversy developed over conflicting

²¹⁶ The information for this case study comes from written documentation about the parties and the legal dispute. Table 1 lists the sources of printed material, and the dates of reports included in this study. A National Public Radio report from the news program *All Things Considered* provided additional information on the asthma problem in the South Bronx. The appellate court opinion gives the rationale for reversing the trial court's ruling. Supplemental information was obtained in telephone interviews with representatives from the disputing parties. A list that follows the bibliography includes the names of the four men who agreed to my taping our conversations, their positions in relation to the dispute, and the date of each conversation as well as its approximate length.

²¹⁷ Bradley, "Practicing What They Preach: Environmental Groups are Taking Economics Seriously, and are Even Investing in New Businesses Themselves," *E Magazine*, November/December 1995, p.25.

proposals for the development of the Harlem River Rail Yard, a 96-acre site acquired by the New York State Department of Transportation (DOT) in 1982.²¹⁸

The South Bronx has become an infamous example of inner-city devastation. Its decline already seemed irreversible by the mid-1960s.²¹⁹ At that time, New York City began a "planned shrinkage" policy, withdrawing "vital neighborhood services -- health care, police protection, firehouses, [and] social welfare agencies" from older neighborhoods such as those in the South Bronx, in an attempt to "encourage" the city's population "to concentrate in the sections that remain alive."²²⁰ This policy resulted in the flight of white landlords by the early 1970s, with many buildings left to rot. As taxes remained unpaid, the city repossessed "most apartment houses" and "slated many still-occupied buildings for the wrecking ball."²²¹

Many residents fled from the South Bronx, as arsonists "torched whole blocks" and "[s]treet gangs like the Savage Skulls and the Nomads moved in, terrorizing the remaining families."²²² Census figures show a decline in population for the South Bronx from "about 100,000" in 1970 to "about 37,000" in 1990, as "the neighborhood had been pried apart by common urban blights -- crime and drugs, white flight, incorrigible poverty."²²³ Popular media "underscored the borough's reputation as a lawless wasteland," such as the "appalling images" in Paul Newman's 1981 movie *Fort Apache, The Bronx*, or Tom Wolfe's 1987 novel *Bonfire of the Vanities*.²²⁴

²¹⁸ From the appellate court opinion, *South Bronx Clean Air Coalition v. New York State Department of Transportation* (1995).

²¹⁹ Breslin, "On these sidewalks of New York, the sun is shining again," *Smithsonian*, April 1995, p.103.

²²⁰ Thrush, "Beyond Bricks and Mortar," *Empire State Report*, December 1994, p.54.

²²¹ Ibid.

²²² Ibid.

²²³ Ibid.

²²⁴ Breslin, "On these sidewalks of New York," p.104.

However, "among the ruins there remained survivors who hadn't given up."²²⁵ In an April 1995 *Smithsonian* article, Patrick Breslin describes the "rebirth" of the South Bronx as a result of efforts by community development groups such as the colorfully-named Banana Kelly Community Improvement Association (Banana Kelly) and Mid-Bronx Desperadoes. Another group that represents residents who refused to leave the community is the South Bronx Clean Air Coalition (the Coalition), a vocal grassroots community organization that formed in the early 1990s to oppose a medical waste incinerator in the South Bronx, using a combination of legal tactics and neighborhood demonstrations to contribute to the incinerator's eventual bankruptcy.²²⁶

Health problems related to air pollution have become a serious urban environmental issue. A 1996 report by the Natural Resources Defense Council (NRDC), using findings from a study conducted in 1995 by the American Cancer Society and Harvard Medical School, concludes that diseases caused by "particulate air pollution" may result in 64,000 premature deaths each year, and that lifespans of people in the most polluted cities may decrease "by an average of one to two years." This pollution includes smoke and soot, along with "tiny aerosol particles formed from gaseous emissions of sulfur dioxide and volatile organic compounds." And primary sources of this pollution in the United States include "older, coal-fired power plants, industrial boilers, and gas- and diesel-powered vehicles."²²⁷

Media reports document the claim that asthma, one of the diseases related to air pollution, has reached epidemic proportions in the South Bronx, with asthma rates "perhaps eight to 10 times the national average, even higher among children."²²⁸ Although these reports cite indoor air pollution ("cigarette smoke, dust mites, cockroaches, rodents") as the "most important inner-city characteristic" contributing to the "epidemic," residents complain that "the

²²⁵ Breslin, "On these sidewalks of New York," p.104.

²²⁶ Hevesi, "Bronx Foes Try to Stop Medical Incinerator," *New York Times*, 11/2/91, p.A25; Frankel, "Raising a Stink Over Incinerator," *USA Today*, 8/13/92, p.A6; Fisher, "Judge Temporarily Halts Tests at Medical-Waste Incinerator," *New York Times*, 9/1/92, p.B4; Hennelly, "Bronx Burnout: Bankrupt Medical Waste Incinerator Goes Up in Smoke," *Village Voice*, 7/12/94, pp.10-11; Hennelly, "They Speak in the Dark," *Village Voice*, 3/21/95, p.18.

²²⁷ From "Danger in the Air," an online summary of a May 1996 report by the NRDC, *Breath-Taking: Premature Mortality Due to Particulate Air Pollution in 239 American Cities*.

²²⁸ Nossiter, "Asthma Common and On Rise in the Crowded South Bronx," *New York Times*, 9/5/95, p.A1; National Public Radio report by Melissa Block, "Asthma Victims Choke on South Bronx Pollutants," *All Things Considered*, 5/23/96.

air is so bad ... it makes them physically ill."²²⁹ The South Bronx combines residential neighborhoods with heavy industry, such as the "waste transfer stations, garbage dumps, junk yards, recycling centers, a fertilizer plant and a huge sewage treatment facility" in the Hunt's Point community alone. Many people blame the borough's economic dependence on waste recycling for their health problems.²³⁰

The South Bronx continues to struggle against poverty and pollution, along with "an ever-toughening battle against crime and drugs."²³¹ At the end of a mainly upbeat article in *Smithsonian* about the "rebirth" of this community, Patrick Breslin comments that the loss of jobs was a major factor in the decline of the South Bronx, and that community groups like Banana Kelly that worked to rebuild and restore services to their neighborhoods now focus on economic growth. Their efforts concentrate on bringing in projects that will generate jobs, such as a supermarket and shopping center backed by the Mid-Bronx Desperadoes, and Banana Kelly's support for the Bronx Community Paper Company.²³²

After its beginning in 1977 as a tenants' rights group, Banana Kelly has become "arguably the nation's best-known community development corporation."²³³ Banana Kelly joined with a national environmental organization, the Natural Resources Defense Council (NRDC), in a proposal to develop a paper recycling plant in the Harlem River rail yard in the South Bronx. The proposed paper mill would use the cleanest technology available and provide employment opportunities to the neighboring community. The two organizations' objectives, of introducing a clean industry and jobs to the South Bronx, address both urban environmental concerns and economic concerns of residents of this "poorest congressional district in the country."²³⁴

²²⁹ Ibid.

²³⁰ From "Asthma Victims Choke on South Bronx Pollutants," *All Things Considered*, 5/23/96.

²³¹ Thrush, "Beyond Bricks and Mortar," p.56.

²³² Breslin, "On these sidewalks of New York," p.111.

²³³ Thrush, "Beyond Bricks and Mortar," p.53.

²³⁴ From "Asthma Victims Choke on South Bronx Pollutants," segment #6 on the National Public Radio program *All Things Considered*, 5/23/96; see also Weiss, "Minimum hopes for those lost in the South Bronx," *St. Louis Post-Dispatch*, 12/31/95, p.C5.

The South Bronx Clean Air Coalition filed a lawsuit in 1994 against the DOT, opposing the proposed change in land use for the rail yard, including the paper mill. Allied with a Manhattan attorney and railroad buff named John McHugh, representatives of the Coalition cite increased truck traffic to the proposed paper mill as an added source of air pollution in the South Bronx and a danger to public health.²³⁵ The Coalition and their attorney have enrolled the concerns over health and air pollution in the South Bronx, as actants in this land use controversy. They have not contrived their concern, although by focusing solely on truck exhaust as a cause of asthma, they may have oversimplified that claim in order to strengthen their legal argument.

Organizational Actors in the Controversy

Three primary actors in this urban environmental controversy, briefly introduced in the preceding discussion, include the Banana Kelly Community Improvement Association (Banana Kelly), the Natural Resources Defense Council (NRDC), and the South Bronx Clean Air Coalition (Coalition) with its *pro bono* attorney, John F. McHugh. All three groups represent different constituencies, with the "diverse social, political, and ideological objectives" that contribute to controversy.²³⁶ I include Mr. McHugh in the list of actors because he introduces his specific concerns about the proposed development of the Harlem River Rail Yard into his legal representation of the Coalition.

Two other organizational actors, the courts and the media, also played major roles in the evolving dispute. Descriptions of the primary actors in newspapers and magazines influence the image they project to the general public. That image has an impact on their membership levels as well as their ability to convince public and private agencies to provide them with funding or other support for their projects. The courts provide another stage for airing public disputes, in which actants like the Coalition, with much less visibility in the media, technically hold equal standing with their more powerful opponents. The involvement of these two actants is interwoven into the following description of the major disputants and the land use controversy.

NRDC. Founded after Earth Day in 1970 by two Wall Street lawyers and a group of recent law graduates from Yale, NRDC is a national environmental organization with staffs of

²³⁵ Van Natta, Don Jr., "Mill Sought for Bronx is Blocked: Railroad Buff Delays a Project in Train Yard," *New York Times*, 8/27/95, p.31.

²³⁶ See text accompanying note 196.

lawyers, scientists, and researchers, and offices in New York, Washington D.C., San Francisco, and Los Angeles.²³⁷ NRDC's self-description states:

NRDC is a national nonprofit organization dedicated to protecting the world's natural resources and ensuring a safe and healthy environment for all people. With 170,000 members and a staff of lawyers, scientists, and other environmental specialists, NRDC combines the power of law, the power of science, and the power of people in defense of the environment.²³⁸

A mainstream environmental organization, NRDC's income totalled \$25.8 million in 1995, including \$14.4 million from membership dues and contributions. The \$18.7 million in expenses for NRDC's 1995 program services included \$5.8 million for legal programs, \$4.4 million for scientific support, \$7.2 million for public education programs, and \$428,720 for "legislative action," which includes NRDC's lobbying efforts.²³⁹ Even these broad budget items suggest NRDC's "huge agenda" as an advocate for environmental protection.²⁴⁰ NRDC's board of trustees includes numerous attorneys, well-known environmentalists such as Laurance Rockefeller and Robert Redford, and a smattering of members representing business, agriculture, academia, and medicine.²⁴¹

One trustee describes NRDC as "a multifaceted organization using every tool we can to bring about change: the policy process, the media, Congress, the courts."²⁴² NRDC has used the legal system effectively from its start, when its lawyers represented other groups in environmental litigation. Later, NRDC expanded into an organization with dues-paying members, that represents those members in litigation on a wide range of environmental

²³⁷ Garland, *Twenty Years Defending the Environment*, p.10.

²³⁸ "About NRDC," *Amicus Journal*, Spring 1996.

²³⁹ *Natural Resources Defense Council: 1995 Annual Report*, p.27.

²⁴⁰ Garland, *Twenty Years Defending the Environment: NRDC 1970-1990*, p.13.

²⁴¹ Garland, *Twenty Years Defending the Environment*, p.4.

²⁴² *Ibid.*, p.17.

issues.²⁴³ Its legal efforts have resulted in court decisions with massive penalties to industrial polluters, and input to environmental policy, legislation, and regulation.

In addition to using various printed and broadcast media for its lobbying activities and public education campaigns, NRDC has impacted policy by publicizing issues directly through the media. For example, NRDC took its arguments against the use of alar, a carcinogenic pesticide or "plant growth regulator" used on fruit trees, to the general public through a broadcast segment on *CBS Sixty Minutes*²⁴⁴ The resulting outcry led to alar's removal from the market.²⁴⁵

A 1990 NRDC publication describes the wide range of legal and technical activity conducted by the 170-member staff. These include:

litigation, lobbying, and ... high-quality policy analysis and research, as well as public education campaigns ... also innovative demonstration projects ... ranging from a pilot project of alternative-fuel buses in New York City to ... work demonstrating energy efficient technology in the Seattle Lighting Design Laboratory.²⁴⁶

The organization has developed additional programs targeting specific issues. An international program began in 1973, which an NRDC publication describes as "well before the broader environmental movement was aware of the global implications of environmental problems."²⁴⁷

NRDC initiated its Urban Program in 1976, to act as an advocate for the urban environment on issues involving air pollution, mass transportation, drinking water, garbage, industrial pollution, land use planning. In addition, the Urban Program anticipated "working in

²⁴³ Ibid., p.16.

²⁴⁴ Holden, "Apple Growers vs. CBS: TV Wins," *Science*, v.262, n.5130, p.35.

²⁴⁵ Garland, *Twenty Years Defending the Environment*, p.55.

²⁴⁶ Ibid., p.16.

²⁴⁷ Ibid., p.27.

partnership with what would come to be known as the environmental justice movement."²⁴⁸ A separate Environmental Justice Initiative began in 1993, demonstrating NRDC's expanded commitment to confront environmental problems in poor and minority communities.²⁴⁹

The considerable skill and experience of NRDC's environmental advocacy reflects an effective mobilization of expert knowledge. Staff for each program includes lawyers, and all programs except for legislative affairs have science and research staff members.²⁵⁰ Consultants increase the pool of experts supporting NRDC's arguments. At the same time, NRDC focuses on developing and maintaining membership (175,000 members in 1995²⁵¹), as a "constituency" committed to their programs. As one of NRDC's trustees has commented: "If you don't have a constituency, you're just another "expert," and Congress can choose to listen to you or not. But if you have constituents, Congress *has* to listen."²⁵² NRDC thus combines technical expertise with "a loyal, educated, committed membership"²⁵³ to influence environmental law and policy.

Banana Kelly Community Improvement Association Banana Kelly is a grassroots community organization, one of numerous organizations that began in New York City's South Bronx in the late 1970s. In 1977, thirty families living in three tenement buildings on a crescent-shaped curve of Kelly Street, "known for 50 years as the 'Banana,'" had begun to repair them.²⁵⁴ When the city attempted to evict them and demolish the buildings, the families organized in protest. They "resolutely formed a human chain around their buildings, and with

²⁴⁸ Curvin, "Cities," *The Amicus Journal*, v.17, n.4, p.35.

²⁴⁹ Adams, "Environmentalism and Justice at NRDC," *The Amicus Journal*, v.16, n.1, p.2.

²⁵⁰ "NRDC Staff," *The Amicus Journal*, v.17, n.4, p.56 (staff "scientists" at NRDC include social scientists and engineers in addition to natural scientists).

²⁵¹ *NRDC 1995 Annual Report*, p.26.

²⁵² Garland, *Twenty Years Defending the Environment*, p.17.

²⁵³ *Ibid.*

²⁵⁴ Breslin, "On these sidewalks of New York," p.108; Terry, "Dropouts Put Lives and a Building Back Together," *New York Times*, 2/20/89, p.D3; Graham and Boyce, "Out of the Ashes: A South Bronx Street Rises Through the Toil of Poor Homesteaders," *Wall Street Journal*, 8/22/89, p.A1; Gonzalez, "In the South Bronx, the Grass Roots Grow Up," p.B1; Thrush, "Beyond Bricks and Mortar," p.53.

reporters at the scene, the city decided to back down."²⁵⁵ These "urban homesteaders" continued to work on the tenements after blocking the demolition.²⁵⁶ They "incorporated their organization as the Banana Kelly Community Improvement Association," and adopted the motto "Don't Move -- Improve."²⁵⁷

From its start as an advocate for tenants' rights, Banana Kelly has become "arguably the nation's best-known community development corporation" (CDC).²⁵⁸ According to a 1989 article in the *Wall Street Journal*, the organization today has a 90-member staff and manages 415 apartments, with a "\$22 million budget that includes funds to renovate an additional 333 units."²⁵⁹ The "varied functions of CDCs" such as Banana Kelly include "housing, economic development and social services."²⁶⁰ An editorial in *U.S. News & World Report* calls CDCs "the driving force in most reviving poor places because they refurbish housing, restore enterprise to ruined commercial districts and make life unpleasant for those standing in the way of progress, from junkies to zoning bureaucrats."²⁶¹

²⁵⁵ Breslin, "On these sidewalks of New York," p.108; see also Thrush, "Beyond Bricks and Mortar," p.54.

²⁵⁶ Gonzalez, "In the South Bronx, the Grass Roots Grow Up," *New York Times*, 1/7/93, p.B1.

²⁵⁷ Harris, "Banana Kelly's Toughest Fight," p.34; Breslin, "On these sidewalks of New York," p.108.

²⁵⁸ Thrush, "Beyond Bricks and Mortar," p.53.

²⁵⁹ Graham and Boyce, "Out of the Ashes," p.A1; for other figures, see Breslin, "On these sidewalks of New York," p.108 (managing 45 buildings with 1,000 units; cooperative ownership of another 1,500 units); Harris, "Banana Kelly's Toughest Fight," *New Yorker*, 7/24/95, p.35 (managing 52 buildings; real estate holdings over \$50 million); Thrush, "Beyond Bricks and Mortar," p.54 (currently own or manage 47 buildings with over 1,000 tenants).

²⁶⁰ Thrush, "Beyond Bricks and Mortar," p.56.

²⁶¹ Rainie, "The Lessons of Banana Kelly," *U.S. News & World Report*, 6/5/95, p.72.

In 1991, Banana Kelly joined five other groups in the South Bronx in the Comprehensive Community Revitalization Program (CCRP), pooling resources and information about potential funding sources.²⁶² CCRP's first director stated:

We need to recognize that CDCs are going to be the basic structure of service delivery in inner cities for some time ... Government will continue to cut funding for all social services. But they have already recognized that the only way to deliver the remaining services is at the grassroots.²⁶³

Banana Kelly "depends on city, state, federal, and private-foundation funds to function."²⁶⁴ Nevertheless, according to one of its officers, "neighborhood revival is built on ... community self-help that minimizes the role of 'credentialed professionals.'"²⁶⁵

The organization's community development activity does not focus solely on residential property -- Banana Kelly "also helped build a pediatric health clinic, runs an adult vocational-training program, and has worked to revive a local commercial strip by providing low-interest loans for businesses."²⁶⁶ Banana Kelly initiated an "Anti-Crime Drugs-Out Task Force"²⁶⁷ in 1988 and ran "nine community improvement and youth projects" in 1989. One of those projects was a "Housing Related Enhanced Work Experience Program," an 11-month job training program for high school dropouts funded by the New York City Department of Employment.²⁶⁸

Banana Kelly provides a wide range of social services. CDCs often combine economic and social goals -- "Most are not mere landlords -- they exert influence on nearly every aspect

²⁶² Thrush, "Beyond Bricks and Mortar," p.56; see also Gonzalez, "In the South Bronx, the Grass Roots Grow Up," p.B4.

²⁶³ Thrush, "Beyond Bricks and Mortar," p.56.

²⁶⁴ Harris, "Banana Kelly's Toughest Fight," p.35.

²⁶⁵ Rainie, "The Lessons of Banana Kelly," p.72.

²⁶⁶ Harris, "Banana Kelly's Toughest Fight," p.35; see also Thrush, "Beyond Bricks and Mortar," p.54.

²⁶⁷ Trebay, "Staying Power," *Village Voice*, v.33, n.43, p.16.

²⁶⁸ Terry, "Dropouts Put Lives and a Building Back Together," *New York Times*, 2/20/89, p.D3.

of a tenant's life."²⁶⁹ According to Yolanda Rivera, Banana Kelly's executive director: "We're not just out to provide a roof and four walls, we're here to stabilize people's lives ... Ultimately we're out to stabilize a neighborhood."²⁷⁰ Banana Kelly emphasizes training and hiring local people for its staff, many of whom "live in the buildings they manage."²⁷¹ Instead of traditional social workers, "self-trained paraprofessional residents" become case managers who "coordinate disparate services in all areas of a client's life -- mental health, housing, food stamps, and job training."²⁷²

Banana Kelly actively pursues social concerns for the South Bronx. "From the beginning, according to Yolanda Rivera, 'the promise was made that the community would be rebuilt for the people who stayed.'"²⁷³ As they continued to rehabilitate abandoned buildings, "Banana Kelly ... wanted tenants who had a sense of responsibility. They screened the people who applied to move into their buildings,"²⁷⁴ and "they are still just about the only local organization that actively helps tenants roust drug dealers from infested buildings."²⁷⁵

This activist social agenda has drawn criticism, especially for one aggressive effort to screen out potential drug dealers. The board of directors inserted a clause in leases requiring new tenants "to attend 'values clarification' classes designed to create a hostile climate for families harboring or supporting dealers. The tactic badly backfired," and Banana Kelly abandoned it after coming under intense pressure for this "betrayal of the fundamental

²⁶⁹ Thrush, "Beyond Bricks and Mortar," p.53.

²⁷⁰ Ibid.

²⁷¹ Breslin, "On these sidewalks of New York," p.110.

²⁷² Thrush, "Beyond Bricks and Mortar," p.55; see also Breslin, "On these sidewalks of New York," p.110.

²⁷³ Breslin, "On these sidewalks of New York," p.108.

²⁷⁴ Ibid., pp.109-110; see also Graham and Boyce, "Out of the Ashes," p.A6.

²⁷⁵ Thrush, "Beyond Bricks and Mortar," p.56.

principles upon which the organization had been formed: community empowerment, tenant organizing, participatory democracy."²⁷⁶

The director of another community development group suggests that Banana Kelly's problems result from its evolution from a small grassroots group into a large agency "and losing touch with their tenants."²⁷⁷ With a "multimillion-dollar budget and 92 employees," Banana Kelly acknowledges that its focus has shifted from "old-fashioned organizing" to economic growth, jobs, and social services. The agency maintains its focus on the community where it began, anticipating that residents will take on the responsibilities of community organizing and advocacy.²⁷⁸

In its efforts to bring change to the South Bronx, Banana Kelly has consistently pursued a strategy of cooperation with other groups and organizations. The Bronx Community Paper Company proposal continues their policy of "linking social services to ambitious neighborhood development projects."²⁷⁹ In addition to the economic boost to the community in the form of construction jobs and jobs at the paper mill, the proposal contains funding for a community center, housing for homeless high school students, a day care center, an adult literacy program, a bookstore, funding of a college endowment for local students, and loan funding for housing and small businesses.²⁸⁰

South Bronx Clean Air Coalition. The Coalition is a small grassroots community organization that came "into being to oppose the Bronx-Lebanon medical-waste incinerator" that opened in 1992.²⁸¹ That situation, described by the *New York Times* as "a textbook exercise in grass-roots democracy," involved community organization, demonstrations and legal action by Bronx residents who opposed the "hulking, double-furnace incinerator that was built -

²⁷⁶ Ibid.

²⁷⁷ Ibid.

²⁷⁸ Gonzalez, "In the South Bronx, the Grass Roots Grow Up," pp.B1, B4; see also Graham and Boyce, "Out of the Ashes," p.A6; Breslin, "On these sidewalks of New York," p.111.

²⁷⁹ Thrush, "Beyond Bricks and Mortar," p.54.

²⁸⁰ Harris, "Banana Kelly's Toughest Fight," pp.35-36; Thrush, "Beyond Bricks and Mortar," p.54.

²⁸¹ Harris, "Banana Kelly's Toughest Fight," p.38; see also n.225 and accompanying text.

- with few people knowing what it was -- in a Port Morris industrial park near the East River."²⁸²

The developers obtained their permit to build the incinerator in 1989, holding only one public hearing (to meet the minimum legal requirement) after notifying 24 officials and the Community Board. Only "about two dozen people -- officials and representatives of the applicants -- attended the meeting, which lasted 35 minutes."²⁸³ The regional director of the State Environmental Conservation Department defended the validity of that hearing, arguing that the Community Board held the responsibility for informing the community. After community residents learned about the incinerator and complained, the president of the company developing the project called their reaction "unfair and divisive," coming "well past the eleventh hour."²⁸⁴

After learning about the project in 1991, residents conducted five forums to educate the community about the incinerator. Their children distributed leaflets in Port Morris. Six hundred people held a demonstration on October 17, 1991 at the construction site and draped a banner spanning two stories of a neighboring factory "reading 'Stop the Medical Waste Incinerator' and bearing the garish visage of a screaming skull."²⁸⁵

The developers claimed that the incinerator site was in an industrial area, and that outsiders had aroused community residents to oppose the project. In fact, many people live within a 6-block radius around the incinerator, and "Public Schools 27, 30 and 65 were within a mile, as were several parochial schools." As to the argument about outside agitation, Alisa Eilenberg, the woman who began the protest in Riverdale, located four miles from the site, had studied incinerators and expressed concern about the impact of emissions throughout the Bronx. Residents feared an increased risk of cancer, based on an estimate by an environmental consultant they hired.²⁸⁶

²⁸² Hevesi, "Bronx Foes Try to Stop Medical Incinerator," *New York Times*, 11/2/91, p.A25.

²⁸³ Ibid.

²⁸⁴ Ibid., p.A29.

²⁸⁵ Ibid.

²⁸⁶ Ibid.

A 1994 article in the *Village Voice* describes impacts of the incinerator to explain the continued opposition by South Bronx residents.

The plant is a disaster not only because it has failed nearly 100 times to limit the poisons it emits into the air (which it has), or because children in the area are suffering more respiratory illnesses than usual (which they are), or because there are allegations that it is financed in part by mob-backed companies (which there are). The stack is also a disaster because it is bankrupt.²⁸⁷

South Bronx children "suffer one of the highest rates of pediatric asthma and pneumonia in the country," and health care providers noted "an increase in the incidence and severity of [asthma] attacks" after the incinerator began to function.²⁸⁸

Carlos Padilla, a community activist, became one of the most vocal opponents to the incinerator. "An ex-marine and ex-gang member," Padilla has spent most of his life in the South Bronx, where he ran "successful trucking and hospital supply businesses."²⁸⁹ As an indication of Padilla's commitment to the community, he had already gotten arrested for cleaning up a "rat-infested empty lot" after failing in efforts to identify the person or agency with responsibility for cleaning it up. Padilla attempted "to establish a viable autoclaving operation of infectious medical waste as an alternative to incineration," but incinerator proponents frustrated his project by distributing leaflets opposing it under the name of a spurious community organization.²⁹⁰

Their experience with the incinerator left the community feeling "ignored and betrayed." For example, the city's Industrial Development Agency issued tax-free bonds to finance the project and waived sales and property taxes, and the state environmental agency "ruled an environmental impact study unnecessary for the burner's approval."²⁹¹ In addition,

²⁸⁷ Hennelly, "Bronx Burnout: Bankrupt Medical Waste Incinerator Goes Up in Smoke," *Village Voice*, p.10.

²⁸⁸ *Ibid.*, p.11.

²⁸⁹ *Ibid.*; but see Harris, "Banana Kelly's Toughest Fight," p.39, which states that Padilla "had once run a trucking company and now works at a medical-supply company."

²⁹⁰ Hennelly, "Bronx Burnout," p.11.

²⁹¹ *Ibid.*, pp.10-11.

Village Voice articles about the incinerator's bankruptcy raise another concern about the incinerator, allegations about connections with organized crime.²⁹²

This dispute produced unexpected outcomes in the community, as South Bronx neighborhoods mobilized effectively against a common adversary. The information made public about the incinerator after its bankruptcy supported residents' concerns about risks to health from industrial pollution and added to their fears about additional industrial development in the South Bronx. Groups formed to monitor development proposals and to keep the community informed. In the South Bronx, Carlos Padilla became a co-founder of the South Bronx Clean Air Coalition, with a membership loosely composed of residents who had opposed the incinerator.

At the end of the incinerator dispute, NRDC and Banana Kelly announced their plan for a recycled paper mill at the Harlem River Rail Yard.²⁹³ Despite year-long efforts prior to the announcement by Banana Kelly and NRDC to inform community residents about the project, the Coalition objected to potential pollution from the mill's emissions and to the "privatization" of state-owned property.²⁹⁴

In this dispute, the Coalition has used tactics very similar to those it used against the incinerator. After the incinerator's bankruptcy, community members learned that organized crime provided \$600,000 in financing for that project. Burned once, the Coalition has suggested that Francesco Galesi, the developer from whom NRDC and Banana Kelly obtained a lease for the paper mill site, has connections to organized crime. Anthony Riccio, the vice president of Galesi's Harlem River Yard Ventures, characterizes this argument as an ethnic insult focusing solely on his and Galesi's Italian surnames.²⁹⁵ Nevertheless, community residents have valid reasons for their "residual rage and suspicion about any outsider coming into the South Bronx to do anything."²⁹⁶

²⁹² Ibid., p.10; Hennelly, "They Speak in the Dark," p.18.

²⁹³ Holusha, "Pioneering Bronx Plant to Recycle City's Paper," *New York Times*, 5/6/94, p.D1.

²⁹⁴ Harris, "Banana Kelly's Toughest Fight," p.38.

²⁹⁵ Ibid., p.40.

²⁹⁶ Ibid., p.38.

As a small community group with membership varying according to the degree of concern over particular proposals, the Coalition has no funding sources and depends on tenacious leaders such as Carlos Padilla to fight for their issue and influence development policy in the South Bronx. If a situation requires a visible community response, the leaders can organize Coalition "members" through an informal communication network. Such an organizing effort stresses lay expertise of its members, who obtain information needed to confront suspected polluters. They also accept technical assistance, such as legal expertise to obtain injunctions, or to press their claims in court.

The Coalition's battle against the incinerator involved an almost spontaneous rebellion by community residents. Their choice of issues to address as an organization has an impact on the Coalition's credibility as an effective advocate for clean air in the South Bronx. One current effort involves a cooperative effort with the city's environmental agency to obtain funding for sophisticated technical equipment and a technician, to conduct regular tests of air quality in the Bronx.²⁹⁷ Their opposition to the paper mill may damage the Coalition's credibility in the community, depending on whether residents agree with their demonization of Banana Kelly and NRDC as outsiders unconcerned with the quality of life in the South Bronx.

John F. McHugh. John McHugh, the attorney for the Clean Air Coalition, has his own agenda for the Harlem River Yard. The *New Yorker* describes McHugh as "a tall, rangy fifty-four-year-old lawyer and rail advocate known in certain transportation circles as Choo-Choo McHugh."²⁹⁸ A New Jersey resident, McHugh has a private legal practice in Manhattan.²⁹⁹

Variouly described as a "railroad buff" and a "passionate railroad advocate," McHugh has argued since 1982 "that the former Harlem Rail Yard should be used solely as a railroad transportation hub, which he says is badly needed by what is left of New York City's industrial base." In addition, McHugh argues that the state granted the 99-year lease to developer Francesco Galesi at a rate "far below market rent."³⁰⁰ Since his residence lies outside the affected community, and also out of state, McHugh does not have legal standing to sue the state of New York on his own behalf. In a process of mutual enrollment, McHugh provided legal

²⁹⁷ From a telephone interview with Carlos Padilla, 6/13/96.

²⁹⁸ Harris, "Banana Kelly's Toughest Fight," p.36.

²⁹⁹ *Martindale Hubbell Law Directory, 1991*; Van Natta, "Mill Sought for Bronx is Blocked," *New York Times*, 8/27/95, p.32.

³⁰⁰ Van Natta, "Mill Sought for Bronx is Blocked," pp.31-32.

representation to South Bronx residents, allowing McHugh to pursue his quest to block any development of the site unrelated to railroad use.³⁰¹

McHugh considers New York state's environmental review process inadequate, and overly susceptible to political and economic pressures for development. He complains that environmentalists abuse the state's Environmental Quality Review Act in order to thwart economic development, citing shopping centers and repaving of roads as examples. In the Coalition's lawsuit against the paper mill, McHugh offered the trial court an alternate interpretation of that statute. Despite his ambivalence about environmentalism, McHugh's argument against any industrial development of the Harlem River Rail Yards does reflect concern about air quality, in its claim that increasing rail freight would decrease truck traffic in the area, thereby decreasing exhaust emissions that McHugh links to the high rates of asthma in the South Bronx.³⁰²

The Bronx Community Paper Company -- Legal Dispute over Land Use

The Bronx Community Paper Company is a joint effort by NRDC and Banana Kelly to develop a for-profit paper recycling company in the South Bronx, with "a plant design that would not employ chlorine and that would otherwise minimize use or creation of toxic substances."³⁰³ A 1994 *New York Times* article describes the project as "the first inner-city project of its type in the nation," and the original plan anticipated ownership of the mill by Banana Kelly and two paper manufacturers: S.D. Warren, a subsidiary of Scott Paper Company based in Boston, and MoDo, a Swedish company.³⁰⁴ Table 2 lists varying media descriptions of the project proposal during a two-year period after the project's announcement on May 6, 1994.

At the time of the project's announcement, John Adams, NRDC's executive director, said: "We get everything we want: jobs, recycling, a process we like and social equity ... We

³⁰¹ Ibid.; Harris, "Banana Kelly's Toughest Fight," p.37.

³⁰² From phone interview with John F. McHugh, 6/13/96.

³⁰³ Gerrard, "Building Environmentally Just Projects: Perspective of a Developers' Lawyer," *Environmental Law News*, Spring 1996, p.36.

³⁰⁴ Holusha, "Pioneering Bronx Plant to Recycle City's Paper," *New York Times*, 5/6/94, pp.D1, D5; Breslin, "On these sidewalks of New York," p.111; Harris, "Banana Kelly's Toughest Fight," p.33.

save lots of trees and end the waste of putting a valuable resource into landfills."³⁰⁵ In exchange for its co-sponsorship and participation, Banana Kelly would pursue its social and economic agenda for the South Bronx, managing community services and employment training programs included in the proposal.

Allen Hershkowitz, a senior scientist at NRDC, proposed in 1991 "to put up an environmentally sound, technologically advanced de-inking and pulp-manufacturing plant ... to demonstrate that environmentally sound technologies could create long-term jobs."³⁰⁶ The proposal combines Hershkowitz's expertise on recycling with NRDC's efforts to reduce the country's reliance on incinerators and landfills, and their environmental justice opposition to siting incinerators and landfills "in communities inhabited by people of color."

Hershkowitz wanted to develop the project in New York City in partnership with a community group. NRDC's involvement would include working with that community group to find paper manufacturers to invest in the project, obtain permits, find a site, and seek community support. This activist form of environmental justice sought industrial development that would improve the community, rather than waiting to react to development taking place without community input.

With a Ph.D. in political economics from the City University of New York and fifteen years' experience working against polluting industries, Hershkowitz argued that "in the twenty-first century, business, environmental, and community interests will have to stop fighting with each other and start working together."³⁰⁷

Traditionally, the environmental movement has expected to mediate our relationship with business through law. This has to change. Over the last two decades, we've had to make a lot of unfortunate compromises so that things could move forward. The fact is, nature doesn't compromise. Environmentalists don't think of themselves, God knows, as industry builders, and the world doesn't expect us to act that way, but I'm convinced that's what we have to do.³⁰⁸

³⁰⁵ Holusha, "Pioneering Bronx Plant to Recycle City's Paper," p.D1.

³⁰⁶ Ibid.

³⁰⁷ Harris, "Banana Kelly's Toughest Fight," p.32.

³⁰⁸ Ibid., p.33.

Hershkowitz's argument received a practical test as NRDC began to work with business and community groups on the BCPC project.

A Swedish company, MoDo, the first paper manufacturer to become interested in the project, offered experience with "environmentally clean de-inking technology," and agreed to take a portion of the pulp produced by the Bronx company. S.D. Warren, a subsidiary of Scott Paper Company based in Boston, agreed to take a majority of the pulp, and would participate in supervising the operations.³⁰⁹ Each paper manufacturer agreed to contribute at least \$250,000 in seed money to cover expenses for engineering and economic studies.³¹⁰

An NRDC legal intern who had worked with Banana Kelly in the past urged Hershkowitz to meet Yolanda Rivera, Banana Kelly's executive director.³¹¹ When they met in October 1992, Hershkowitz's passion for the project overcame Rivera's initial skepticism about environmentalists, "who seemed never to have been around to prevent illegal dumps from coming to her borough."³¹² After Hershkowitz met with Banana Kelly's board of directors in December 1992, Banana Kelly sent Hershkowitz a formal request for NRDC to become its "technical consultant" for the proposed development in the South Bronx.³¹³

After a year-long search, NRDC and Banana Kelly acquired a site for the project, part of "the long-abandoned Harlem River railroad yard."³¹⁴ The Harlem River Rail Yard contains a total of 96 acres, which the state Department of Transportation (DOT) acquired in 1982.³¹⁵

³⁰⁹ Ibid.

³¹⁰ Ibid.; Van Natta, "Mill Sought for Bronx is Blocked," p.32; Holusha, "Pioneering Bronx Plant to Recycle City's Paper," p.D5.

³¹¹ Harris, "Banana Kelly's Toughest Fight," p.33; Gerrard, "Building Environmentally Just Projects: Perspective of a Developers' Lawyer," *Environmental Law News*, Spring 1996, p.36.

³¹² Harris, "Banana Kelly's Toughest Fight," p.34.

³¹³ Ibid., p.35.

³¹⁴ See table 2, p.67, for media descriptions of the site.

³¹⁵ From the memorandum decision of the New York Supreme Court, Appellate Division, First Department, 8/10/95.

DOT's original plan to rehabilitate the freight yard included environmental impact studies to assess potential reductions in air pollution and traffic congestion by transferring loaded units from railroad flatcars to trucks for delivery.³¹⁶ Economic factors forced DOT to explore alternative options for the site, and a 1989 study recommended development for mixed use, to "combine rail transportation with commercially leased warehousing and ancillary activities."³¹⁷

Four developers responded to DOT's request for proposals to develop the site, and DOT selected the "multi-use development plan" from developer Francesco Galesi's company, Harlem River Yard Ventures (HRYV), in April 1990. The HRYV plan dedicated 47 acres to transportation, including 28 acres for an intermodal freight facility, plus "a 14-acre bulk transfer facility, ... a 5-acre solid waste transfer facility, ... a waste paper recycling plant and space for dry and refrigerated warehouses and the New York Wholesale Market." After a 99-year lease was signed and approved by the state Comptroller, HRYV took possession of the site. HRYV included the proposal for the Bronx Community Paper Company in its land use plan submitted in May 1992. DOT approved HRYV's final environmental impact statement, which included the land use plan, on May 13, 1994.³¹⁸

New York City's mayor Giuliani reportedly welcomed the project,³¹⁹ and it also caught the attention of the White House.³²⁰ Pedro Espada, Jr., the state senator "whose district includes the mill site," requested a study from two SUNY professors who teach papermaking technology. Based on their report, Espada gave his support to the project.³²¹ Banana Kelly and NRDC continued their public education efforts in the community. For example, Rivera and Hershkowitz spent months "meeting almost weekly with community groups, often in basements or projects, to explain their aims and methods."³²² Notices about a public hearing held on

³¹⁶ Ibid.; see also Harris, "Banana Kelly's Toughest Fight," p.36.

³¹⁷ From the appellate court decision.

³¹⁸ Ibid.

³¹⁹ Holusha, "Pioneering Bronx Plant to Recycle City's Paper," p.D1.

³²⁰ Van Natta, "Mill Sought for Bronx is Blocked," p.32.

³²¹ Harris, "Banana Kelly's Toughest Fight," p.40.

³²² Ibid., p.39.

December 9, 1994, appeared five times in local newspapers during late November, and Banana Kelly also distributed flyers in local projects to publicize that hearing.³²³

The Coalition and McHugh remained unconvinced. McHugh steadfastly contends that the state should return the entire site to rail freight use.³²⁴ Coalition members make less consistent arguments, and various media sources have attempted to explain the persistent resistance by some South Bronx residents. Carlos Padilla makes an environmental justice argument against what he describes as pressure by outsiders -- non-residents of the South Bronx -- to impose the paper mill on the community without adequate explanation.³²⁵ However, a report in the *New Yorkers* suggests an alternate incentive for Padilla. According to that report, McHugh told Padilla "that if a full-freight yard were to be built on the site he -- Padilla ... -- could be trained to run it."³²⁶

Gwynn Smalls, another member of the Coalition, claimed that if Galesi (the developer of the Harlem River Rail Yards and the mill's landlord) "went away 'the community would run the yard and everyone would be better off.'"³²⁷ According to the *New Yorker* article, Smalls "spoke in a vague way of more desirable options for local businesses at or near the yard."³²⁸ Similarly, in my phone conversation with Carlos Padilla, he described the Harlem River Rail Yard as "94 acres of land, probably the most prime land for economic development, that would be the biggest shot in the arm to the city's economic and unemployment problem, but has been given away to a very powerful and influential man called Francesco Galesi."³²⁹

Responding to my question about what the Coalition would prefer to do with the land, Padilla said "it has to be brought to the table for proper planning," adding that "if you leave the

³²³ Ibid., p.38.

³²⁴ See text accompanying notes 302 and 358.

³²⁵ From a phone interview with Carlos Padilla, 6/13/96.

³²⁶ Harris, "Banana Kelly's Toughest Fight," p.39.

³²⁷ Ibid.

³²⁸ Ibid.

³²⁹ From phone interview with Carlos Padilla, 6/13/96.

rail yard as a rail yard, you could do other things with it," mentioning parks, recreation and walkways. Later in the conversation, Mr. Padilla repeated his statement that

the whole battle is really over the 94 acres of land. We're after that lease to be stopped. Ninety-four acres of probably the most powerful piece of land, that will help the economy, and take people off public assistance, off the back of taxpayers and this community -- it's been given away ... The whole area probably has to be developed, not this section that's going to benefit this very wealthy man ... A lot of us out here know what they're doing, and are appalled that they won't sit down and tell the community what they're doing, and stop lying to them, tell them what they're going to do. And stop offering these jobs. They know we need jobs. Stop waving this carrot around. ... And the NRDC, they're not an environmental group in our community. They are a developer.³³⁰

Both observers and participants often cite the rejection of pressure from outside the community as a reason for the adamant resistance to this project. One project advisor said: "I think the South Bronx is emblematic of all the broken promises that the government has made and never come through on ... They don't trust outsiders who promise gold and deliver snake oil."³³¹ The Coalition had not finished its battle against the medical waste incinerator when Banana Kelly and NRDC announced this proposal. Along with other incinerator opponents, Coalition members had received publicity and praise for their efforts, and their suspicions about the incinerator had been validated. As that battle diminished, they learned of another outside developer coming into the South Bronx, this time with a paper mill.

In August 1994 this "odd coalition of foes" filed a lawsuit to challenge the lease that DOT had awarded to Harlem River Yard Ventures, "the mill's landlord."³³² Ironically, McHugh based this lawsuit on the state's Environmental Quality Review Act, "a piece of legislation that was put on the books by environmentalists to give communities a greater voice in developments that affected them."³³³ NRDC had used the law repeatedly in action against industrial polluters.

³³⁰ Ibid.

³³¹ Van Natta, "Mill Sought for Bronx is Blocked," p.32.

³³² From the appellate court decision; Van Natta, "Mill Sought for Bronx is Blocked," p.32; Harris, "Banana Kelly's Toughest Fight," p.36.

³³³ Ibid., p.37.

Now their opponents characterized NRDC as the developer,³³⁴ which Hershkowitz viewed "as a perversion of the process."³³⁵

Under New York law, people who disagree with a decision of a state agency have four months after that decision becomes "final and binding" to file a lawsuit challenging it. McHugh based the Coalition's lawsuit on an allegation that DOT "skewed" the request for proposals for the Harlem River Yard "to discourage bidders from considering exclusive development of the site" as a railroad freight yard.³³⁶ According to McHugh, the lawsuit met the four-month time limit by interpreting the final environmental impact statement approved by DOT on May 13, 1994 as the agency's final decision on the land use plan.

On March 16, 1995, a Bronx trial judge "set aside and annulled both the lease ... and the approval of a land use plan ... pursuant to that lease."³³⁷ NRDC and Banana Kelly "were stunned" at this judgment, as they had considered the lawsuit "groundless."³³⁸ Three law firms consulted by NRDC had concluded "that the suit would probably be dismissed" but the trial judge ruled the lease invalid "on the basis that the state had granted it without properly considering alternative options for the site." That ruling "not only chilled the financial team's efforts to raise money but put the mill's very future in question." Lawyers for the paper mill and HRYV filed a motion for an expedited appeal in mid-March, hoping for a June hearing, because they feared that a longer delay "would seriously imperil the mill's chances of opening in 1997."³³⁹

Both industry investors had recently withdrawn from participation in the project. New management at the Swedish company, MoDo, considered MoDo's debt its highest priority, although they remained committed to buying pulp from the Bronx mill and continued to offer technical consultation to the project. Scott Paper Company had sold the Boston paper

³³⁴ From phone interviews with John McHugh and Carlos Padilla, 6/13/96.

³³⁵ Harris, "Banana Kelly's Toughest Fight," p.37.

³³⁶ From the appellate court decision.

³³⁷ Ibid.

³³⁸ Van Natta, "Mill Sought for Bronx is Blocked," pp.31-32.

³³⁹ Harris, "Banana Kelly's Toughest Fight," pp.36, 40.

manufacturer, S.D. Warren, to a South African company that wanted to recover its investment before making additional financial commitments.³⁴⁰ NRDC and Banana Kelly learned about S.D. Warren's withdrawal "on the same day they heard they had lost the lawsuit." The appeal became even more important as they began to recruit new investors.³⁴¹

At the appeal hearing on June 1, 1995, the visible presence of the disputing parties differed markedly: "People from Banana Kelly, NRDC, and the Galesi group filled several rows of the courtroom. Only two of the sixty-seven petitioners showed up, and one had to leave before the case was heard."³⁴² McHugh "argued passionately for upholding the lower-court decision" on the grounds that DOT had not adequately explored the option of rehabilitating the Harlem River Rail Yard as an intermodal freight facility. The attorney for the paper company (and chairman of NRDC's board of trustees), Frederick A.O. Schwarz, Jr., argued that if the court upheld the lower court opinion, it would jeopardize the stability of other government leases.³⁴³

On August 10, 1995, the state appellate court issued a unanimous ruling in favor of DOT, HRYV, and the Bronx Community Paper Company. Although the lawsuit challenged the lease under provisions of a state environmental statute, the appellate court stated: "Clearly, petitioners, in commencing this proceeding, were less motivated by environmental concerns than by economic, political or other factors."³⁴⁴ They rebuked the trial judge for engaging in "economic impact analysis, which is an inappropriate basis for review of an environmental clearance," and for substituting its reasoning for that of DOT, which had rejected the single-use alternative as less feasible after it "had been fully aired in public debate."³⁴⁵

In addition to accepting the NRDC argument on the merits, the appellate court also agreed that the trial court should have dismissed the lawsuit as time-barred. They stated that

³⁴⁰ Ibid., p.36; Van Natta, "Mill Sought for Bronx is Blocked," p.32.

³⁴¹ Van Natta, "Mill Sought for Bronx is Blocked," p.32.

³⁴² Harris, "Banana Kelly's Toughest Fight," p.40.

³⁴³ Ibid.

³⁴⁴ From the appellate court decision.

³⁴⁵ Ibid.

the final decision on alternative uses for the site occurred when HRYV and DOT signed the lease in August 1991, or at the latest the following month when the state Comptroller approved the lease. The four-month statute of limitations had thus run out long before McHugh filed the Coalition's lawsuit.³⁴⁶

Following the appellate court ruling, McHugh denied that the Coalition's lawsuit had harmed the paper mill project.

"We didn't do this to them -- they did it to themselves," he said. "They could have put this mill in any number of places -- the Hunts Point peninsula, for one. But they chose a rail yard for a paper mill, which makes no sense. As a result, they probably killed themselves off, and that's not very smart."³⁴⁷

McHugh filed a motion to appeal and continued to oppose the projected development. In December 1995, he stated: "I don't know how this justifies using the last piece of property in all of New York state west of the Westchester County line that can be developed as a rail intermodel (*sic*) as a paper mill. It's ridiculous."³⁴⁸ On December 7, 1995, the New York Court of Appeals, the state's highest court, denied the Coalition's motion to appeal the appellate court decision.³⁴⁹

Outcomes of the Dispute

A few days before the Court of Appeals ruling, a *New York Times* article reported that the Bronx Community Paper Company had "signed an agreement with the Prins Recycling Corporation of Fort Lee, NJ, to build and operate a \$25 million wastepaper sorting plant" at the Harlem River Yard site. By December 1995, the plans for the paper mill included the sorting plant to provide pulp for a \$375 million recycling plant. Banana Kelly and NRDC continued

³⁴⁶ Ibid.

³⁴⁷ Van Natta, "Mill Sought for Bronx is Blocked," p.32.

³⁴⁸ Holloway, "Bronx Groups Signs Recycling Company for Mill Project," *New York Times*, 12/4/95, p.B3.

³⁴⁹ From the one-word ruling by the New York Court of Appeals, 12/7/95.

their efforts to "complete a deal with a paper company" in order to arrange financing for the main recycling plant.³⁵⁰

By June 1996, "officials" had begun to describe the project as "the largest private-sector manufacturing plant built in the city since World War II." State officials approved an environmental permit for the project, which "would break new environmental ground by using partly treated sewage water from the city's water treatment plant," reducing its water costs for the anticipated three million gallons of water it would use each day, and eliminating its impact on the city's fresh water supply. New York's governor, George Pataki, announced that the state would "sell tax-free bonds to secure \$75 million in low-cost financing for the project." In addition, since the "site is within a state economic development zone and the newly created Federal Empowerment Zone," the paper mill "will qualify ... for Federal and state benefits intended to encourage projects in poor areas."³⁵¹

The project planners had translated the main plant into a newsprint mill, and newspaper publishers "including Advance Publications, the Gannett Company, News Corporation and The New York Times Company expressed interest in using the pulp. A new for-profit corporation, the NYC Paper Mill, was created to obtain additional financing from private investors and run the paper company. Niilo Hakkarainen, the president of NYC Paper Mill, stated his company had "raised \$20 million in equity capital from paper industry investors," and hoped "to complete equity raising and other financing before the fall of this year, and begin construction immediately thereafter."³⁵²

In addition to the transformation in the project (described above and in table 2), both during and resulting from the lawsuit, media reports have translated their description of the participants to fit more closely the positive outcomes they describe and the venue of the reports. The discussion that follows cites excerpts from various media accounts, each of which provides a somewhat different picture of the legal dispute, the land use controversy, and the various parties involved.

The November/December issue of *E Magazine*, a popular magazine aimed at environmentalists, calls the paper mill "NRDC's project" and doesn't mention Banana Kelly by name. This article also describes opposition to the project as a "smattering of grassroots groups

³⁵⁰ Holloway, "Bronx Group Signs Recycling Company," p.B3.

³⁵¹ Holusha, "State Approves Bronx Paper-Recycling Mill," *New York Times*, 6/12/96, p.B3.

³⁵² *Ibid.*; I have assumed that NYC Paper Mill is a new company, although Tim Martin, the person at NRDC who talked to me, avoided responding directly to my questions about it.

and activists" who claimed that NRDC ignored "their concerns about the communal impacts of sludge and emissions." It notes the temporary success of the "lawsuit against the state of New York for leasing the land to the mill's developer," and the reversal of the trial court verdict on appeal.³⁵³

A *New York Times* article dated December 4, 1995, credits Yolanda Rivera and Banana Kelly for the initial idea, stating that Rivera approached NRDC "to help lure nonpolluting industries to the South Bronx." This article focuses on the Bronx Community Paper Company as a separate entity "which has been embraced by residents, environmentalists and government leaders." It doesn't mention the residents in the Coalition who opposed the project, but depicts that opposition as "a lawsuit brought by a Manhattan lawyer who is a railroad buff," quoting McHugh about his interest in the site as a "transportation hub."³⁵⁴

A summary of the project appears in a Spring 1996 article in *Environmental Law News*, written by a lawyer who "represents BCPC in certain environmental matters." This report credits NRDC with the initial idea, stating that "NRDC and Banana Kelly together formed the Bronx Community Paper Company (BCPC) to develop" the project. According to this version, BCPC then acted as a separate entity, securing financing "from several major paper companies," finding a "suitable site in the South Bronx, a predominantly Latino area," and preparing an environmental impact statement. The "widespread support" cited for the project mentions President Clinton, Governor Pataki, and New York City mayor Giuliani. It does not mention reactions by residents, except as "(s)ome Bronx environmental groups" that "disagreed with Banana Kelly about the costs and benefits of the project," and the legal dispute here involves a challenge "by some who said the site, which had been used many years earlier as a rail yard, should revert to that purpose."³⁵⁵

Another *New York Times* article, dated June 12, 1996, discusses only "the project" rather than the "Bronx Community Paper Company." This report introduces a new actor, a newsprint paper mill called the "NYC Paper Company," as the eventual beneficiary of this joint project of NRDC and Banana Kelly.³⁵⁶ The legal dispute receives peripheral mention: "The newsprint mill is the successor to a plan to produce de-inked paper pulp on the site, which was

³⁵³ Bradley, "Practicing What They Preach," p.27.

³⁵⁴ Holloway, "Bronx Group Signs Recycling Company," p.B3.

³⁵⁵ Gerrard, "Building Environmentally Just Projects," p.37.

³⁵⁶ Holusha, "State Approves Bronx Paper-Recycling Mill," p.B3.

abandoned last year when two international paper companies withdrew after a delay caused by a lawsuit."³⁵⁷ The article quotes Allen Hershkowitz on NRDC's role in the project, but mentions none of the other organizations or individuals involved in the legal dispute. It focuses on business aspects of the project, only citing support by state officials, including Governor Pataki.

Several months after the legal dispute ended, I interviewed John McHugh and a representative from each of the three main organizational participants by phone, asking for their reactions to this dispute and their perceptions about the effectiveness of law in resolving the underlying land use controversy. Despite their eventual loss in court, John McHugh and Carlos Padilla both stated that the dispute had not yet ended. McHugh suggested that additional legal steps exist to challenge the project; Padilla suggested that the project may face demonstrations: "If this community gets up one morning and says, "We are not going to let you through," I assure you, they're not going through."³⁵⁸ Padilla considered the lawsuit "very effective," because it gave the Coalition "standing" to participate in decisions affecting the community.³⁵⁹

The next participant who spoke to me was Tim Martin, a Senior Resource Specialist at NRDC who worked on the project with Allen Hershkowitz. He described the remaining opposition to the project as a "handful of people" whom he considers well-intentioned but misinformed about the environmental controls built into the plans for the paper mill. According to Martin,

Padilla represents a very small group in the Bronx, and McHugh is a lawyer in Manhattan. Both of them were involved in a lawsuit against our landlords, and they ... lost that suit eventually. ... Now they're sort of gadflies ... just trying to cause people to be uncertain and unclear, and they really don't have ... facts on their side. ... Really, we're talking about a very small, marginal group of people that really don't know what they're talking about.³⁶⁰

Martin considers the legal process effective in resolving the specific land use controversy. He expressed reservations, however, about NRDC's forming similar coalitions with community

357 Ibid.

358 From transcript of phone interview with Carlos Padilla, 6/13/96.

359 Ibid.

360 From transcript of phone interview with Tim Martin, 6/24/96.

groups in the future, because of the "hysterical" opposition they encountered in this process of community outreach.³⁶¹

Michael Meenan, the Director of Industrial Development at Banana Kelly for the past six months, had the most positive reaction to the entire controversy. This may reflect Banana Kelly's lengthy experience with community organizing in the South Bronx and its relationship with community residents, including members of the Coalition. While Tim Martin at NRDC expressed dismay at the vehement opposition to the project, Michael Meenan stressed Banana Kelly's concern with "sensitivity to the environmental impact of creating jobs" in projects such as the Bronx Community Paper Company. Banana Kelly comes across as an organization secure enough about its position in the community to form partnerships with groups both inside and outside the Bronx to pursue economic development that will benefit the community.

According to a *New York Times* article entitled "Mill Sought For Bronx Is Blocked," this legal dispute reinforces a negative stereotype about attempts to resolve environmental issues.

The difficulties facing the Bronx Community Paper Company illustrate how even the best-intentioned environmentally sensitive construction projects, backed by enthusiastic support from neighborhood residents to the Oval Office, can be stymied. The project's problems have also reinforced the long-held perception among investors and developers that it is extremely difficult to develop manufacturing projects in New York City, with its myriad bureaucratic, political and legal hurdles.³⁶²

Another report states that *if* the mill is built, it will represent a shift in the focus of the environmental movement to the promotion of economic growth in response to the "'jobs vs. the environment' debate" resulting from the spotted owl controversy.³⁶³

This dispute demonstrates the limitations of dependence on legal technology to resolve environmental controversies. Although the Coalition's attempt to create a different interpretation of an environmental statute failed, the delay caused by the lawsuit forced changes in the project. In a clear example of the environmental movement's expanding focus, this case pitted an environmental justice claim against an effort to implement the cleanest

³⁶¹ Ibid.

³⁶² Van Natta, "Mill Sought for Bronx is Blocked," p.32.

³⁶³ Bradley, "Practicing What They Preach," pp.25, 27.

possible papermill technology with economic concerns about jobs. NRDC's purpose for the project was to demonstrate the "next phase of environmentalism,' in which groups like NRDC would promote, rather than fight, economic development."³⁶⁴

³⁶⁴ Ibid., p.25.

Table 1 Publications Reporting on the Bronx Community Paper Company and the Parties to the Legal Dispute

<u>Source of Article</u>	<u>Date of Articles</u>
Reports on the Bronx Community Paper Company:	
<i>New York Times</i>	6/12/96, 12/4/95, 8/27/95, 5/6/94
<i>Environmental Law News</i>	Spring 1996
<i>Amicus Journal</i>	Winter 1996
<i>New Yorker</i>	7/24/95
<i>Smithsonian</i>	April 1995
<i>Empire State Report</i>	December 1994
<i>NRDC: 1995 Annual Report</i>	1995
<i>E Magazine</i>	November/December 1995
Reports on the Banana Kelly Community Improvement Association:	
<i>New York Times</i>	6/12/96, 12/4/95, 8/27/95, 5/6/94, 1/7/93, 2/20/89
<i>Environmental Law News</i>	Spring 1996
<i>Amicus Journal</i>	Winter 1996
<i>New Yorker</i>	7/24/95
<i>Smithsonian</i>	April 1995
<i>Empire State Report</i>	December 1994
<i>U.S. News & World Report</i>	6/5/95
<i>Wall Street Journal</i>	8/22/89
<i>Village Voice</i>	10/25/88
Reports on the Natural Resources Defense Council:	
<i>New York Times</i>	6/12/96, 12/4/95, 8/27/95, 5/6/94
<i>Environmental Law News</i>	Spring 1996
<i>Amicus Journal</i>	Winter 1996
<i>New Yorker</i>	7/24/95
<i>Empire State Report</i>	December 1994
<i>NRDC: 1995 Annual Report</i>	1995
<i>E Magazine</i>	November/December 1995
Reports on the South Bronx Clean Air Coalition:	
<i>New York Times</i>	8/27/95, 9/1/92, 11/2/91
<i>New Yorker</i>	7/24/95
<i>Village Voice</i>	7/12/94
<i>USA Today</i>	8/13/92
Reports quoting John F. McHugh, attorney for the Coalition:	
<i>New York Times</i>	12/4/95, 8/27/95, 9/1/92, 11/2/91
<i>New Yorker</i>	7/24/95

Table 2 Bronx Community Paper Company -- Media Information

Projected Plant Cost:

\$485 million	[<i>New York Times</i> 6/12/96, p.B3]
\$400 million	[<i>NRDC 1995 Annual Report</i> , p.7]
\$400 million	[<i>New York Times</i> 12/4/95, p.B3]
\$200 million	[<i>E Magazine</i> , November/December 1995, p.25]
\$280 million	[<i>New York Times</i> 8/27/95, p.31]
\$260 million	[<i>New Yorker</i> , 7/24/95, pp.35-36]
\$100 million	[<i>Empire State Report</i> , December 1994, pp.53-54]

Number of Jobs Created:

- "600 permanent jobs and 2,200 temporary construction jobs" [*New York Times* 6/12/96, p.B3]
- "hundreds of badly needed blue collar jobs" [*Environmental Law News*, v.5, n.1, 1996, p.37]
- "hundreds of jobs in the neighborhood" [*Amicus Journal*, v.17, n.4, 1996, p.36]
- "700 jobs" [*New York Times* 12/4/95, p.B3]
- "1,000 permanent jobs" [*New York Times* 8/27/95, p.31]
- "nearly 900 full-time jobs for people in the community, and 600 construction jobs while it was being built" [*New Yorker*, 7/24/95, p.36]
- "300 jobs" [*Smithsonian*, April 1995, p.111]
- "300 new jobs" [*Empire State Report*, December 1994, p.54]
- "perhaps 300 new jobs" [*New York Times* 5/6/94, p.D1]

Location and Size of Site:

- "The 33-acre plant would be built on the site of the old Harlem River rail yard, which has been abandoned for more than 25 years." [*New York Times* 6/12/96, p.B3]
- "a 19-acre tract just north of Randalls Island ... at the Harlem River Rail Yard, which has been abandoned for 25 years" [*New York Times* 12/4/95, p.B3]
- "seventeen acres of the long-abandoned Harlem River railroad yard, at the southern tip of the Bronx, near the Triborough Bridge." [*New Yorker*, 7/24/95, p.35]
- "a 19-acre site in the old Harlem Rail Yard just north of Randalls Island ... Most mills are hundreds of miles from cities, so we will have a \$15-a-ton cost advantage" [*New York Times* 5/6/94, pp.D1,5]

Source of Paper:

- "The mill would produce newsprint from waste paper collected by the city's Department of Sanitation and private sources ... The plant would provide a local market for paper collected by the city and private trash haulers. [*New York Times* 6/12/96, p.B3]
 - "office paper from New York City's trash" [*New York Times* 8/27/95, p.31]
 - "'the urban forest' -- [an estimated] 10,000 tons of paper generated daily by New York City's offices and residences -- as a source for high-grade pulp" [*New Yorker*, 7/24/95, p.32]
 - "the 'urban forest' -- the vast amounts of paper discarded by offices every day" [*New York Times* 5/6/94, p.D1]
-

Conclusion

The title of this thesis succinctly states the main ideas it addresses: the limits of law as technology for environmental policy. The introduction argues in favor of thinking of law as technology as a feasible topic for STS research. This line of reasoning opens a space for further study of law from an STS perspective. As the title suggests, however, limits exist to the effectiveness of legal technologies as tools for environmental policy. Law does not provide long term resolution for every controversy; instead, legal technology can delay or transform the policy-making process, as it did in the case of the Bronx Community Paper Company.

Law participates in the complicated process of public policy-making. As a social technology used in policy-making and analysis, law provides a means to formalize arguments and restrain often heated disputes. In the preface to *Policy for Land: Law and Ethics*, Lynton Keith Caldwell and Kristin Shrader-Frechette state that land use policy inevitably concerns "human attitudes and behaviors." They add that although both science and law affect "human relationships to the land ... [w]hat people believe about their relationships with the Earth takes the form of ethical conclusions that are expressed in institutions defined by law.³⁶⁵ Law has become an actant in the social network that produces public policy.

But someone could accept this argument, and still respond: "So what? Does an examination of legal technology from an STS perspective add anything to legal practice or to the study of technology?" In my opinion, both law and STS would benefit from an expanded perspective. As chapter 2 points out, STS practitioners have shown interest in legal issues, but have not addressed its functions as a social technology.³⁶⁶ I merely suggest here that STS could widen its focus to include studies of a social technology such as law.

A multidisciplinary perspective such as that of STS could provide lawyers with a broader set of alternatives to aid their clients. The legal system, like the practice of science, creates winners and losers.³⁶⁷ Court decisions, statutes, and regulations clarify current rules for behavior. In corporate and criminal matters, translating established rules to apply to present situations must remain a gradual process. The economic and criminal justice systems require stability in the rules they follow in order to function effectively.

³⁶⁵ Caldwell and Shrader-Frechette, *Policy for Land*, p.viii.

³⁶⁶ See text accompanying notes 139 and 140.

³⁶⁷ See, e.g., Latour, *Science in Action*; Latour, "Irreductions," *The Pasteurization of France*, 1.1.10 (p.160), 3.4.3 (p.204).

When the legal system identifies winners and losers effectively, a dispute officially ends. For disputes involving strong opposing beliefs, however, law may provide a necessary but not a sufficient solution. In environmental disputes, legal technologies often fail to provide effective means for long-term resolution. As the case study and the previous discussion demonstrate, opponents on environmental issues have opposing moral commitments and rights claims, in addition to their differing legal positions. While people have internalized the belief in punishing criminal activity, we have conflicting beliefs about the best uses of natural resources.

Resolving environmental disputes requires more flexibility and more informality than legal technologies provide, because the underlying philosophies of the opponents will not change with a court ruling or passage of legislation. An effective environmental dispute resolution process requires moral and ethical components that recognize this inherent instability in the practice of law, incorporating communication and compromise by the parties to the dispute.

I contend that the United States public depends excessively upon current legal technologies to resolve a wide range of disputes. For issues involving criminal or corporate law, using legal technologies as a means of social control provides practical, reasonable dispute resolution. As a tool for resolving environmental controversies, however, law has not demonstrated effectiveness to the same degree, despite the explosive growth in the practice of environmental law since the 1970s. The discussion in chapter 2 supports the conclusion that legal action can provide only temporary resolution to environmental controversies, because the disputing parties have fundamentally different priorities relating to economics and environmental protection.

In contrast to its effectiveness as a means to maintain control in a complex society, law has limitations as a technology for social policy. For social policy issues, law provides a formal, and very expensive, means to settle disputes, but only temporarily.³⁶⁸ In matters involving strong opposing personal beliefs and rights claims such as the subject of this thesis, the formal rulemaking of legal technology alters neither beliefs nor actions of the loser, demonstrated in the environmental context by the continued legal activity (appeals, new court cases, efforts to change laws and revise regulations) after every "final" legal decision. And in a period of government retrenchment, with budget cuts at all levels, enforcement practices also contract, restricting the response only to the most egregious violations.

As different groups incorporate legal tools into their positions and arguments on environmental issues, environmental law undergoes a process of translation, taking on new

³⁶⁸ See Bardach and Kagan, "Liability Law and Social Regulation," ch.11 in Bardach and Kagan, *Social Regulation: Strategies for Reform*, pp.251-253.

meanings as it applies to different social contexts. When issues become polarized, with sincere arguments based on economics and ethics from opposing positions on the issue, reliance on legal technology can result in a policy seesaw, with the dominant position dependent on which political party currently holds power and how close is the next election. The case study in chapter 3 provides an example of this limitation in the ability of current legal practices to resolve environmental controversy.

Chapter 1 reviews the twentieth-century development of environmentalism in the United States. What began as parallel, and somewhat elitist, concerns with conservation of natural resources in stark contrast to preservation of wilderness and wildlife, has become a multidimensional movement addressing urban and economic issues, as well as air, land, and water quality, and preservation of plant and animal species. As environmentalism has grown, it has faced strong challenges for ignoring the concerns of the urban poor and minority groups, and the economic concerns of industries and individuals threatened by the impacts of environmental regulation. Defending the accumulating policy for this wide range of environmental issues has required expertise in politics and law, and the environmental movement has achieved much of its success in those forums.

The case study in chapter 3 gives an example of a response to growing concerns about urban environments, involving different claims and actors from those in the more traditional environmental dispute involving preservation of scenic views or species habitats versus economic development. Environmentalists on both sides of this dispute attempt to make the urban environment more "livable" for people. On one side, an established South Bronx community development organization joined with a national environmental organization in a project combining economic development with concern for air and water quality. Their opponents, an activist coalition of neighborhood residents, make an environmental justice argument against siting a paper mill in their neighborhood.

These conflicting environmental concerns demonstrate the strength of environmentalism in the United States. Different strands have developed to focus on different aspects of environmental protection and renewal (local, statewide, regional, national, international issues; mainstream environmentalism, environmental justice, radical environmental activism). They have survived over a decade of attacks from industries affected by environmental regulation and from individuals claiming primacy for property rights; that opposition has even adopted environmental terminology and claimed concern for the environment, but privilege economics over preservation of nature. The environmental movement has started to respond by incorporating economic considerations into their environmental proposals, as the case study demonstrates.

By no means do I suggest that the environmental movement should abandon legal technology in pursuit of its objectives. The practice has become entrenched; an environmental

lawyer has observed that: "In no other political and social movement has litigation played such an important and dominant role. Not even close."³⁶⁹ Nor do I consider environmental issues unique because opposing claims have irreconcilable ethical bases; the abortion issue in the United States presents a similar impasse. The problem develops when an issue becomes so emotionally charged that the technology on which we have become dependent can provide only a short-term resolution, with the "losers" continuing their battles outside the legal system.³⁷⁰

Suggestions have come from varied disciplines about changing legal technologies in order to create more lasting resolutions to environmental controversies. Environmental economists propose strategies to replace the rigid command-and-control practices of regulatory agencies with more flexible measures, enabling industries affected by regulation to meet targeted environmental goals without necessarily facing bankruptcy.³⁷¹ An article in the *Washington Post Magazine* proposes replacing the current "bewildering tangle of legislation" aimed at environmental protection with "ecorealist" legislation comprised of 3 statutes, "one for pollution abolition, one for habitat protection, one to control toxic substances."³⁷² A proposal from within STS would create a "national land use policy ... consonant with the sophisticated, technological society that we have created."³⁷³

Legal practice changes also, as practitioners translate it into forms that provide more effective resolutions to disputes. A growing area of legal practice involves alternatives to litigation, such as negotiation and mediation. The June/July 1996 issue of the *Virginia Lawyer*, the state bar journal, includes an article on "Mediation: It's not 'Alternative' Dispute Resolution Anymore." The cover story for the August 1996 issue of the *ABA Journal*, "The Lawyer Turns Peacemaker," states: "As adversaries turn from litigation to mediation to resolve differences, the future will belong to attorneys who can lead the way to common ground."

³⁶⁹ Getches, "Law," *The Amicus Journal*, v.17, n.4, p.43.

³⁷⁰ See the discussion in chapter 1, the case study in chapter 3, and Helvarg, *The War Against the Greens*.

³⁷¹ See, e.g., Smith, "Environmental Policy at the Crossroads," ch.9 in Greve and Smith, eds., *Environmental Politics: Public Costs, Private Rewards*, p.187; Santopietro and Shabman, "Can Privatization Be Inefficient?: The Case of the Chesapeake Bay Oyster Fishery," *Journal of Economic Issues*, v.26, n.2, p.410; Bernton, "U.S. to Revamp System for Harvesting Halibut in Alaska," *The Washington Post*, 9/29/94.

³⁷² Easterbrook, "Beyond Politics as Usual," *The Washington Post Magazine*, (4/9/95) p.35.

³⁷³ Caldwell and Shrader-Frechette, *Policy for Land*, p.xiv.

Similarly, the Summer 1996 issue of *Natural Resources & Environment*, the journal for the ABA section on natural resources, energy and environmental law, also focuses on alternatives to litigation, with articles such as "Collaborative Problem-Solving in Environmental Dispute Resolution," "Drafting the Effective ADR Clause for Natural Resources and Energy Contracts," "Alternative Dispute Resolution in the Department of Justice," and "Mediation, the Mediator, and the Environment." The attention given to these translations of legal technology suggest the desire to produce more long-term solutions to environmental controversies than the current all-or-nothing litigation-and-regulation system allows.

References

- Abbey, Edward, *The Monkey Wrench Gang* (New York: Avon Books, 1975).
- Ackerman, Bruce, *Private Property and the Constitution* (New Haven, CT: Yale University Press, 1977).
- Adams, John H., "Environmentalism and Justice at NRDC," *The Amicus Journal*, v.16, n.1, p.2 (Spring 1994).
- Bardach, Eugene, and Robert A. Kagan, "Liability Law and Social Regulation," ch.11 in Bardach and Kagan, eds., *Social Regulation: Strategies for Reform* (San Francisco, CA: Institute for Contemporary Studies, 1982).
- Beniger, James R., *The Control Revolution: Technological and Economic Origins of the Information Society* (Cambridge, MA: Harvard University Press, 1986).
- Bernton, "U.S. to Revamp System for Harvesting Halibut in Alaska," *The Washington Post*, p.A3 (9/29/94).
- Bethell, Tom, "Property and Tyranny," *The American Spectator*, v.27, n.8, pp.16-17 (1994).
- Bijker, Wiebe E., and John Law, eds., *Shaping Technology/Building Society: Studies in Sociotechnical Change* (Cambridge, MA: MIT Press, 1992).
- Bijker, Wiebe E., Thomas P. Hughes, and Trevor J. Pinch, eds., *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology* (Cambridge, MA: MIT Press, [1987, 1989] 1993).
- Bovard, James, *Lost Rights: The Destruction of American Liberty* (New York: St. Martin's Press, 1994)
- Bradley, James, "Practicing What They Preach: Environmental Groups are Taking Economics Seriously, and are Even Investing in New Businesses Themselves," *E Magazine*, v.6, n.6, pp.25-27 (1995).
- Brante, Thomas, Steve Fuller, and William Lynch, *Controversial Science: From Content to Contention* (New York: SUNY Press, 1993).
- Breslin, Patrick, "On these Sidewalks of New York, the Sun is Shining Again. (South Bronx)" *Smithsonian*, v.26, pp.100-106 (1995).

- Bromley, Daniel W., *Environment and Economy: Property Rights and Public Policy* (Cambridge, MA: Blackwell Publishers, 1991).
- Callicott, J. Baird, "American Indian Land Wisdom? Sorting Out the Issues," *Journal of Forest Management*, vol.33, pp.35-42 (1989).
- Callon, Michel, "Some Elements of a Sociology of Translation: Domestication of the Scallops and Fishermen of St. Brieuc Bay," in John Law, ed., *Power, Action and Belief*.
- Caldwell, Lynton Keith and Kristin Shrader-Frechette, *Policy for Land: Law and Ethics* (Lanham, MD: Rowman & Littlefield, 1993).
- Carson, Rachel, *Silent Spring* (Boston: Houghton Mifflin, 1962).
- Coyle, Dennis J., *Property Rights and the Constitution: Shaping Society Through Land Use Regulation* (Albany: SUNY Press, 1993).
- Cronon, William, *Changes in the Land: Indians, Colonists, & the Ecology of New England* (New York: Hill & Wang, 1983).
- Curvin, Robert, "Cities," *The Amicus Journal*, v.17, n.4, p.35 (Winter 1996).
- Darnovsky, Marcy, "Stories Less Told: Histories of U.S. Environmentalism," *Socialist Review*, v.24, pp.11-54 (1992).
- Dunlap, Riley E., "Public Opinion and Environmental Policy," ch.4 in James P. Lester, ed., *Environmental Politics and Policy: Theories and Evidence* (Duke University Press, 1989).
- Dunlap, Thomas R., *Saving America's Wildlife* (Princeton, NJ: Princeton University Press, 1988).
- Easterbrook, Gregg, "Beyond Politics as Usual," *The Washington Post Magazine*, pp.20-21, 34-36 (4/9/95).
- Echeverria, John and Sharon Dennis, "Takings Policy: Property Rights and Wrongs," *Issues in Science and Technology*, v.10, n.1, pp.25-28 (1993).
- Ely, James W., Jr., *The Guardian of Every Other Right: A Constitutional History of Property Rights* (New York: Oxford University Press, 1992).

- Engel, J. Ronald, and Joan G. Engel, *Ethics of Environment & Development: Global Challenge, International Response* (Tucson, AZ: University of Arizona Press, 1990).
- Engelhardt, H. Tristram, Jr., and Arthur L. Caplan, *Scientific Controversies: Case Studies in the Resolution and Closure of Disputes in Science and Technology* (New York: Cambridge University Press, 1987).
- Epstein, Richard A., *Takings: Private Property and the Power of Eminent Domain* (Cambridge, MA: Harvard University Press, 1985).
- Fisher, Ian, "Judge Temporarily Halts Tests at Medical-Waste Incinerator," *New York Times* p.B4 (9/1/92).
- Foucault, Michel, *Discipline and Punish: The Birth of the Prison* (New York: Vintage Books edition, 1979).
- Fox, Stephen, "Franklin D. Roosevelt and New Deal Conservation," ch.6, pp.183-217, in *The American Conservation Movement: John Muir & His Legacy* (Madison, WI: University of Wisconsin Press, 1985).
- Frankel, Bruce, "Raising a stink over incinerator," *USA Today*, p.A6 (8/13/92)
- Garland, Anne Witte, *Twenty Years Defending the Environment: NRDC 1970-1990*(New York: NRDC, 1990).
- Gerrard, Michael B., "Building Environmentally Just Projects: Perspective of a Developer's Lawyer," *Environmental Law News*, v.5, n.1, pp.33-37 (1996).
- Getches, David H., "Law," *The Amicus Journal*, v.17, n.4, p.43 (Winter 1996).
- Gonzalez, David, "In the South Bronx, the Grass Roots Grow Up," *New York Times* pp.B1, B4, col.3 (1/7/93).
- Gottlieb, Robert, *Forcing the Spring: The Transformation of the American Environmental Movement* (Washington, DC: Island Press, 1993).
- Graham, Ellen, and Joseph N. Boyce, "Out of the Ashes: A South Bronx Street Rises through the Toil of Poor Homesteaders," *Wall Street Journal*, v.214, p.A1, A6 (8/22/89).
- Greve, Michael, "The Importance of Property Rights: Capitalism is the Process of Creative Destruction (speech)," *Vital Speeches*, v.59, n.18, pp.569-573 (1993).

Guha, Ramachandra, "Radical American Environmentalism and Wilderness Preservation: A Third World Critique," *Environmental Ethics*, v.11, n.7 (1989).

Hamilton, Neil D., "The Value of Land: Seeking Property Rights Solutions to Public Environmental Concerns," *Journal of Soil and Water Conservation*, v.48, n.4, pp.280-284 (1993).

Haraway, Donna, "Teddy Bear Patriarchy: Taxidermy in the Garden of Eden, New York City, 1908-36," ch.3 in *Primate Visions: Gender, Race, and Nature in the World of Modern Science* (New York: Routledge, 1989).

Harbrecht, Doug, "A Question of Property Rights and Wrongs," *National Wildlife*, v.32, n.6, pp.4-11 (1994).

Harris, Lis, "Banana Kelly's Toughest Fight," *The New Yorker*, v.71, n.21, pp.32-40 (7/24/95).

Hays, Samuel P., *Beauty, Health, and Permanence: Environmental Politics in the United States, 1955-1985* (New York: Cambridge University Press, 1987).

----- *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890-1920* (Cambridge, MA: Harvard University Press, 1959).

Helvarg, David, *The War Against the Greens: The "Wise-Use" Movement, the New Right, and Anti-Environmental Violence* (San Francisco: Sierra Club Books, 1994).

Hennelly, Robert, "Bronx Burnout: Bankrupt Medical Waste Incinerator Goes Up in Smoke," *Village Voice*, v.39, n.28, pp.10-11 (7/12/94).

----- "They Speak in the Dark," *Village Voice*, v.40, n.12, p.18 (3/21/95).

Hevesi, Dennis, "Bronx Foes Try to Stop Medical Incinerator," *New York Times*, pp.A25,29 (11/2/91).

Hirsh, Richard F., "The Mainstreaming of Conservation," ch.7 in *Power Loss: Regulation, Technology, and the Destruction of Consensus in the American Electric Utility System, 1965-1996* (draft manuscript, 1996).

Hirsh, Richard F., and Adam H. Serchuk, "Momentum Shifts in the American Electric Utility System: Catastrophic Change -- or No Change at All?" *Technology and Culture*, v.37, pp.280-311 (April 1996).

- Holden, Constance, "Apple Growers vs. CBS: TV Wins," *Science*, v.262, n.5130, p.35 (10/1/93).
- Holloway, Lynette, "Bronx Group Signs Recycling Company for Mill Project" *New York Times*, p.B3 (12/4/95).
- Holusha, John, "Pioneering Bronx Plant to Recycle City's Paper," *New York Times* pp.D1, D5 (5/6/94).
- "State Approves Bronx Paper-Recycling Mill," *New York Times* p.B3 (6/12/96).
- Jasanoff, Sheila, Gerald E. Markle, James C. Petersen, and Trevor Pinch, eds., *Handbook of Science and Technology Studies* (London: Sage, 1995).
- Keller, Evelyn Fox, *A Feeling for the Organism: The Life and Work of Barbara McClintock* (San Francisco: Freeman, 1983).
- Kempton, Willett, James S. Boster and Jennifer A. Hartley, *Environmental Values in American Culture* (Cambridge, MA: MIT Press, 1995).
- Kenworthy, Tom, "Angry Ranchers Across the West See Grounds for an Insurrection," *The Washington Post*, p.A3 (2/21/95).
- Koppes, Clayton R., "Efficiency, Equity, Esthetics: Shifting Themes in American Conservation," ch.10 in Donald Worster, ed. *The Ends of the Earth: Perspectives on Modern Environmental History* (Cambridge, UK: Cambridge University Press, 1988).
- Laet, M.K. de, *Vaders, Sterren, en Hormonen. Antropologische controversen over de kennis van de Wilde* (Utrecht: ISOR Press, 1994).
- Landy, Marc, Marc J. Roberts, and Stephen R. Thomas, "The Origins and Development of the Environmental Protection Agency," ch.2 in *The Environmental Protection Agency: Asking the Wrong Questions* (New York: Oxford University Press, 1990).
- Lapp, David, "Wise Use's Labor Ruse: The Anti-Environmental Wise-Use Movement is Attempting -- Both Successfully and Unsuccessfully -- to Forge Ties with Workers," *Environmental Action*, v.25, n.3, pp.23-26 (1993).
- Latour, Bruno, *Science in Action: How to Follow Scientists and Engineers Through Society* (Cambridge, MA: Harvard University Press, 1987).

- *The Pasteurization of France*, translated by Alan Sheridan and John Law (Cambridge, MA: Harvard University Press, 1993).
- *We Have Never Been Modern*, translated by Catherine Porter (Cambridge, MA: Harvard University Press, 1993).
- Latour, Bruno, and Steve Woolgar, *Laboratory Life: The Construction of Scientific Facts* (Princeton, NJ: Princeton University Press, [1979] 1986).
- Law, John, ed., *Power, Action, and Belief* (Boston: Routledge, 1986).
- Lehmann, Scott, *Privatizing Public Lands* (New York: Oxford University Press, 1995).
- Lemonnier, Pierre, *Technological Choices: Transformation in Material Cultures since the Neolithic* (New York: Routledge, 1993).
- Leopold, Aldo, *A Sand County Almanac: With Essays on Conservation from Round River* (New York: Oxford University Press, 1949; Ballentine, [1949, 1953, 1966] 1991).
- Levinson, Nancy, "Give and Takings: When Do Land-Use Rules Trample Property Rights?" *Architectural Record*, v.182, n.10, pp.50-53 (1994).
- Lewis, Thomas A., "Cloaked in a Wise Disguise," *National Wildlife*, v.30, n.6, pp.4-9 (1992).
- Lutts, Ralph H., "Chemical Fallout: Rachel Carson's *Silent Spring*, Radioactive Fallout, and the Environmental Movement," *Environmental Review*, v.9, pp.210-225 (1985).
- Melosi, Martin V., "Lyndon Johnson and Environmental Policy," ch.5 in Robert A. Divine, ed., *The Johnson Years, Volume Two: Vietnam, the Environment, and Science* (Lawrence, KS: University Press of Kansas, 1987).
- Minter, Richard, "You Just Can't Take It Anymore: America's Property Rights Revolt," *Policy Review*, n.70, pp.40-46 (1994).
- Nash, Roderick, *American Environmentalism: Readings in Conservation History*, 3d ed. (New York: McGraw-Hill, 1990).
- *The Rights of Nature: A History of Environmental Ethics* (Madison: University of Wisconsin Press, 1989).

----- *Wilderness and the American Mind*, 3d ed. (New Haven, CT: Yale University Press, 1982).

Natural Resources Defense Council: 1995 Annual Report.

Natural Resources Defense Council, "25 Years for the Environment," *The Amicus Journal*, v.17, n.4 (Winter 1996).

Nelkin, Dorothy, *Controversy*, 3d ed. (Newbury Park, CA: Sage, 1992).

Nossiter, Adam, "Asthma Common and On Rise in the Crowded South Bronx," *New York Times*, p.A1 (9/5/95).

O'Callaghan, Kate, "Whose Agenda for America?" *Audubon*, v.94, n.5, pp.80-91 (1992).

Pitt, Joseph C., *Technology and Science: Foundations of the Philosophy of Technology* (pre-publication manuscript, in review)

Plater, Zygmunt, Robert H. Abrams, and William Goldfarb, *Environmental Law and Policy: Nature, Law, and Society*, with 1994 supplement (St.Paul, MN: West, 1992).

Poole, William, "Neither Wise Nor Well: Abusers of the Common Trust or Downtrodden Populists? At the Exploiters' Convention, the Wise-Use Movement Frets about its Image," *Sierra*, v.77, n.6, pp.59-61, 88-93 (1992).

Portney, Paul R., "EPA and the Evolution of Federal Regulation," ch.2, pp.7-25, in *Public Policies for Environmental Protection* (Resources for the Future, 1990).

Postman, Neil, *Technopoly* (New York: Knopf, 1992).

Rainie, Harrison, "The Lessons of Banana Kelly," *U.S. News & World Report*, v.118, n.22, p.72 (June 5, 1995).

Roberts, Paul Craig, "Nature is a More Gentle Adversary than the Government: The Stealing of Property Rights by our Government (speech)," *Vital Speeches*, v.60, n.12, pp.371-373 (1994).

Sale, Kirkpatrick, *The Green Revolution: The American Environmental Movement 1962-1992* (New York: Hill & Wang, 1993).

- Santopietro and Shabman, "Can Privatization Be Inefficient?: The Case of the Chesapeake Bay Oyster Fishery," *Journal of Economic Issues*, v.26, n.2, pp.407-419 (1992).
- Sax, Joseph L., "Takings and the Police Power," *Yale Law Journal*, v.74, pp.36-76 (1964).
- Scarce, Rik, *Eco-Warriors: Understanding the Radical Environmental Movement* (Chicago: Noble Press, 1990).
- Seltzer, Mark, "The Love-Master," part V in *Bodies and Machines* (New York: Routledge, 1992).
- Smith, Fred L. Jr., "Environmental Policy at the Crossroads," ch.9 in Michael S. Greve and Fred L. Smith, eds., *Environmental Politics: Public Costs, Private Rewards* (New York: Praeger, 1992).
- Smith, T.V., and Marjorie Grene, eds., *Philosophers Speak for Themselves: From Descartes to Locke* (Chicago: University of Chicago Press, 1940).
- Sowell, Thomas, "The 'Takings' Issue," *Forbes*, v.149, n.5, p.60 (1992).
- Stapleton, Richard M., "A Call to Action (Wise Use Movement)," *National Parks*, v.67, n.3-4, pp.37-40 (1993).
- "Greed vs. Green: How the Wise Use Movement Employs Corporate Money and Questionable Tactics to Stake its Claim to Public Lands," *National Parks*, v.66, n.11-12, pp.32-37 (1992).
- Strong, Douglas, *Dreamers and Defenders: American Conservationists* (Lincoln, NB: University of Nebraska Press, 1988).
- Sylvan, Richard, and David Bennett, *The Greening of Ethics: From Anthropocentrism to Deep-Green Theory* (Tucson, AZ: University of Arizona Press, 1994).
- Taylor, Bob Pepperman, *Our Limits Transgressed: Environmental Political Thought in America* (Lawrence, KS: University Press of Kansas, 1992).
- Terrie, Philip G., "Wilderness: Ambiguous Symbol of the American Past," from Ray B. Browne, Marshall W. Fishwick, and Kevin O. Browne, eds., *Dominant Symbols in Popular Culture* (Bowling Green, OH: Bowling Green State University Popular Press, 1990).

- Terry, Don, "Dropouts Put Lives and Building Back Together," *New York Times* s.D, p.3, col.1 (2/20/89).
- Thompson, Janna, "A Refutation of Environmental Ethics," *Environmental Ethics*, v.12, n.2, pp.147-159.
- Thrush, Glenn, "Beyond Bricks and Mortar," *Empire State Report*, v.20, pp.53-56 (1994).
- Trebay, Guy, "Staying Power," *Village Voice*, v.33, n.43, p.16 (10/25/88).
- Van Natta, Don, Jr., "Mill Sought for Bronx is Blocked," *New York Times* s.1, p.31, col.2 (8/27/95).
- Weber, Leonard, "The Social Responsibility of Land Ownership," *Earth Ethics*, v.1, n.4, pp.1, 3-6 (1990).
- Weiss, Richard H., "Minimum Hopes for Those Lost in the South Bronx," *St. Louis Post-Dispatch*, p.C5 (12/31/95).
- White, Lynn Jr., "The Historical Roots of Our Ecological Crisis," *Science*, vol.155, pp.1203-1207 (1967).
- Worster, Donald, *Dust Bowl: The Southern Plains in the 1930s* (New York: Oxford University Press, 1979).
- Yandle, Bruce, ed., *Land Rights: The 1990s' Property Rights Rebellion* (Lanham, MD: Rowman & Littlefield, 1995).
- Yearley, Steven, "The Environmental Challenge to Science Studies," ch.20 in Jasanoff, Sheila, Gerald E. Markle, James C. Petersen, and Trevor Pinch, eds., *Handbook of Science and Technology Studies*, pp.457-479 (1995).

Appendix: Telephone Interviews

I completed the following four interviews for the case study included in chapter 3 of this thesis. The first two people I reached represented opponents of the proposed development, on the day after an article appeared in the *New York Times* that reported the apparent inevitability of the paper mill project.

1. John F. McHugh, attorney for the South Bronx Clean Air Coalition's lawsuit against the New York State Department of Transportation and the Bronx Community Paper Company
date of conversation: June 13, 1996
length of time: approximately 40 minutes
comments: Mr. McHugh was responsive to my questions, passionate about his concerns about restoring the rail freight system in New York City, and angry about the previous day's news report.
2. Carlos Padilla, co-founder of the South Bronx Clean Air Coalition
date of conversation: June 13, 1996
length of time: approximately 1 hour
comments: Mr. Padilla phoned me soon after I talked with Mr. McHugh. He expressed outrage about the *New York Times* report, pride in the Coalition's achievements in the South Bronx, and derision toward NRDC and Banana Kelly.

After repeated unsuccessful efforts to talk to Allen Hershkowitz at NRDC and Yolanda Rivera at Banana Kelly, I asked to speak with someone else at each organization who could answer my questions about the Bronx Community Paper Company.

3. Tim Martin, senior resource specialist at the New York office of the Natural Resources Defense Council
date of conversation: June 24, 1996
length of time: approximately 20 minutes
comments: Mr. Martin's manner was arrogant in this conversation. He berated me twice for not talking to NRDC first. I informed him that I had tried to talk to Allen Hershkowitz, who had not responded to messages I had left over the preceding three weeks, or to my attempts to contact him by letter and e-mail. Martin reminded me that he had responded immediately, and told me to get in contact with him if I had any more questions. After the interview, I phoned Martin twice for more information; he did not return my calls.
4. Michael Meenan, director of industrial development for the Banana Kelly Community Improvement Association
date of conversation: July 2, 1996
length of time: approximately 20 minutes
comments: Mr. Meenan was both courteous and responsive to my questions.

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EDUCATION

Virginia Tech, Blacksburg, VA

MS in Science & Technology Studies, December 1996

- thesis: *The Limits of Law as Technology for Environmental Policy*

New York Law School, New York, NY

JD, June 1988

- Journal of Human Rights, research editor 1987-88

- Moot Court Association, board member 1987-88

Texas Christian University, Fort Worth, TX

MS in Applied Social Research, 1982

Proyecto Lingüístico Francisco Marroquín, Huehuetenango, Guatemala
independent study of Spanish, summer 1976

University of Texas at Arlington, Arlington, TX

MSSW in Planning and Community Organization, 1976

- participated in field evaluations of Peace Corps community development in Ecuador

College of William & Mary, Williamsburg, VA

BA in Sociology, 1970

EXPERIENCE

Choices and Challenges Project, Virginia Tech, Blacksburg, VA

Administrative Assistant, Fall 1995

- completing a marketing mailing list, production and mailing transcripts from past seminar/teleconferences

Deborah G. Mayo, Ph.D., Professor of Philosophy, Virginia Tech, Blacksburg, VA

Graduate Assistant, 1992-1995

- proofreading, indexing, and library research for manuscript of a philosophy of statistics textbook

Assistant Dean Martha J. Johnson, Graduate School, Virginia Tech, Blacksburg, VA

Graduate Assistant, 1991-1995

- scheduled Graduate Honor System cases, updated job listings for graduate students, assisted in survey research for the Scholarship and Fellowship Office

United States Magistrate James C. Francis IV, United States District Court, Southern District of New York, Fall 1987

- federal court clerkship; research, drafting on issues before the magistrate

Environmental Protection Agency, Air and Pesticides Branch, Office of Regional Counsel, New York, NY, Summer 1987

- researching and drafting on environmental issues

Natural Resources Defense Council, New York, NY, Winter 1987

- internship in environmental law

Human Resources Administration, Legislation Section, New York, NY
Legislative Aide, Fall 1986

- proofreading and summarizing legislative proposals

Immigration and Naturalization Service, Trial Attorneys, New York, NY, Fall 1986

- internship in immigration law

Bernard Raphan, P.C., New York, NY
Legal Assistant, Summer 1986

- research in landlord-tenant law

Law Library, New York Law School, New York, NY
Student Assistant, Fall 1985 - Spring 1988

- gained familiarity with library reference material

Allied Communities of Tarrant, Fort Worth, TX
Administrative Assistant, 1978 - 1983

- wrote grant proposals and reports to funding agencies for church-based community organization

Center for Program & Institutional Renewal, Austin College, Sherman, TX
Assistant Director for Research, 1982 - 1983

- collected and analyzed data for an evaluation of private higher education in Texas; wrote and edited profiles of individual institutions

Child Protective Services Intake Program, Dallas, TX
Assistant to the Program Director, 1981

- analyzed data, wrote grant proposals, reviewed case records

United Way of Metropolitan Tarrant County, Fort Worth, TX

Interview Supervisor, Southeast Survey, 1978

- supervised 20-25 interviewers for a survey of social services and facilities needs in southeast Fort Worth

Dallas County Department of Human Resources, Dallas, TX

Protective Services Caseworker, 1972 - 1974

- counseling, diagnosis and referral services to abused and neglected children