

THE IDENTIFIABILITY BIAS IN ENVIRONMENTAL LAW

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ABSTRACT

The identifiability effect is the human propensity to have stronger emotions regarding identifiable individuals or groups than for abstract ones. The more information that is available about a person, the more likely this person's situation will influence human decisionmaking. This human propensity has biased law and public policy against environmental and ecological protection because the putative economic victims of environmental regulation are usually easily identifiable workers that lose their jobs, while the beneficiaries—people who avoid a premature death from air or water pollution, people who would be saved by medicinal compounds available only in rare plant and animal species, and future generations not subjected to harmful changes in climate—are unidentifiable abstractions.

More fundamentally, however, this identifiability bias has helped create structural biases in legal institutions against environmental and ecological protection. For example, the doctrine of standing creates a bias against unidentifiable victims of environmental wrongs, because of the obvious necessity of showing injury in fact to an identifiable party. Other legal concepts common to a liberal legal tradition also serve to protect the interests of individuals—identifiable individuals—against state action. This liberal conception of law underweights the rights of unidentifiable individuals that are often beneficiaries of state action.

Importantly, this is not simply a variant of public choice theory. Many lawmaking decisions and institutions harbor biases against unidentifiable individuals that are not explainable in monetary terms. And importantly, this is not simply a variant of the availability heuristic. Identifiability is more subtle and lasting than sensationalist media accounts of spectacular events that serve as available heuristics. The identifiability bias in environmental law is based on a fundamental human instinct, not a monetary one, and affects deeper decisionmaking processes.

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I. INTRODUCTION

Consuming about half of the front page of the June 23, 2005, *Globe and Mail* newspaper of Canada, was an up-close photo of a forty-one-year-old woman hugging her twelve-year-old daughter, with an accompanying headline of “Breast cancer survivors fighting for new drug.”¹ The woman is Ontario breast cancer patient Leslie Cowan, and the drug is Herceptin, a drug believed to have novel breast cancer-fighting properties.² But because Ontario’s Health Minister had not yet approved the use of Herceptin, it was not a drug treatment that the province would have paid for under its public health care system at the time.³ So, as the article reported, Leslie Cowan was seeking treatment in the United States (U.S.), which would cost her approximately \$100,000 a year.⁴ Ms. Cowan was reported as saying, “I will have to remortgage my home in order to receive cancer treatment in the U.S. . . . I don’t know if my kids will be able to go to college, but at least I’ll be alive.”⁵

The very next day, the *Globe and Mail* reported that the Ontario Health Ministry would fast-track the review process so that

1. Lisa Priest, *Breast Cancer Survivors Fighting for New Drug*, GLOBE AND MAIL (Toronto), June 23, 2005, at A1.

2. *Id.*

3. *Id.*

4. *Id.*

5. *Id.*

Herceptin would become fundable by the province within a few months.⁶ Health Minister George Smitherman was quoted in the article as saying “I’m a human being like anybody else and I’m personally impacted by personal stories I have a very, very keen personal sense of the degree to which this is a tremendously impactful decision point for some women and many families in the province of Ontario.”⁷

It certainly seems callous to take issue with the Health Minister’s intervention. But, one wonders, when George Smitherman jumped Herceptin to the top of the queue, what drugs were pushed aside? Might there have been people who were hurt by this move?

One drug that might have been held up was Methotrexate, which was approved for provincial funding in October 2005, shortly after Herceptin’s approval.⁸ Methotrexate is a curiously versatile drug that is used in chemotherapy treatment for acute lymphoblastic leukemia (most commonly children’s leukemia), rheumatoid arthritis, Crohn’s disease, psoriasis, and ironically, breast cancer.⁹ Much is still unknown about Methotrexate, despite a great deal of clinical study.¹⁰ Was a possible delay in the funding of Methotrexate worth it? Quite possibly, but a rational inquiry would examine a variety of factors, including the incidences of the diseases treated by Methotrexate and Herceptin, their effectiveness in treating such diseases, their incremental effectiveness relative to existing treatments, and perhaps their cost. The week that Herceptin was approved, the Canadian Medical Association Journal published an editorial questioning the wisdom of the province’s approval, especially given the \$148 million price tag funding Herceptin and two other drugs over a three-year period.¹¹

But the way that a newspaper story changed, in one day, the priorities of the largest provincial health ministry in Canada is much more important and subtle. The response to the June 23, 2005 article, which focused so intensely on Leslie Cowan and her family,

6. Lisa Priest, *Ontario Will Fast-Track Breast Cancer Drug*, GLOBE AND MAIL (Toronto), June 24, 2005, at A1.

7. *Id.*

8. Ministry of Health and Long-Term Care, Ontario Drug Benefit Formulary/Comparative Drug Index, Methotrexate (search record on file with author).

9. MedlinePlus, U.S. National Library of Medicine and the National Institute of Health, Methotrexate, <http://www.nlm.nih.gov/medlineplus/druginfo/medmaster/a682019.html> (last visited Feb. 15, 2008); MedicineNet.com, Methotrexate, <http://www.medicinenet.com/methotrexate/article.htm> (last visited Feb. 15, 2008); National Psoriasis Foundation, Systemic Treatments: Methotrexate, <http://www.psoriasis.org/treatment/psoriasis/systemics/methotrexate.php> (last visited Feb. 15, 2008).

10. A Pubmed search turned up over 5700 medical journal articles discussing Methotrexate. Pubmed, <http://www.pubmedcentral.nih.gov/> (last visited Feb. 15, 2008).

11. Editorial, *Genomics and Economics*, 173 CAN. MED. ASS’N J. 329 (2005); see also Elaine Carey, *Do Politics Affect Drug Coverage?*, TORONTO STAR, Aug. 19, 2005, at D02.

illustrates how the *identifiability* of individuals profoundly affects public policy and lawmaking. This story was decisively effective in identifying Leslie Cowan and other breast cancer victims and pushing their appeal to the top of the agenda. What gets ignored, however, is the effect that this diversion of Health Ministry resources might have had on people that might have benefited from Methotrexate or other drugs that were delayed in approval or study because of the fast-tracking of Herceptin. These individuals were unconsciously shoved aside because they were less clearly identifiable to the Ontario Health Minister.

This anecdote is, of course, only one example of a legal or policy decision that is affected by the identifiability of stakeholders to some dispute. This Article argues that environmental law is an area of law and policy that is particularly susceptible to systemic bias due to stakeholder identifiability. The problem is that the beneficiaries of environmental law tend to be less identifiable than those that might be economically harmed by environmental law. As a result, the identifiability effect works a consistent bias against the cause of environmental protection, and in some cases, economic progress as well. Part II of this Article describes the identifiability effect, as developed by psychologists. Part III discusses how the identifiability effect impacts public debate over environmental issues. Part IV sets out several examples of environmental conflicts that have been affected by the identifiability of stakeholders. While Part IV describes specific instances of the identifiability bias affecting the outcome of environmental conflicts, Part V describes cases in which the identifiability bias has insinuated itself into the very *structure* of law in ways that work to the systematic detriment of environmental protection. Part VI examines why structural identifiability biases exist. Part VII of this Article discusses how the identifiability bias may be countered. Some cases are discussed in which environmental advocates have been able to use the identifiability effect to their advantage, finding a stakeholder group with interests that are coincident with an environmental goal, thus making them somehow more identifiable than the economic victims of environmental protection. While environmental advocates are occasionally able to tap into the identifiability bias, this Article argues that these cases are the exception, not the norm. This Part examines several legislative and administrative mechanisms that have reduced the identifiability bias in environmental law and policy. These mechanisms curb the judicial and administrative discretion that allows identifiability to creep into environmental decisionmaking and are the key to more systemic reform that will keep the identifiability bias under wraps. Part VIII concludes with some summary remarks.

II. THE IDENTIFIABILITY EFFECT

Identifiability is the propensity for people to have stronger emotions regarding identifiable individuals or groups than for abstract, unidentifiable ones.¹² Psychological researchers have long known that the more information there is available about a person, the more memorable that person becomes, and the more likely that this person's situation will influence human decisionmaking.¹³ Thus, we are more inclined to help or favor people who can be readily seen or heard than we are for more abstract, statistical victims. Charitable organizations have known for a long time that people are more willing to lend aid to a cause that has a vivid poster child. The identifiability effect also seems to exist for punitive impulses—people seem more willing to punish wrongdoers that they can identify, as opposed to those they cannot.¹⁴ The identifiability effect was, at least in earlier versions, a theory of a linkage between “vividness” and intensity of conviction.¹⁵ As Nobel Laureate economist Thomas Schelling said in 1968, “when we know the people, we care.”¹⁶

Research findings on identifiability clearly pose challenges to economic assumptions of rationality. The identifiability effect also raises the problem that human decisionmaking and public policymaking could be inconsistent across situations with different identifiability characteristics, even if the situations are substantively indistinguishable. As psychological researchers have pointed out,¹⁷ while “Baby Jessica” McClure was trapped in a well for several days, sympathetic media-watchers sent her family over \$700,000 to assist with rescue efforts—enough money to save hundreds of children's lives if spent on preventative health care;¹⁸ also, the North American Free Trade Agreement was met with fierce resistance (and continues to be the subject of criticism) because opponents could point to

12. Although they do not set out a formal definition, Deborah A. Small & George Loewenstein describe and study the phenomenon in more specificity in their article *The Devil You Know: The Effects of Identifiability on Punishment*. 18 J. BEHAV. DEC. MAKING 311 (2005).

13. RICHARD NISBETT & LEE ROSS, HUMAN INFERENCE: STRATEGIES AND SHORTCOMINGS OF SOCIAL JUDGMENT 43-62 (1980).

14. Experimental situations have shown that research subjects have been more willing to punish misdeeds carried out by more identifiable wrongdoers, even if given very modest identifiability markers, such as numbers. See Small & Loewenstein, *supra* note 12; George Loewenstein et al., *Statistical, Identifiable and Iconic Victims and Perpetrators* (Stanford Law School John M. Olin Program in Law and Economics, Working Paper No. 301, 2005), available at <http://ssrn.com/abstract=678281>.

15. Karen E. Jenni & George Loewenstein, *Explaining the “Identifiable Victim Effect,”* 14 J. RISK & UNCERTAINTY 235, 237 (1997).

16. T. C. Schelling, *The Life You Save May Be Your Own*, in PROBLEMS IN PUBLIC EXPENDITURE ANALYSIS 127, 129-30 (Samuel B. Chase, Jr., ed., 1968).

17. The following examples are noted in Jenni & Loewenstein, *supra* note 15, at 235-36.

18. *Id.* at 236.

individuals in specific industries that were likely to lose their jobs, while proponents could only argue that the additional economic prosperity would create *some* unidentifiable jobs, *somewhere*.¹⁹ In the criminal law context, the difference between a murder trial in which nothing is said or shown about the murder victim and one in which the identity of the victim is prominently on display, may mean the difference between acquittal and conviction,²⁰ or, in the sentencing phase, the difference between life and death.²¹ Perhaps most troubling, the conscious use of identifiability as a rhetorical weapon in some instances and not others, and for some causes and not others, will create an added impetus for some causes and not others, an impetus that may not be warranted.

It is now an oversimplification to say that identifiability is merely a theory of “vividness.”²² The psychological explanations of identifiability have evolved over the last decade. What exactly is the cognitive process that makes people more willing to help or punish? Is it truly just an emotional link between the vividness of a person and our inclination to help or punish? In addition to the vividness theory, recent experiments on the impulse to help have suggested three other possible theories for the identifiability effect:

CERTAINTY: Kahneman and Tversky’s “prospect theory” posits that people overweight certain outcomes relative to uncertain ones.²³ As compared to statistical victims, identifiable victims exist with 100 percent certainty, so that efforts to help such a person will *definitely* benefit a person. Identifiability in this sense, by eliminating the

19. Walter Goodman, *TV, by Its Very Nature, Can Stack the Deck*, N.Y. TIMES, Sept. 13, 1993, at C20.

20. A recent case before the Supreme Court involved the question of whether it was inherently and critically prejudicial for a murder victim’s family to sit in the second row of the gallery wearing buttons that displayed the victim’s picture. *Carey v. Musladin*, 127 S. Ct. 649 (2006).

21. For some empirical evidence on the proposition that victim impact statements affect the likelihood of a death sentence, see Edith Greene et al., *Victim Impact Evidence in Capital Cases: Does the Victim’s Character Matter?*, 27 J. APPLIED SOC. PSYCHOL. 145 (1998); James Lugmbuhl & Michael Burkhead, *Victim Impact Evidence in a Capital Trial: Encouraging Votes for Death*, 20 AM. J. CRIM. JUST. 1, 5-6 (1995). The Supreme Court has itself flipped on the legal question, holding in *Booth v. Maryland*, 482 U.S. 496, 509 (1987), that victim impact statements at the sentencing phase were inadmissible, but then overruling that just four years later in *Payne v. Tennessee*, 501 U.S. 808, 828-30 (1991). For a lively scholarly exchange about the effects and the appropriateness of victim impact statements, see Susan Bandes, *Empathy, Narrative, and Victim Impact Statements*, 63 U. CHI. L. REV. 361 (1996); Susan Bandes, *Reply to Paul Cassell: What We Know About Victim Impact Statements*, 1999 UTAH L. REV. 545; and Paul G. Cassell, *Barbarians at the Gates? A Reply to Critics of the Victims’ Rights Amendment*, 1999 UTAH L. REV. 479.

22. Jenni & Loewenstein, *supra* note 15, at 237.

23. Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 ECONOMETRICA 263 (1979).

uncertainty as to whether someone truly benefits, is the greater certainty that a tangible positive outcome will occur.²⁴

REFERENCE GROUP: People overweight risks that are faced by a specific group or region because they conceive of risks more concretely in smaller groups.²⁵ If risks are dispersed throughout a larger population, people tend to underweight this risk relative to a risk that is faced by a larger fraction of a smaller group, even if the number of people at risk is the same.²⁶ So a 10% risk faced by 100,000 people will be viewed with more seriousness than a 1% risk faced by one million people. Under this theory of identifiability, people prefer to help identifiable victims because the identification, in effect, creates a “reference group” composed entirely of the identified victims.²⁷ This effect can be empirically separated from the certainty effect.²⁸

EX ANTE VS. EX POST: Once an event has occurred, people attach greater blame and responsibility to the event for a victim’s plight, providing greater impetus to the need to help.²⁹ People may thus feel more compelled to help someone once misfortune has befallen him or her, rather than take preventative measures to help avoid the misfortune.³⁰ Since identifiable victims typically only become identifiable because the misfortune has occurred, people may be expressing a desire to help people ex post, rather than ex ante.

The most recent experimental simulations seem to favor the “reference group” theory of identifiability.³¹ This is an important finding because it shows that the identifiability effect is not simply another version of the availability heuristic,³² in which vividness merely makes examples seem more familiar and available to people. The identifiability effect can be much more subtle, tapping into cognitive processes that affect how people view the place of individuals and groups within a larger society. That said, there is considerable overlap among all four of these theories, and no

24. See generally Milton C. Weinstein et al., *The Economic Value of Changing Mortality Probabilities: A Decision-Theoretic Approach*, 94 Q. J. ECON. 373, 374, 393-95 (1980) (analyzing the theory of willingness to pay in order to affect probability of death).

25. Jenni & Loewenstein, *supra* note 15, at 238-39.

26. *Id.*

27. *Id.*

28. Deborah A. Small & George Loewenstein, *Helping a Victim or Helping the Victim: Altruism and Identifiability*, 26 J. RISK & UNCERTAINTY 5, 5-7 (2003) (citing research findings in Jenni & Loewenstein, *supra* note 15).

29. Jenni & Loewenstein, *supra* note 15, at 239.

30. Weinstein et al., *supra* note 24, at 374.

31. Jenni & Loewenstein, *supra* note 15, at 249-53.

32. The availability heuristic is the propensity for people to overweight probabilistic outcomes in which they have a readily available experience to relate to. Highly media-publicized events tend to serve as availability heuristics. See, e.g., Christine Jolls et al., *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471, 1509-10 (1998).

disentanglement has been made so that one theory of identifiability has emerged. For purposes of this Article, it seems safe to conclude that whatever the cognitive process for people feeling more strongly about identifiable persons than unidentifiable ones, the more information we have about a person or group, and the more specific we can be about a person or group, the more likely we are to help or punish.³³ It is nevertheless useful to keep separate these four specific theories of identifiability, as they help us recognize and analyze more specific patterns of behavior.

From a rhetorical perspective, these experimental simulations confirm that which skilled legal advocates already know: that invoking vivid images and being more specific about people, rather than appealing to abstract notions, helps win arguments. Law professors are well aware of the pedagogical value of using actual stories about real people to help illustrate a point. Lawmakers as well, most of whom are trained in these skills of persuasion, have frequently drawn on identifiability as a rhetorical tool. In fact, the danger is that lawmaking has become unduly influenced by the identifiability of stakeholders.

III. THE IDENTIFIABILITY BIAS IN ENVIRONMENTAL LAW

The identifiability effect poses special problems for environmental law and policy, such that it consistently biases lawmaking against environmental and ecological protection. While environmental debate is hardly alone among hot-button topics in eliciting emotionally charged public debate, environmental law is particularly vulnerable to behavioral anomalies that are tapped by identifiability oriented arguments. Emotional arguments that emphasize the economic hardship of identified individuals or groups tap into heuristic processes that cause an overweighting of the costs of environmental protection and underweighting of the benefits of environmental protection. This creates a bias against the enhancement of environmental quality or ecological protection. Emotional appeals, from both environmental advocates and skeptics of environmental regulation, bring these biases to the fore, essentially substituting an emotional intensity meter for a rational means of making

33. Even small amounts of information, such as a number that identified but did not *name* a victim, made research subjects significantly more likely to aid victims. Small & Loewenstein, *supra* note 28, at 8-11. In one study, a group of research subjects were given \$10 to begin with. *Id.* at 8. At random, the \$10 was taken away from half of the subjects. *Id.* The half retaining their \$10 were asked if they were willing to give up some of their \$10 to aid those that had lost theirs. *Id.* at 8-9. Their willingness to do so was highly correlated with the amount of information they had about the person or persons losing their \$10. *Id.* at 9-10. Even a small amount of information, such as a number that represented a specific person, boosted willingness to pay, as compared with a situation in which no information at all was available about a victim. *Id.*

environmental decisions. In part because of the identifiability effect, those arguing for greater environmental quality or ecological protection on the basis of emotional appeals will generally lose this contest.

Consider a typical debate over a proposed environmental or ecological law that tightens some standard, at some economic cost, or over an existing law that regulated parties believe is unduly restrictive. Detractors of the law will be able to point to specific individuals or specific communities that will supposedly lose their jobs or their way of life if the proposed law is enacted or complain that the existing law is overly protective of the environment.³⁴ Of course, these claims are often exaggerated by affected industries. But more to the point, these putative economic victims of environmental protection are highly identifiable to most people. Moreover, these victims are often romanticized—loggers, ranchers, farmers, and fishers as rugged frontiersmen, and mineworkers and factory workers as noble laborers—and are thus strong attractors of sympathy from lawmakers and the general public. The same *Globe and Mail* that gave Leslie Cowan her fame also featured on the front page of its August 19, 2005 British Columbia section a huge photo of ruddy-faced sixty-seven-year-old fisher Mike Forrest, who was going to suffer because of the planned closure of the Pacific salmon fishery.³⁵ The article tells us that Mr. Forrest “invested \$350,000 in an aluminum boat in the 1990s for commercial salmon fishing. He said he believed federal politicians who promised that a reorganization of the Pacific salmon fisheries would ensure the livelihood of those who kept their federal fishing licences But that’s not how things worked out.”³⁶ This story was long on the life of Mike Forrest, a third generation salmon fisher (“My dad did this, my grandfather did it. This is who I am, what I’m about.”), yet was remarkably bereft of any mention of the collapse of the Pacific salmon that necessitated the closure,³⁷ and, incredibly, of the long-suffering aboriginal fishers and their legally superior rights to fish for Pacific salmon.³⁸ Nevertheless, the Canadian Department of

34. President George H.W. Bush campaigned for re-election in 1992 on a platform of reforming the ESA, vowing to block renewal of the ESA and arguing for a reformed law that would give “greater consideration to jobs, families and communities.” Michael Wines, *Bush, in Far West, Sides With Loggers*, N.Y. TIMES, Sept. 15, 1992, at A25.

35. Robert Matas, *Fish Season to Get the Hook*, GLOBE & MAIL (Toronto), Aug. 19, 2005, at S1.

36. *Id.*

37. See *Population Numbers May Doom Salmon: Scientists, Analysts Believe Wild Pacific Fish Could Become Extinct*, MSNBC.COM, Sept. 7, 2005, <http://www.msnbc.msn.com/id/9239431/>.

38. See Emily Walter et al., *Fishing Around the Law: The Pacific Salmon Management System as a “Structural Infringement” of Aboriginal Rights*, 45 MCGILL L.J. 263 (2000).

Fisheries and Oceans opened up a consultation process in the Fall of 2005 that resulted in a number of meetings with the Commercial Salmon Advisory Board (the fishers' organization) lasting into 2006,³⁹ before finally limiting the Fraser River salmon fishery to a nominal four-fish-per-day catch for the 2006 season.⁴⁰ An entire year was lost in attending to the economic needs of the Fraser River salmon fishers.

Of course, the *Globe and Mail* is hardly alone in serial sensationalism—examples abound in which a tension is deliberately created between environmental protection and the economic health of some identifiable group of individuals, with the obvious media preference for reporting on the latter.⁴¹ More significantly, congressional lawmakers have become extremely skilled at using the identifiability effect to dramatize the plight of their constituents,⁴²

39. See, e.g., Canada Dep't of Fisheries & Oceans, Fisheries Mgmt., Pac. Region, Wild Salmon Policy, http://www.pac.dfo-mpo.gc.ca/species/salmon/wsp/default_e.htm (last visited Feb. 15, 2008).

40. The fishery area in question, the Fraser River, suffered large declines in sockeye salmon runs in 2004 and 2005, leading to the proposed and slowly implemented fishing restrictions. The limits are available at http://www.pac.dfo-mpo.gc.ca/recfish/Tidal/area29_e.htm#Salmon (last visited Feb. 15, 2008).

41. See, e.g., Timothy Egan, *Hook, Line and Sunk*, N.Y. TIMES, Dec. 11, 1994, § 6 (Magazine), at 75 (“[Clenching a knife in his teeth, fingers bloodied] from a long night wrestling squid and a new net that cuts to the bone, Tony Demelo finishes up his chores in the port where Herman Melville learned how to swear. The morning light has chased away the prostitutes and drug dealers who roam the cobbled streets of New Bedford’s waterfront district, bartering in Portuguese. Nearby, commuter traffic carries workers with soft hands and clean clothes to office towers in Providence and Boston.”); Lisa Leff, *Company Town Carved From Old Growth Faces Uncertain Future*, WASH. POST, Dec. 30, 2006, http://www.washingtonpost.com/wp-dyn/content/article/2006/12/31/AR2006123100407_pf.html (describing uncertainty facing company logging town being sold because of decreased logging opportunities due to environmental restrictions); Tom Pelton, *Suit Threat Frustrates Hog Farmers: Environmental Groups Targeting Bay Pollution*, BALTIMORE SUN, Jan. 22, 2007, at 1A (highlighting the plight of pig farmers whose manure is causing water pollution in the Chesapeake Bay); Joe Wojtas, *An Old Fleet Under a Dark Cloud*, N.Y. TIMES, Aug. 18, 2002, at 14CN (describing in detail the economic dislocation of the Portuguese immigrant fishers of Stonington, Conn.).

42. In just looking at the issue of grazing on public lands, for example, Michael Byrne, president of the Public Lands Council, complained that Wild and Scenic River designations have caused dislocation in the cattle ranching industry that depends on federal grazing permits:

More than 50 operations ran cattle along the subject area of the Donner and Blixen, Owyhee, and Malheur Rivers, involving hundreds of people if you consider that each operation often consisted of several different families. Elimination of these ranch operations means the elimination of a way of life that has been in place for generations in many cases.

Grazing: Hearing Before the Subcomm. on Public Lands and Forests of the S. Comm. on Energy and Natural Resources, 109th Cong. 24 (2005) (prepared statement of Michael Byrne, President, Public Lands Council, on Behalf of the National Cattlemen’s Beef Association). Congressman Scott McInnis has also weighed in by stating:

[U]nfortunately, what happens out there is . . . the national Sierra Club, Earth First, and by the way, most of these are headquartered not in this area, they are headquartered back here in the East, primarily in

momentarily crowding out everyone else that may have a stake in the outcome of an environmental conflict. Even if the identified groups are quite large, advocates on their behalf have succeeded in reducing the reference group size so that the group is at least more identifiable than the reference group of beneficiaries—all of the rest of us.

In stark contrast to the identifiability of those who are economically harmed by environmental regulation, the beneficiaries of environmental protection are mostly unidentifiable. Air pollution and water pollution and environmental exposure to toxic substances claim many victims, resulting in the premature death of many and sickening many others.⁴³ Consider this: air pollution from coal-fired power plants alone are estimated to cause 30,000 premature deaths in the U.S. every year,⁴⁴ the equivalent of approximately one fully

Washington D.C., who come into this area and try and dictate . . . the policies of their special interests on the management of these Federal lands The kind of impact that it has is, it drives our ranching communities [out] And these families, and again look at my in-laws, David and Sue Ann Smith, we can still see the cabins where their grandparents came and homesteaded in that area. And they are very dependent frankly upon multiple use of Federal land. So is everybody in Meeker, Colorado. So is everybody in Grand Junction.

144 CONG. REC. H2804-05 (May 5, 1998) (statement of Rep. McInnis). From the Senate side:

I don't think people understand that ranching is the economic backbone for many rural communities in the West [W]hen you kill the ranching industry you also kill Main Street. I believe a disproportionate increase in a fee could do just that, and . . . would indeed have devastating repercussions for the rancher and the community.

142 CONG. REC. S2397-02 (1996) (statement of Sen. Dorgan) (arguing against an increase in grazing fees for grazing on federal lands).

43. For a general discussion on the health effects of air and water pollution, see Robin Kundis Craig, *Removing "the Cloak of a Standing Inquiry": Pollution Regulation, Public Health, and Private Risk in the Injury-in-Fact Analysis*, 29 CARDOZO L. REV. 149 (2007).

44. A consulting firm, Abt Associates, which has contracted with the EPA and a number of environmental organizations, estimated in 2000 that coal-fired power plants accounted for roughly 30,000 premature deaths each year. ABT ASSOCS., THE PARTICULATE-RELATED HEALTH BENEFITS OF REDUCING POWER PLANT EMISSIONS, EXHIBIT 6-3, ESTIMATED PM-RELATED HEALTH AND WELFARE BENEFITS ASSOCIATED WITH AIR QUALITY CHANGES RESULTING FROM THE REMSAD-BASED "ALL POWER PLANT" SCENARIO 6-4 (2000). This figure has been cited on numerous occasions, and over time, seems to have withstood the barrage of electricity industry attacks on Abt Associates and the study. See, e.g., 150 CONG. REC. S1515 (Feb. 24, 2004) (statement of Rep. Jeffords), available at http://frwebgate.access.gpo.gov/cgi-bin/getpage.cgi?dbname=2004_record&page=S1515&position=all; News Release, Sen. Ron Wyden, Wyden Backs Clean Air Legislation (June 26, 2002) (on file with author); AMERICAN LUNG ASSOCIATION, STATE OF THE AIR: 2004, PROTECTING THE NATION FROM AIR POLLUTION, http://lungaction.org/reports/sota04_protecting2.html; *FY 2006 Budget of the U.S. Environmental Protection Agency, Before the S. Appropriations Subcomm. on Interior & Related Agencies*, 109th Cong. (2005) (statement of S. William Becker, Executive Director, State & Territorial Air Pollution Program Administrators), available at <http://www.4cleanair.org/SenateTestimony0405.pdf>; *Current Environmental Issues Affecting the Readiness of the Department of Defense: Hearing Before the H. Comm. on*

loaded 747 jumbo jet crashing into a mountainside every week.⁴⁵ How many weeks of a jumbo jet crashing would we tolerate before we would completely ground air traffic, or at least undertake heroic measures to make air travel safer? Imagine, then, that we knew ahead of time which 30,000 people would die in the upcoming year from air pollution—is it not conceivable that we would undertake similarly heroic measures to reduce air pollution?

The epidemiology of air pollution has developed into a science that establishes very strong links between air quality (especially the concentration of fine particulate matter) and health outcomes and has withstood the barrage of industry assault.⁴⁶ But however conclusive the statistical link between air pollution and health outcomes, none of the millions of those sickened nor tens of thousands dying from air pollution can actually trace their injuries or deaths to a specific source of pollution, or even to pollution generally. As a result, the prospective victims of air pollution may never be identified to anybody and will remain abstract, weak attractors of sympathy, and systematically under-represented.

To add another dimension to this problem, the identifiability of persons decreases dramatically as one looks to the future. It has never been a secret that future generations are frequently and systematically shortchanged in a wide variety of public policies. We demand income tax cuts that drive budgets into deficit and mortgage

Energy & Commerce, 108th Cong. (2004) (statement of S. William Becker, Executive Director, State & Territorial Air Pollution Program Administrators), available at <http://energycommerce.house.gov/reparchives/108/Hearings/04212004hearing1252/Becker1942.htm>; Bernard L. Cohen, *The Nuclear Power Advantage*, http://www.npcil.nic.in/nupower_vol13_4/npaavol4.htm (last visited Feb. 15, 2008).

45. There are many models of Boeing's 747, but a common one, the 747-400, carries 524 passengers in a two-class configuration. Technical Characteristics – Boeing 747-400, http://www.boeing.com/commercial/747family/pf/pf_400_prod.html (last visited Feb. 15, 2008). A quick calculation shows that 524 passengers dying once a week yields 27,248 deaths per year.

46. Event studies have tracked fluctuations in pollution, in particular particulate matter, with health outcomes. Changes in health outcomes have been studied in the presence of events that change pollution levels. Luke Clancy et al., *Effect of Air-Pollution Control on Death Rates in Dublin, Ireland: An Intervention Study*, 360 LANCET 1210 (2002) (involving a ban on coal sales); Anthony Johnson Hedley et al., *Cardiorespiratory and All-Cause Mortality after Restrictions on Sulphur Content of Fuel in Hong Kong: An Intervention Study*, 360 LANCET 1646 (2002) (involving new restrictions on the sulfur content of fuel oil); C. Arden Pope III et al., *Daily Mortality and PM10 Pollution in Utah Valley*, 47 ARCHIVES ENVTL. HEALTH 211 (1992) (involving a strike at a local steel mill). Other, more statistically robust studies tracked the health outcomes of large groups of individuals over long time periods. These “cohort,” or panel data studies, have been the focus of several rulemakings and have been heavily scrutinized. Douglas W. Dockery et al., *An Association Between Air Pollution and Mortality in Six U.S. Cities*, 329 NEW ENG. J. MED. 1753 (1993); C. Arden Pope, III et al., *Particulate Air Pollution as a Predictor of Mortality in a Prospective Study of U.S. Adults*, 151 AM. J. RESPIR. & CRIT. CARE MED. 669 (1995); see also Francine Laden et al., *Reduction in Fine Particulate Air Pollution and Mortality*, 173 AM. J. RESPIR. & CRIT. CARE MED. 667 (2006).

our children's future so that we have higher current disposable income.⁴⁷ Despite an overwhelming consensus on the need to reduce gasoline consumption and reduce pollution from cars and trucks, we resist gasoline taxes because they would reduce our current disposable income.⁴⁸ This resistance has easily trumped a nearly universal belief among economists that a higher gasoline tax is the most effective and efficient way to reduce gasoline consumption.⁴⁹

47. Former Congressional Budget Office Director Robert Reischauer, who served under both Presidents George H.W. Bush and William J. Clinton, was quoted in a *New York Times* article as lamenting the continued failure of Congress to deal with a looming budget crisis over the costs of Medicare and Social Security: "The long-term budget crisis appears so distant that it's going to be very hard to get politicians excited about it this year The economy is strong, and the deficit seems to be at manageable levels right now. No one wants to risk popular support by doing something courageous." Steven R. Weisman, *Democrats Face Limits in Reshaping Bush Budget*, N.Y. TIMES, Feb. 6, 2007, at A19. The article describes how Congressional Democrats badly wish to overturn President Bush's budget and be seen as balancing the federal budget, but have limited options given that they are afraid of the political ramifications of ending the President's tax cuts, which expire in 2010. *Id.*

48. See, e.g., Richard Simon & Mary Curtius, *GOP Fears Gas Price Anger May Spill Over*, L.A. TIMES, Aug. 25, 2005, at 1. A New York Times/CBS poll conducted in 2006 asked if respondents generally favored an increase in gas taxes; 85% said they would oppose it, while 12% said they would favor an increase. Respondents were more receptive to a gasoline tax if it would reduce global warming, but if the tax was as much as \$2.00, 87% said they would again oppose it. The poll results are available online at http://www.nytimes.com/packages/pdf/national/20060228_poll_results.pdf (last visited Feb. 15, 2008). Writer T.C. Boyle wrote an op-ed in *The New York Times* purportedly "confessing" to being a gas hog. T.C. Boyle, Op-Ed, *To Pump or Not to Pump*, N.Y. TIMES, Apr. 30, 2006, at 4. He wrote of his commute between his Santa Barbara home and the University of Southern California where he teaches:

That's the conundrum out here in the land of the automobile. We'd like to do our bit for the environment—and out-of-control gas prices awaken in us a fervent desire to save at the pump . . . [but] when Monday comes, we need our cars

. . . .

. . . My commute to the University of Southern California is an unholy 200 miles round-trip and it consumes time . . . and fuel. I drive a powerful sports car because of the burning need to subdue and outrace all those other commuters, and . . . I make it alone and I make it as expeditiously as I can, with little thought for what it is costing, on every level.

Id.

49. Economists so universally favor "Pigouvian" taxes to reduce pollution externalities, a list of citations would be pointlessly voluminous. A recent *Wall Street Journal* survey of sixty economists found that of the forty-seven respondents, forty favored a fossil fuel tax as a way to reduce greenhouse gas emissions. *Economists Favor Fossil Fuels Tax to Spur Alternatives – Survey*, E&E NEWS PM, Feb. 8, 2007. An especially important Pigouvian tax is a gasoline tax. Economists such as politically diverse *New York Times* columnist Paul Krugman, who has spent virtually every column in the past four years criticizing the Bush Administration, and Gregory Mankiw, who served as President Bush's Chief Economic Advisor, favor a higher gasoline tax. See, e.g., Edmund L. Andrews, *Economics Adviser Learns the Principles of Politics*, N.Y. TIMES, February 26, 2004, at C4; Paul Krugman, *Gasoline Tax Follies*, N.Y. TIMES, March 15, 2000, at A23. Professor Mankiw is the founder of the "Pigou Club," an "elite group of pundits and policy wonks with the good sense to advocate higher Pigouvian taxes," which includes higher gasoline taxes. Greg Mankiw's Blog: The Pigou Club Manifesto,

There is no sharper illustration of the human propensity to dramatically discount the welfare of future generations than the world's abject failure to deal with the problem of climate change. Although awareness of climate change and momentum for climate change legislation grows even in the U.S.⁵⁰—the lone holdout from the Kyoto Protocol now that Australia has ratified the agreement⁵¹—it is easy to forget that we have been aware of the risks of climate change for decades.⁵² In 1978, Congress passed the National Climate Program Act,⁵³ which required the President to establish a program to “assist the Nation and the world to understand and respond to natural and man-induced climate processes and their implications.”⁵⁴ In 1987, Congress passed the Global Climate Protection Act,⁵⁵ which required, among other things, the establishment of a National Climate Program Office, which would develop and carry out national policy on climate change.⁵⁶ Of course, neither law imposed any

<http://gregmankiw.blogspot.com/2006/10/pigou-club-manifesto.html> (Oct. 20, 2006). Nobel Laureate Joseph Stiglitz, President Clinton's Chief Economic Advisor, recently called for a global carbon tax, justifying such a tax by saying, “[t]here is a social cost to emissions, and the common environmental tax would simply make everyone pay the social cost. This is in accord with the most basic of economic principles.” Joseph E. Stiglitz, *A New Agenda for Global Warming*, 3 *ECONOMISTS' VOICE* 1, 3 (2006), available at <http://www.bepress.com/cgi/viewcontent.cgi?article=1210&context=ev>. A gasoline tax has been favored even by the libertarian Grover Norquist, who favors the shifting of tax burden from income taxes to consumption taxes such as gasoline taxes. Robert H. Frank, *A Way to Cut Fuel Consumption That Everyone Likes, Except the Politicians*, N.Y. TIMES, Feb. 16, 2006, at C3.

50. Felicity Barringer & Andrew C. Revkin, *Measures on Global Warming Move to Spotlight in the New Congress*, N.Y. TIMES, Jan. 18, 2007, at A24 (describing how the 110th Congress appears to be more apt to move forward with climate change legislation); Darren Samuelson, *Global Warming 'a Sleeper Issue' in Midterm Election — Zogby Poll*, GREENWIRE, Nov. 17, 2006 (on file with author) (showing that concern with global climate change played a role in the Democratic Party gains in the 2006 midterm elections). Even President George W. Bush acknowledged the need to address climate change in his state of the union address on January 23, 2007, his first reference to global climate change in his six years in office. Darren Samuelson, *Six Years in, Bush Gives Warming his State of the Union Debut*, ENV'T & ENERGY DAILY, Jan. 24, 2007 (on file with author).

51. In one of his first acts as the new Prime Minister of Australia, Kevin Rudd obtained ratification of the Kyoto Protocol on December 3, 2007. Australian Government, Department of Climate Change, International Activities, Kyoto Protocol, <http://www.greenhouse.gov.au/international/kyoto/index.html> (last visited Feb. 15, 2008).

52. A 1979 National Academy of Sciences report stated that “[w]e now have incontrovertible evidence that the atmosphere is indeed changing and that we ourselves contribute to that change. Atmospheric concentrations of carbon dioxide are steadily increasing, and these changes are linked with man's use of fossil fuels and exploitation of the land.” CARBON DIOXIDE AND CLIMATE: A SCIENTIFIC ASSESSMENT, REPORT OF AN AD HOC STUDY GROUP ON CARBON DIOXIDE AND CLIMATE, CLIMATE RESEARCH BOARD, NATIONAL RESEARCH COUNCIL vii (1979), available at http://www.atmos.ucla.edu/~brianpm/download/charney_report.pdf.

53. Ch. 56, § 2, 92 Stat. 601 (1978) (current version at 15 U.S.C. § 2901 (2000)).

54. *Id.* at § 3 (current version at 15 U.S.C. § 2902 (2000)).

55. Global Climate Protection Act of 1987, Pub. L. No. 100-204, § 1101-06, 101 Stat. 1407 (1987) (current version at 15 U.S.C. §§ 2901-2908 (2000)).

56. 15 U.S.C. § 2904(c) (2000).

binding obligations on anyone to do anything about climate change. Senator Timothy Wirth's 1988 National Energy Policy Act, however, called for, among other things, a reduction of carbon dioxide emissions by 20 percent below 1988 levels by the year 2000, energy efficiency regulations on all buildings, and the development of coal liquification and carbon dioxide recovery from coal-fired power plants.⁵⁷ Testifying in favor of the law was Dr. Stephen H. Schneider, the Stanford climatologist and author of the 1984 book, *The Coevolution of Climate and Life*, and one of the early scientists warning of climate change. His explanation of global climate change was met by then-Senator Bill Bradley's remark "[t]hat answer would not be understood by any of my constituents [laughter] who would be faced with higher electricity rates in order to deal with the situation or higher gasoline prices"⁵⁸ With the identifiability of his constituents affecting one of the Senate's most reliable environmentalists, it is no wonder that Senator Wirth's bill died.

As noted above, there is no controversy among economists that in order to reduce pollution from motor vehicles and to reduce dependence on foreign suppliers of oil, the preferred method would be to increase gasoline taxes. And yet, historically, gasoline taxes have been categorically rejected as a means of achieving behavioral changes in American driving habits on the grounds that it would require difficult behavioral changes in American driving habits. In response to a proposed 1975 bill to increase gasoline taxes, Congressman Bill Alexander of Arkansas thundered:

If this tax is enacted, we will be requiring the people of the heartland of America to carry this burden on both shoulders. It is unfair; it is inequitable; it is grossly discriminatory against the . . . people of this country who do not have access to public transportation. . . . Did you ever hear of anybody catching a subway in Osceola, Arkansas, or a bus in Bugtussle, Oklahoma?⁵⁹

The identifiability strategy is patent, drawing Osceola, Bugtussle, and "heartland" America into the debate. To underscore the divergence of the identifiability effect from public choice theory, however, it is important to note that the opposition to the 1975

57. S. 2667, 100th Cong. (1988). For a summary of the Act, see The Library of Congress, THOMAS, S. 2667, <http://thomas.loc.gov/cgi-bin/bdquery/z?d100:SN02667:@@L&summ2=m&>.

58. STEPHEN H. SCHNEIDER, *GLOBAL WARMING: ARE WE ENTERING THE GREENHOUSE CENTURY?* 26-27 (Sierra Club Books 1989).

59. PIETRO S. NIVOLA & ROBERT W. CRANDALL, *THE EXTRA MILE: RETHINKING ENERGY POLICY FOR AUTOMOTIVE TRANSPORTATION* 88-89 (1995) (citing 121 CONG. REC. 18,435 (1975) (internal quotation marks omitted)).

gasoline tax proposal was widespread, attracting representatives from many urban centers as well.⁶⁰

Today's environmental champions are repeating this mistake. Jack Layton, the leader of Canada's federal New Democratic Party (NDP), considered the most environmental of the four federal parties, is on record as being a strong supporter of the Kyoto Protocol.⁶¹ Layton has been sharply critical of the other political parties' attempts to reduce greenhouse gas emissions in Canada as being insufficient and weak.⁶² Incredibly, however, when gasoline prices spiked in the aftermath of Hurricane Katrina in 2005, Layton called for gasoline price regulation. Layton argued that high gasoline prices are "affecting people in their daily lives . . . [and] affecting small businesses," and it "isn't fair to Canadians who have to budget around gas prices or cannot rely on adequate public transit systems."⁶³ Perhaps this is just politics. But it is a remarkable disconnect between Layton's public position on climate change and the one happenstance that induced Canadians to drive less and purchase fuel-efficient vehicles for the first time in decades. Layton's tortured position is made possible by the identifiability of those Canadians suffering from high gas prices. And again, under a *reference group* theory of identifiability, these people need not be named individuals with their photo splashed across the front page of a major newspaper—all that is required is to reduce the reference group size to one that people can better identify.

To be sure, the rhetoric of much opposition to environmental and ecological protection is expressed in terms of *economic costs*. Many debates about environmental and ecological protection are characterized by discussion about the economic costs of such measures, rather than references to specific individuals and groups of people. However, the rhetoric of economic costs is only powerful because of its traceability to actual people. Even as President Bush and other opponents of greenhouse gas regulation express concern

60. *Id.*

61. *See, e.g.*, Jack Layton, Leader, New Democratic Party, Speech on Climate Change Accountability Act (Feb. 5, 2007), *available at* <http://www.ndp.ca/page/4892>.

62. Layton has criticized the current Administration of Prime Minister Stephen Harper for its refusal to act on climate change, boasting that it "forced Harper's flawed 'Clean Air Act' into an all-party committee for a full re-write. The NDP has tabled 15 tough amendments, challenging Parliament to adopt a plan for immediate action to combat global warming and meet Canada's Kyoto targets." NDP, Taking the Lead on Climate Change, <http://www.ndp.ca/page/4769> (last visited Feb. 15, 2008). Also, when current Liberal Party leader Stephane Dion Layton was Environment Minister, Layton wrote an open letter to Dion criticizing the then-governing Liberal government for its weak plan to reduce greenhouse gas emission. Jack Layton, *Jack's Open Letter to Stephane Dion*, OTTAWA CITIZEN, Feb. 16, 2005, *available at* <http://www.ndp.ca/page/1307>.

63. Mike Adler, *Layton Seeks Gas Price Probe*, INSIDETORONTO.COM, Aug. 26, 2005 (on file with author).

about the costs of complying with limits on greenhouse gases,⁶⁴ they made it clear that the costs were those that would be suffered by “our families and workers,”⁶⁵ and “American business[es].”⁶⁶ The inclusion of the words “our” and “American” is not accidental.⁶⁷ It reflects conscious attempts to convey the message that costs don’t just accrue anywhere—they accrue in identifiable individuals. On the day that the Intergovernmental Panel on Climate Change (IPCC) released its fourth and most recent assessment of the science of climate change,⁶⁸ Energy Secretary Samuel Bodman reiterated the Bush Administration’s position that “the imposition of a carbon cap in this country would . . . lead to the transfer of jobs and industries abroad that do not have such carbon caps.”⁶⁹ Again, conspicuously absent is mention of the many, many potential victims and costs of climate change.⁷⁰

It would thus be a mistake to say that an economic debate has replaced an emotional debate about the victims and beneficiaries of environmental regulation. Cost-benefit analysis has become a well-established practice in federal environmental regulation, having been the subject of an executive order in every administration since the Reagan administration, including President Clinton’s.⁷¹ But the

64. President Bush’s opposition to mandatory limits to greenhouse gas emissions in the U.S. has been based upon his stated concern that it will hurt the U.S. economy. Justin Blum, *Senate Rejects Greenhouse Gas Limits*, WASH. POST, June 23, 2005, at A8.

65. *Id.* (“‘My first priority is protecting our families and workers,’ said Sen. Christopher S. Bond (R-Mo.). The amendment, he added, ‘will hurt our families, hurt our nation’s energy security, drive jobs overseas.’”).

66. *Big Business Pushes Bush on Carbon Caps*, CBS NEWS, Jan. 23, 2007, http://www.cbsnews.com/stories/2007/01/23/business/main2387501.shtml?source=RSSattr=HOME_2387501 (describing how Bush has “refused in the past to enact legislation that would impose mandatory caps on carbon emissions, claiming the move would hurt American business”).

67. Similarly, in Canada, when a motion was passed in the House of Commons calling for steep cuts in greenhouse gas emissions, Labor Minister Jean-Pierre Blackburn said, “If we took drastic measures to the point that companies had to close, that would not be right.” *Canada’s House Backs Steep Emissions Cuts*, N.Y. TIMES, Feb. 15, 2007, at A19.

68. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS, SUMMARY FOR POLICY MAKERS (Feb. 5, 2007), *available at* http://www.aas.org/news/press_room/climate_change/media/4th_spm2feb07.pdf [hereinafter 4TH IPCC].

69. Darren Samuelsohn, *Bush Officials Insist No Change is Coming on GHG Caps*, GREENWIRE, Feb. 2, 2007 (on file with author).

70. Not to be outdone, the counterargument by Sen. Joseph Lieberman, who along with Sen. John McCain sponsored a bill to limit greenhouse gas emissions, warned “[t]he real losers here are our children and grandchildren, who, if we don’t act soon, are going to inherit a planet that is not going to be as hospitable as the one we were given by our parents and grandparents.” Blum, *supra* note 64, at A8.

71. President Clinton’s Executive Order 12,866 modified the requirement but did not abandon cost-benefit analysis. Exec. Order No. 12,866, 58 Fed. Reg. 51735 (Sept. 30, 1993). President Reagan: Executive Order 12,291, 46 Fed. Reg. 13,193 (Feb. 17, 1981). President George H.W. Bush continued carrying out Executive Order 12,291, and President George W. Bush has continued carrying out Executive Order 12,866.

many sloppy references to the costs of regulation, without consideration of the benefits of regulation, are not cost-benefit analyses. Cost-benefit analysis requires a sober look at both sides of the ledger.⁷² The fixation on the costs of environmental protection, as a rhetorical tool, is still an appeal to sympathies for people that are more identifiable than those people that would be helped by laws or regulations focusing on environmental protection.

This Article is written from an anthropogenic point of view. For every environmental or ecological problem, I assume that there are human interests involved, even if the connection appears tenuous. While the preservation of rare and endangered species raises significant moral questions, it also implicates human welfare. The collapse of ecosystems due to the extinction of some keystone species⁷³ may ultimately have very important human consequences, whether it be the loss of an important pharmaceutical resource,⁷⁴ the loss of important ecosystem services,⁷⁵ or just the loss of a recreational or aesthetic resource.⁷⁶ While the moral questions are

72. Judge Richard Posner has recently dedicated the better part of a book to a cost-benefit analysis of climate regulation, concluding somewhat informally that regulation is badly needed. See RICHARD A. POSNER, *CATASTROPHE: RISK AND RESPONSE* (2004). The most recent and probably the most authoritative analysis is the Stern Review on the Economics of Global Climate Change, conducted by the Treasury of the United Kingdom, which concluded that failure to act would amount to losing 5-20% of GDP forever, whereas taking actions to avoid climate change would cost less than 1% of GDP. STERN REVIEW, *THE ECONOMICS OF CLIMATE CHANGE, SUMMARY OF CONCLUSIONS*, at x, xii-xiii, available at http://www.hm-treasury.gov.uk/media/4/3/Executive_Summary.pdf.

73. A keystone species is one that is particularly important to its home ecosystem, such that its removal would bring about a profound change in the makeup of the ecosystem. It is a species “whose impact on its community or ecosystem is large, and disproportionately large relative to its abundance.” Mary E. Power et al., *Challenges in the Quest for Keystones*, 46 *BIOSCIENCE* 609, 609 (1996); see also *Keystone Species—Why Prairie Dogs Are So Important*, <http://www.prairiedogs.org/keystone.html> (“A keystone species is a species whose very presence contributes to a diversity of life and whose extinction would consequently lead to the extinction of other forms of life. Keystone species help to support the ecosystem (entire community of life) of which they are a part.”) (last visited Feb. 15, 2008).

74. See *infra* text accompanying notes 79-81.

75. For example, wetlands provide a variety of tangible services, such as water purification, groundwater recharge, and floodwater buffering. James Salzman & J.B. Ruhl, *Currencies and the Commodification of Environmental Law*, 53 *STAN. L. REV.* 607, 612 (2000).

76. For example, the multiple environmental threats facing the Great Barrier Reef, including warming ocean waters, threaten the viability of a possibly critical ecosystem in the Southern Pacific Ocean, but also threaten the tourism industry that receives two million tourists and five million recreational visitors each year. Great Barrier Reef Marine Park Authority: Tourism and Recreation, http://www.gbrmpa.gov.au/corp_site/key_issues/tourism (last visited Feb. 15, 2008); Great Barrier Reef Marine Park Authority: Overview—The Current Status of the Great Barrier Reef: Feb 2006, http://www.gbrmpa.gov.au/corp_site/info_services/publications/sotr/overview (last visited Feb. 15, 2008) (“[S]ince 1998, the Great Barrier Reef has suffered its two worst ever recorded coral bleaching events, caused by unusually hot sea water . . .”).

important, I raise the human welfare implications—the interests of unidentifiable individuals—as a minimum basis for concern.

IV. INCIDENTAL IDENTIFIABILITY BIASES

This Article explores the manifestations of identifiability bias in law and lawmaking and considers two ways in which the bias influences environmental law and policy: *incidental* identifiability bias, in which direct identifications of individuals or groups are invoked in specific, discrete instances to advance a particular policy; and *structural* identifiability bias, in which certain legal doctrines or institutions are established in such a way as to systematically discount the welfare of unidentifiable stakeholders. While incidental identifiability bias is easily recognizable and potentially susceptible to a remedy, structural identifiability bias challenges some of our core values of representative democracy and judicial restraint. This Article restricts its analysis and proposals to those identifiability biases, incidental and structural, that affect environmental law and policymaking. Addressing the many other identifiability biases across our democratic and judicial systems is a task left for future scholarship.

Incidental identifiability biases against environmental law can be seen in legislative, judicial, and administrative lawmaking. Identifiability crops up as a policy factor simply because of its rhetorical power. In the following examples, the identifiability bias plays a direct role in a conflict-specific, or “incidental,” way.

A. *Bias in Legislatures*

U.S. Congressional debates are replete with poignant references to specific individuals, held up as exemplar victims of a capricious government bureaucracy, or some other symbol of the need to curb and limit environmental regulation. One of the most potent rhetorical weapons of those opposed to environmental and ecological protection has been the invocation of the noble logger, rancher, farmer, miner, fisherman, or factory worker as a symbol of the dear price that must be paid for environmental protection. Note that this mode of rhetoric is effective under three of the theories of identifiability:

- *Vividness*, because it is easy to conjure up in one’s mind what these people look like, and the difficult physical conditions under which they often labor;
- *Reference group*, because these references are to a specific industry or a specific community highly dependent upon an industry; and

- *Certainty*, because of the perceived certainty that some people will lose their jobs, as opposed to the perception that environmental benefits are still somewhat unproven.

These references need not be highly specific to raise the identifiability of an individual or a group. A reference to “timber families” or “ranching communities” is sufficient to raise identifiability and evoke an emotional response.⁷⁷ Experiments by psychologists of how much people were willing to help others have shown that even seemingly insignificant amounts of information, such as an identification number without a name, were sufficient to increase a person’s willingness to pay to help.⁷⁸

Conservation of biological diversity has been especially hampered by an identifiability bias. While the noble loggers, ranchers, and others have always been easy to identify and paint, the beneficiaries of biological diversity are extremely difficult to identify. We know that many important pharmaceutical discoveries are derived from plants and wildlife that are sometimes at risk of extinction, such as the ugly Pacific Yew tree, which yields the breast cancer-fighting compound taxol,⁷⁹ or the rosy periwinkle, which produces compounds that are effective in fighting leukemia, Hodgkin’s disease, and

77. For example:

That preservation [law] has wreaked incomprehensible havoc on timber families who have had to live with prolonged uncertainty about their futures. All indices of human despair have gone through the roof in these communities: child abuse, spousal abuse, alcohol and substance abuse, divorce, adolescent depression and suicide attempts, bankruptcies, and illness.

136 CONG. REC. S16941 (daily ed. Oct. 5, 1992) (statement of Sen. Gorton).

Is it our intention to mindlessly punish communities that mine coal or produce steel or chemicals or automobiles? . . . These are also real people with real families—men and women who do hard, dirty, and often dangerous work. Are we to punish certain regions because of some sort of legislated value judgment about who is responsible for the quality of our air?

136 CONG. REC. S531-01 (daily ed. Jan. 30, 1990) (statement of Sen. Byrd). In his account of the passage of the 1990 Clean Air Act Amendments, Gary Bryner wrote that during the floor debates over the Clean Air Act Amendments “Byrd held the floor during much of the week of March 19, describing in detail the lives and deaths of coal miners.” GARY BRYNER, *BLUE SKIES, GREEN POLITICS: THE CLEAN AIR ACT OF 1990*, 105 (1993).

I rise in defense of the people of the 2nd District of Maine, and especially the loggers, the farmers, and the fishermen of Washington County. Unemployment there recently nudged above 10 percent. The traditional uses of land, the jobs they depend upon, and the families that need those paychecks are under fire . . . [M]y constituents feel besieged by a Federal proposal to list as endangered Atlantic salmon in the rivers of the region. A listing would strain the economy which is based on natural resources.

146 CONG. REC. H1105-06 (daily ed. Mar. 16, 2000) (statement of Rep. Baldacci).

78. See *supra* text accompanying note 33.

79. University of Maryland Medical Center, Breast Cancer: About Taxol, <http://www.umm.edu/breast/taxol.htm> (last visited Feb. 15, 2008).

testicular cancer.⁸⁰ Both of these plant species narrowly averted extinction.⁸¹ The beneficiaries of biological diversity are all of humankind. This not only dilutes the importance of biological diversity, but reduces identifiability in exactly the opposite way that the identifiability of loggers, ranchers, and others are amplified:

- *Vividness*, because it is impossible to imagine the face of person with a disease that would be cured by a compound produced by some rare plant or wildlife species;
- *Reference group*, because the reference group of “all of humankind” is as large as it can possibly be; and
- *Certainty*, because the probability of any one rare plant or wildlife species that stands in the path of development would yield a life-saving compound is apt to be low, causing people to underweight its importance.

As a society, we discount the importance of biological diversity because although we rationally know that lives *will* be saved by conserving biological diversity, these beneficiary lives are statistical and abstract, and from our perspective, somewhat uncertain. We also discount it because the long development timeline of most drugs exists far into the future. For policy purposes, they might as well not exist at all.

Can identifying an environmental perpetrator rally emotional forces around the cause of punishing a wrongdoer? Recall that the identifiability effect can cut both ways—stimulating an instinct to punish as well as to help. In egregious and discrete cases of midnight dumping of toxic wastes, for example, where an individual is clearly identified and is caught doing something clearly wrongful, identifiability serves to excite our instinct to punish. However, in the endangered species context, where the leading causes of extinction are habitat loss,⁸² isolating a wrongdoer is deeply problematic. Similarly, in a pollution context, where there are thousands, perhaps millions, of contributors to the air pollution problem (including ourselves as we drive motor vehicles), the causal link that is required to identify a wrongdoer is virtually impossible to establish. So, despite the existence of an occasional environmental villain, the

80. Herbs2000.com, Rosy Periwinkle, http://www.herbs2000.com/herbs/herbs_periwinkle.htm (last visited Feb. 15, 2008).

81. *New Source of Cancer Drug Spares Yew Tree*, N.Y. TIMES, Jan. 31, 1993, at 1-16; Cincinnati Zoo & Botanical Garden, Planting Seeds for the Future, <http://cincinnati.zoo.org/Exhibits/GardenBest/PlantingSeeds/plantingseeds.html> (last visited Feb. 15, 2008).

82. See, e.g., PETER KAREIVA ET AL., NATIONAL CENTER FOR ECOLOGICAL ANALYSIS AND SYNTHESIS, USING SCIENCE IN HABITAT CONSERVATION PLANS 20 (2000), available at <http://www.aibs.org/bookstore/resources/hcp-1999-01-14.pdf>.

identifiability effect is not generally going to be one that excites our impulses to punish environmental wrongdoing.

The identifiability bias has played a prominent role in the U.S. Congress in its deliberations on conserving biological diversity. In 1995, a barrage of congressional criticism about the economic and social effects of the Endangered Species Act (ESA), both on the floors of the House and Senate and during a series of impromptu hearings held in rural areas, spelled trouble for the ESA.⁸³ The hearings were naked attempts to publicize the hardships supposedly suffered by landowners, farmers, loggers, and other stakeholders negatively impacted by ESA regulations.⁸⁴ Numerous attempts to repeal or substantially amend the ESA were proposed in 1995 and 1996,⁸⁵ and it was only the surprising intervention of House Speaker Newt Gingrich that prevented their passage.⁸⁶ As it turns out, Gingrich, the conservative architect of the Contract With America, aspired as a youngster to be a zookeeper.⁸⁷ In a meeting with Michael Bean, the noted environmental attorney, and Edward O. Wilson, the eminent Harvard ecologist, Gingrich promised he would continue to use his post as Speaker to prevent the ESA reform proposals from reaching the House floor.⁸⁸ In parting, however, he warned that conservative interest groups and his Republican colleagues, armed with personal interest stories of beleaguered ranchers and farmers, were “turning up the heat.”⁸⁹ In fact, these ESA reformers did succeed in legislatively imposing a moratorium on new listings of species under

83. Rep. Richard Pombo of California helped establish an Endangered Species Committee in 1995 to hold hearings throughout the western U.S. on the economic and social effects of the ESA. Pombo unapologetically orchestrated the hearings into rallies of farmers, ranchers, and loggers that felt threatened by ESA regulation, arguing that for years, the ESA debate had been stacked against them, and that it was now their turn. See Nancy Vogel, *Environmental Law Attacked: Foes Rip Endangered Species Act*, SACRAMENTO BEE, Apr. 29, 1995, at A1; David Horsey, *Greens on the Run; GOP Wave Threatening Environmental Regulations*, SEATTLE POST-INTELLIGENCIER, Nov. 5, 1995, at E1.

84. See, e.g., Shi-Ling Hsu, *A Game-Theoretic Approach to Regulatory Negotiation and a Framework for Empirical Analysis*, 26 HARV. ENVTL. L. REV. 33, 52-53 (2002).

85. See, for example, H.R. 2364, 104th Cong. (1995), sponsored by Rep. Shadegg (R-AZ), which would have made the ESA a strictly voluntary law; Rep H.R. 2275, 104th Cong. (1995), sponsored by Rep. Young (R-AK), which would have limited regulation under the ESA to direct physical harming of endangered species; H.R. 2490, 104th Cong. (1995), sponsored by Reps. Tauzin (R-LA) and Fields (R-TX), which would have required external peer review before the listing of any species under the ESA; and S. 768, 104th Cong. (1995), sponsored by Sen. Gorton (R-WA), which would have reversed the citizen suit provision to be available only to those economically harmed by regulation.

86. Michael J. Bean, *The Gingrich That Saved the ESA*, ENVTL. F., Jan./Feb. 1999, at 26, 30.

87. *Id.* at 27.

88. *Id.* at 30.

89. *Id.* at 30-31.

the ESA for a period of six months.⁹⁰ To the optimist, the failure of detractors of the ESA to overturn it is certainly a success; however, there have been no attempts to strengthen and improve the ESA, and this is due largely to the virulent opposition to the ESA.

It should surprise no one that legislatures invite references to identifiable individuals. Legislatures are, after all, bodies of elected representatives; legislators are *supposed* to identify their constituents and protect and advance their interests. In fact, a public choice theorist might go further and argue that these interests make it a matter of self-interest for legislators to protect and advance their interests. To be sure, a theory of identifiability bias overlaps with public choice theory. Public choice theorists would certainly agree that certain economically powerful constituents are much more salient to the legislators, if only because of the monetary incentives they provide to legislators who represent them. This is not inconsistent with the theory of identifiability. Rather, the monetization is simply another form of identifiability and serves as a way of keeping legislative attention on the powerful constituents, even if they are not mentioned by name on the floor of the House or Senate.

However, even the most vigorous public choice theorists would agree that their theory does not explain all legislative action.⁹¹ The vast majority of lawmaking activities that take place daily cannot be accurately modeled by a rational actor model. Beliefs about public policy clearly matter.⁹² A theory of identifiability can account for not

90. Department of the Interior and Related Agencies Appropriations Act of 1996, Publ. L. No. 104-134, 110 Stat. 1321-156, 1321-159 to -160 (1996).

91. Perhaps the strongest adherent of public choice theory is Judge Frank Easterbrook, who wrote that "[m]y theme is tendencies, not truths. No one approach can explain all decisions." Frank H. Easterbrook, *The Court and the Economic System*, 98 HARV. L. REV. 4, 58 (1984); see also Jonathan R. Macey, *Promoting Public-Regarding Legislation Through Statutory Interpretation: An Interest Group Model*, 86 COLUM. L. REV. 223, 228 (1986).

The arguments in this [a]rticle do not hinge on an assumption that all legislation is best explained as self-serving behavior narrowly construed. Indeed, they assume not only that laws are passed for a wide variety of reasons, but also that, as a general matter, it is impossible for judges to reconstruct the complex array of motives that prompted the passage of a particular statute. Some legislation serves the public interest by maximizing society's welfare from an economic perspective.

Id.

92. See, e.g., Daniel A. Farber & Philip P. Frickey, *The Jurisprudence of Public Choice*, 65 TEX. L. REV. 873, 893-98 (1987). As a stark contrast to public choice, the advocacy coalition framework posits that political actors (with ability to influence policy) will form and break coalitions with other political actors, some with similar political beliefs, and some not, but ultimately for the end of some political goal consistent with their political beliefs. See, e.g., Paul A. Sabatier, *An Advocacy Coalition Framework of Policy Change and the Role of Policy-Oriented Learning Therein*, 21 POLY SCI. 129, 131 (1988); Hank C. Jenkins-Smith, *Analytical Debates and Policy Learning: Analysis and Change in the Federal Bureaucracy*, 21 POLY SCI. 169, 170-71 (1988).

only those lawmaking actions that public choice theorists model, but also those for which a sincere desire to make the right decision is the objective. Even such well-intentioned decisions, this Article argues, can be unduly influenced by differential identifiability of stakeholders.

B. *Bias in the Judiciary*

The identifiability bias insinuates itself into judicial decisionmaking as well. While judges are not elected to represent constituents as legislators are, their cases are still intensely focused on the parties before them. Unless the law relevant to the case has some built-in protection for unidentifiable persons, judges are still apt to think first about the rights and obligations of those appearing before them.

For example, the progression of American regulatory takings jurisprudence into a complex assessment of the expectations of the property owner smacks of a judicial obsession with fairness to the property owner, usually an identifiable individual plaintiff bringing her case before the court. Whereas the Fifth Amendment to the U.S. Constitution, by its terms, contemplates only the physical confiscation of property as a compensable governmental action, modern takings jurisprudence has expanded into the realm of “regulatory takings”—cases in which compensation is sought for a regulation that devalues property, rather than physically confiscates it.⁹³ Earlier cases undertook extensive reviews of cases in determining the extent of the police power⁹⁴ and abstained from analyzing the effects upon persons whose property was regulated.⁹⁵

93. *Penn Central Transportation Co. v. New York City* sets forth three factors that are to be considered in an “essentially ad hoc, factual inquir[y].” 438 U.S. 104, 124 (1978). The three factors, which seem to represent the midpoint of a shift from a focus on the governmental action to a focus on the claimant, are: (i) the economic impact upon the claimant, (ii) the extent to which the regulation interferes with investment-backed expectations, and (iii) the character of the governmental action. *Id.* While *Penn Central* remains good law, more recent Supreme Court jurisprudence seems to have abandoned any analysis of the last factor in favor of the first two. Stephen J. Eagle, *The Rise and Rise of “Investment-Backed Expectations,”* 32 URB. LAW. 437, 437 (2000). Although the article argues that investment-backed expectations have become the “prime determinant of what constitutes ‘property,’” it is obvious that the impact of frustrating such expectations is focused upon the economic effects on the claimant. *Id.*

94. See, e.g., *Vill. of Euclid v. Ambler Realty Co.*, 272 U.S. 365 (1928) (upholding a municipal zoning law, despite its effect of severely reducing the value of a parcel previously zoned as industrial); *Mugler v. Kansas*, 123 U.S. 623 (1887) (upholding a Kansas prohibition on the production and sale of alcoholic beverages).

95. See, for example, *Hadacheck v. Sebastian*, which upheld a Los Angeles city ordinance prohibiting the construction of brickyards and brick kilns and explicitly rejected consideration of the well-averred financial hardship imposed upon the plaintiff, who had purchased land with the expectation of mining the clay for a brick kiln. 239 U.S. 394, 410 (1915). The Court held simply that the prohibition was well within the ambit of the police power, and it dismissed considerations of the impact on the claimant. *Id.* “[The police

Not only have courts strayed from an inquiry into the nature of the governmental action, but they have become obsessed with determining the reasonableness of a property owner's expectation of being free from regulation. Regulatory takings cases have become focused almost completely on the property owner, asking whether the complained-of regulation was fair to the property owner.⁹⁶ This drift away from the terms of the Constitution and toward a bias in favor of property owners is driven by the identifiability bias.

Even more troubling for environmentalists is the skill with which property rights organizations litigating regulatory takings cases have been able to troll for "sympathetic plaintiffs"—plaintiffs toward whom juries would have a greater degree of compassion. Hence, landmark regulatory takings cases have been brought on behalf of an eighty-two-year-old widow hoping to realize her late husband's dream to develop their Lake Tahoe streamside property,⁹⁷ a small-town hardware store owner wishing to pave her parking lot and expand her store,⁹⁸ and a "lifelong resident" of a town in which the resident hoped to develop a three-acre wetland into residential housing units.⁹⁹ Clearly, property rights organizations such as the Pacific Legal Foundation, the Mountain States Legal Foundation, and the Defenders of Property Rights have figured out the identifiability bias and have begun using it to their advantage.¹⁰⁰

The identifiability effect perhaps reared its head most prominently in and after the U.S. Supreme Court decision in *Kelo v. City of New London*,¹⁰¹ in which the Court, in a 5-4 decision, upheld the city's taking of private property to further economic development in an effort to revitalize its downtown area.¹⁰² Compensation was not at issue, only the meaning of whether such a redevelopment plant constituted a "public use" that justified the city's exercise of the eminent domain power.¹⁰³ Justice O'Connor's bitter dissent chided

power] may, indeed, seem harsh in its exercise, usually is on some individual, but the imperative necessity for its existence precludes any limitation upon it when not exerted arbitrarily." *Id.*

96. For example, in *City of Monterey v. Del Monte Dunes at Monterey, Ltd.*, the Court held that repeated denials of building permits by the city were unfair and repetitive land use procedure, constituting a compensable taking. 526 U.S. 687, 698 (1999). In *Palazzollo v. Rhode Island*, the Court held that a post-regulation transfer did not preclude a finding that the property owner's expectation of development was "reasonable." 533 U.S. 606, 617 (2001).

97. See *Suitum v. Tahoe Reg'l Planning Agency*, 520 U.S. 725, 730-31 (1997).

98. See *Dolan v. City of Tigard*, 512 U.S. 374, 379 (1994).

99. See *Palazzollo*, 533 U.S. at 613.

100. See, e.g., Christine A. Klein, *The New Nuisance, An Antidote to Wetland Loss, Sprawl, and Global Warming*, 48 B.C. L. REV. 1155 (2007) (explaining the "sanctifying" of property owners).

101. 545 U.S. 469 (2005).

102. *Id.* at 494 (O'Connor, J., dissenting).

103. *Id.* at 477.

the majority for “wash[ing] out any distinction between private and public use of property—and thereby effectively [] delet[ing] the words ‘for public use’ from the Takings Clause of the Fifth Amendment.”¹⁰⁴ Her dissenting opinion also made a point of noting that:

Petitioner Wilhelmina Dery . . . lives in a house on Walbach Street that has been in her family for over 100 years. She was born in the house in 1918; her husband, petitioner Charles Dery, moved into the house when they married in 1946. Their son lives next door with his family in the house he received as a wedding gift . . .¹⁰⁵

It is unclear what the role of this personal description plays in the jurisprudence of eminent domain, but it appears to have moved Justice O’Connor. Her dissent fueled a sharp reaction from the property rights movement¹⁰⁶ and spawned a flurry of state activity protecting or purporting to protect property owners from another *Kelo*;¹⁰⁷ this despite the fact that *Kelo* was not a landmark case and was fairly consistent with current jurisprudence on eminent domain.¹⁰⁸ In the aftermath of *Kelo*, Alabama, Texas, Delaware, and Ohio enacted legislation that, to varying degrees, constrain the ability of municipalities to take property by eminent domain. At least eighteen other states subsequently proposed legislation.¹⁰⁹ Some of these state initiatives change relatively little, while others may truly constrain eminent domain powers.¹¹⁰ But, in all cases, state legislatures have wanted to at least *appear* to have taken action.

C. *Bias in Administrative Agencies*

In the regulatory arena, the general notion of “regulatory capture” is one that has been studied in a number of different settings, one of which is the relationship between field office regulators and individual or small-group regulated parties.¹¹¹ A special form of

104. *Id.*

105. *Id.* at 494-95.

106. Daniel H. Cole, *Why Kelo is Not Good News for Local Planners and Developers*, 22 GA. ST. U. L. REV. 803, 803 (2006).

107. *Id.* at 830-39.

108. *Id.* at 803.

109. *Id.* at 830-36.

110. *Id.*

111. The notion of regulatory capture is that regulatory agencies respond to the regulated entities rather than act in the public interest. Theories abound as to the exact mechanism of how this might take place. One is that repeated regulatory encounters between regulators and regulated entities, where each has some means of punishing and rewarding the other, will give rise to implicit cooperation. IAN AYRES & JOHN BRAITHWAITE, *RESPONSIVE REGULATION: TRANSCENDING THE DEREGULATION DEBATE*, ch. 3 (1992). Another theory of capture stems from George J. Stigler’s *The Theory of Economic Regulation*, which demonstrated how industries may lobby for and *acquire* regulation when it serves to insulate them from competition. 2 BELL J. ECON. & MGMT. SCI. 3 (1971). Finally, a “revolving door” system of regulation in which regulators are employed by the

capture exists in agencies such as the Bureau of Land Management (BLM) or the United States Forest Service, which rely heavily upon field offices to carry out federal policies.¹¹² Policies, even if driven from Washington, D.C., are thus the responsibility of local field officials to carry out, and they have a significant amount of discretion in doing so.¹¹³ These local officials face a strong temptation to interpret their regulatory mandate in such a way as to fit local norms.¹¹⁴ Where field officials are members of the community and identify more strongly with the community than with Washington bureaucrats, and where field officers deal much more regularly with regulated parties than with superiors in Washington, D.C., there is a natural tendency to view the problem from the point of view of the local community.¹¹⁵ The local view would be that federal policy protecting the environment or ecology claims identifiable victims of some capricious regulatory policy concocted by a distant federal bureaucrat. Incidents of identifiability bias are thus common in field officials that adopt a local view and adjust or enforce policies flexibly, ignoring or suppressing the fact that their sympathy with the local community comes at the expense of the more diffuse and less identifiable public interest.

For example, in *Natural Resources Defense Council v. Hodel*,¹¹⁶ an environmental organization sued the BLM for adopting a range management plan based on an environmental impact statement that did not consider the alternative of eliminating grazing permits altogether and only contained one alternative that even contemplated a modest reduction in grazing.¹¹⁷ The organization argued that under the National Environmental Policy Act (NEPA), under which the environmental impact statement was conducted, this omission was inexplicable given the extremely arid and unfavorable conditions for grazing on this particular area of federal land.¹¹⁸ The court upheld the BLM's actions in every regard, including its cursory environmental impact statement.¹¹⁹ While not obviously incorrect in its decision—a rule of reason standard may support the BLM's actions—the court paid very short shrift to the proposition that grazing might be eliminated altogether. The court cited the BLM's environmental impact statement, stating that

regulated entities after the regulator leaves the government is one in which the potential for capture is obvious. See Jeffrey J. Rachlinski & Cynthia R. Farina, *Cognitive Psychology and Optimal Government Design*, 87 CORNELL L. REV. 549, 569 (2002).

112. PHILLIP O. FOSS, POLITICS AND GRASS 199-204 (1960).

113. *Id.*

114. *Id.*

115. *Id.*

116. 624 F. Supp. 1045 (D. Nev. 1985).

117. *Id.* at 1052.

118. *Id.* at 1053.

119. *Id.* at 1063.

[t]he complete abandonment of grazing in the Reno planning area is practically unthinkable as a policy choice; it would involve monetary losses to the ranching community alone of nearly 4 million dollars and 290 jobs, not to mention unquantifiable social impacts. Of course, compared with the economy of the Reno area as a whole, ranching plays only a negligible role. Nevertheless, eliminating all grazing would have extreme impacts on this small community. A “no grazing” policy is simply not a “reasonable alternative” for this particular area.¹²⁰

This court was upholding what is a fairly widespread practice in the BLM to favor local interests that are resource-consuming, such as ranching, overconservation, and recreation interests.¹²¹ Aided by statutes that were sufficiently vague¹²² to allow a great deal of discretion for field managers, the BLM has frequently given short shrift to less identifiable individuals, those that benefit from preservation, and even recreationists, who would be much less present than ranchers and others that engage in consumptive uses of BLM land.

It is worth noting that the regulatory capture literature has extensively studied the types of interactions described above. But again, as a cousin of public choice theory, most of the explanation for capture revolves around the self-interest motivation of regulatory officials: the need to obtain information from regulated parties,¹²³ the threat of reprisal from powerful congressional representatives that are supported by the regulated parties,¹²⁴ and the “revolving door” theory that regulators often leave government employment for a job in the sector that they regulated.¹²⁵ These three explanations, however, do not explain all of the cases of regulatory capture. The

120. *Id.* at 1054 (citations omitted).

121. See, e.g., Michael C. Blumm, *Public Choice Theory and the Public Lands: Why “Multiple Use” Failed*, 18 HARV. ENVTL. L. REV. 405, 422-27 (1994); Joseph M. Feller, *The Comb Wash Case: The Rule of Law Comes to the Public Rangelands*, 17 PUB. LAND & RESOURCES L. REV. 25, 28 (1996); Joseph M. Feller, *Grazing Management on the Public Lands: Opening the Process to Public Participation*, 26 LAND & WATER L. REV. 571, 571-77 (1991) [hereinafter Feller, *Grazing Management*].

122. The Federal Land Policy and Management Act, 43 U.S.C. §§ 1701-1784 (1988), provides that “resource management plans” be drawn up for each district under the jurisdiction of the BLM, in accordance with “multiple use” objectives, including grazing, preservation, recreation, and other uses. While the statute contemplated management of BLM lands for all of these uses, virtually none of the plans have any true grazing management plans, only grazing allowances, allowing ranchers to graze on federal lands without any ecological restrictions whatsoever. Feller, *Grazing Management*, *supra* note 121, at 577-78.

123. Cary Coglianese et al., *Seeking Truth for Power: Informational Strategy and Regulatory Policymaking*, 89 MINN. L. REV. 277, 280-88 (2004).

124. Blumm, *supra* note 121, at 419, n.85.

125. William T. Gormley, Jr., *A Test of the Revolving Door Hypothesis at the FCC*, 23 AM. J. POL. SCI. 665, 666, 681-82 (1979).

question of exactly what monetary incentives truly bear on the everyday decisions of a field official are not fully explained by a rational economic actor model that underlies the regulatory capture literature. It is implausible that every field official making hundreds of mundane daily decisions is controlled by monetary self-interest. Ontario Health Minister George Smitherman's bold move is one example. Hundreds, perhaps thousands more take place every day. To some extent, there must be some psychological factors at work that are not accounted for in regulatory capture theory or public choice theory.

V. STRUCTURAL IDENTIFIABILITY BIASES

As opposed to incidental identifiability biases, in which the direct invocation of individuals or groups tilts a particular decision in favor of those individuals or groups, structural identifiability biases are those institutions, practices, and doctrines that are established in such a way as to intentionally favor certain individuals or groups. Typically, these institutions, practices, and doctrines reflect fundamental values that ensure that individuals or groups are treated fairly in political and legal systems. But, by focusing on fairness to certain individuals or groups, attention and resources are naturally drawn away from those that are not identified as those beneficiary individuals or groups. In other cases, structural identifiability biases stem from our fundamental notions of separation of powers and perhaps some larger sense of how government is supposed to work. In liberal democratic systems, both of these biases are deeply ingrained in our political culture and therefore serve to systemically work to the disadvantage of unidentifiable individuals and groups. Because some of these institutions, practices, and doctrines are so fundamental, the identifiability bias inheres without much alarm on our part as to the missing, unidentifiable constituents. As with the discussion on incidental identifiability biases, this Article examines some examples of structural biases occurring in legislative, judicial, and administrative contexts.

A. *Bias in Legislatures – Grandfathering*

Grandfathering is the practice of exempting existing polluters or land uses from new laws or regulations that would otherwise render them unlawful.¹²⁶ It is based upon a reluctance to impose new laws and regulations upon costly investments and a reluctance to interfere with otherwise legitimate expectations of an investor in an existing

126. Shi-Ling Hsu, *The Real Problem With New Source Review*, 36 ENVTL. L. REP. 10095, 10096 (2006).

legal regime.¹²⁷ Grandfathering is the legal expression of an instinct so basic to liberal values in democratic societies that it has woven itself into all manner of regulation, environmental and otherwise.¹²⁸

As noted in passing above, the regulatory takings inquiry has become an inquiry into whether, among other things, the regulation frustrates a landowner's "investment-backed expectations,"¹²⁹ implying that a regulation may require compensation if the landowner could not have foreseen a new land use regulation. This is a form of grandfathering: the legal recognition, even constitutionalization, of rights to continue doing what one was doing. A more explicit example is the Clean Air Act Amendments of 1977 creating the New Source Review regulatory program, which requires the installation of state-of-the-art pollution control equipment whenever a new air-polluting facility is constructed.¹³⁰ Importantly, New Source Review did not apply to existing facilities, on the theory that sudden and expensive regulatory changes frustrated their investment expectations.¹³¹ In another example involving large investments, the debate over electricity deregulation was influenced by three prominent economists who argued that it was necessary to compensate and protect the owners of "stranded facilities," power plants that are so inefficient that they would be unable to compete in deregulated retail electricity markets.¹³² While electricity deregulation is still a story without an ending, it is clear that the owners of existing power plants will have a very large hand in writing it. A final example of grandfathering in land uses is the common practice in local land use regulations of permitting variances and nonconforming uses; in cases of hardship, these permit deviations from general land use plans that are otherwise binding on

127. *Id.*

128. See, e.g., Jonathan Remy Nash & Richard L. Revesz, *Grandfathering and Environmental Regulation: The Law and Economics of New Source Review*, 101 NW. U. L. REV. 1677 (2007) (examining grandfathering in the context of environmental legislation and regulations).

129. *Penn Central Transp. Co. v. New York City*, 438 U.S. 104, 124 (1978); see also *supra* text accompanying note 93.

130. Clean Air Act §§ 165(a)(4), 173(a)(2), 42 U.S.C. §§ 7475(a)(4), 7503(a)(2) (2000).

131. It was also argued that installing pollution control equipment was much more efficiently done at the new construction stage, rather than patched on at some point in the middle of a plant's life. NATIONAL RESEARCH COUNCIL, INTERIM REPORT OF THE COMMITTEE ON CHANGES IN NEW SOURCE REVIEW PROGRAMS FOR STATIONARY SOURCES OF AIR POLLUTANTS 35 (2005), available at <http://www.nap.edu/books/0309095786/html/> ("Supporters assert that it is justified because new sources can most easily incorporate the latest pollution control technology.").

132. WILLIAM J. BAUMOL ET AL., THE CHALLENGE FOR FEDERAL AND STATE REGULATORS: TRANSITION FROM REGULATION TO EFFICIENT COMPETITION IN ELECTRIC POWER 33 (1995) (on file with author).

all other parties in their future land use changes and developments.¹³³

What lawmakers typically anticipate is that over the course of time, the grandfathered nonconformers will gradually phase themselves out and new entrants in compliance will replace them.¹³⁴ To an extent, this happens. However, some grandfathering situations have seen nonconformers hang on for unexpectedly long periods of time.¹³⁵ Grandfathering under New Source Review and the 1977 amendments still excuse pre-1977 polluters from upgrading or even installing pollution control equipment, with the result that many power plants that were old and polluting in 1977 are now archaic and still polluting.¹³⁶ In the meantime, what of the beneficiaries of new environmental laws and regulations? The pollution that is emitted as a result of the 1977 grandfathering continues to affect unidentifiable victims, and the reduced ability to regulate land uses is continuing to allow development to intrude into wildlife habitat, threatening biological diversity.

Grandfathering is a tool for dealing with legal transitions, which bring together stakeholders in the transition. However, it should be no surprise that the stakeholders most vocal and defensive about transitions are those that would be disadvantaged by them. Grandfathering is a common policy response to these stakeholders. Of course, this comes at the expense of the unidentifiable, those that would benefit from *not* grandfathering existing investments into older, weaker laws or regulations.

Why are liberal democratic societies so adamant about protecting people's expectations to continue doing what they were doing before a new law or regulation? It is an insufficient answer to say that liberalism emphasizes individual autonomy and rights and is most interested in protecting individuals from state oppression, and therefore protects people from regulation that they do not foresee.¹³⁷ We certainly impute knowledge of the criminal law, new and old, to individuals and do not excuse crimes for lack of actual knowledge.¹³⁸ In environmental and land use regulations, there is a strong

133. JESSE DUKEMINIER ET AL., PROPERTY 974-99 (5th ed. 2002).

134. BRUCE BIEWALD ET AL., GRANDFATHERING AND ENVIRONMENTAL COMPARABILITY: AN ECONOMIC ANALYSIS OF AIR EMISSION REGULATIONS AND ELECTRICITY MARKET DISTORTIONS 2 (1998); Shi-Ling Hsu, *Reducing Emissions from the Electricity Generation Industry: Can We Finally Do It?*, 14 TUL. ENVTL. L.J. 427, 435 (2001).

135. Hsu, *supra* note 126, at 10097.

136. Hsu, *supra* note 134, at 434-35.

137. See discussion *infra* notes 226-45 and accompanying text.

138. *United States v. Freed*, 401 U.S. 601, 612 (1971) ("If the ancient maxim that 'ignorance of the law is no excuse' has any residual validity, it indicates that the ordinary intent requirement—*mens rea*—of the criminal law does not require knowledge that an act is illegal, wrong, or blameworthy.").

compulsion to grandfather because those affected by regulation are apt to be few and identifiable, while those that might benefit from regulation are many, diverse, and unidentifiable. While criminal laws protect a larger society—but also more visibly protect identifiable victims (we can all recall specific friends or relatives that have been victims of crime, if not ourselves)—environmental and natural resource laws protect unidentifiable persons. Moreover, recall that identifiability can be a double-edged sword. People are more willing to punish identifiable persons that engage in wrongdoing.¹³⁹ Criminal laws help effectuate this impulse, while environmental and land use regulations that pick on individuals or groups engaged in otherwise lawful activity evoke the “helpfulness” identifiability bias, giving rise to an almost irresistible instinct to grandfather.

A final irony is that while grandfathering is viewed as protecting economic investments, the competitive advantage afforded to existing polluters often *retards* economic progress. Because grandfathering is a legal exemption, it is a valuable asset and a competitive advantage over new entrants that do not enjoy the exemption. Several empirical studies have demonstrated that the grandfathering of old emissions standards has retarded capital turnover in the power plant industry,¹⁴⁰ in automobiles,¹⁴¹ and in four air-polluting industries.¹⁴² Since older facilities tend to pollute more, the slowing of capital turnover certainly increases pollution;¹⁴³ but the economic irony is that it also makes the industry less economically efficient. Older facilities are simply less efficient than newer ones.¹⁴⁴

A compelling case in point is the electricity generating industry. In the 1990s, the economics of new power plant construction was such that natural gas-powered plants were much more economical

139. See Small & Loewenstein, *supra* note 28.

140. Michael T. Maloney & Gordon L. Brady, *Capital Turnover and Marketable Pollution Rights*, 31 J.L. & ECON. 203 (1988). *But see* Frank M. Gollup & Marc J. Roberts, *Environmental Regulations and Productivity Growth: The Case of Fossil-Fueled Electric Power Generation*, 91 J. POL. ECON. 654 (1983); Randy A. Nelson et al., *Differential Environmental Regulation: Effects on Electric Utility Capital Turnover and Emissions*, 75 REV. ECON. & STAT. 368 (1993) (casting some doubt on the methodology of Maloney and Brady, but reaching a similar conclusion).

141. Howard K. Gruenspecht, *Differentiated Regulation: The Case of Auto Emissions Standards*, 72 AM. ECON. REV. 328 (1982).

142. Randy Becker & Vernon Henderson, *Effects of Air Quality Regulations on Polluting Industries*, 108 J. POL. ECON. 379 (2000).

143. U.S. GEN. ACCOUNTING OFFICE, AIR POLLUTION: EMISSIONS FROM OLDER ELECTRICITY GENERATING UNITS 2 (2002).

144. *Id.*; TINA KAARSBERG ET AL., NORTHEAST-MIDWEST INST., THE CLEAN AIR-INNOVATIVE TECHNOLOGY LINK: ENHANCING EFFICIENCY IN THE ELECTRICITY INDUSTRY 30 (1999) (“Engine efficiency has accelerated from 30 percent in the 1940s to as high as 50 percent.”), available at <http://www.nemw.org/Section2.pdf>.

than coal-fired power plants.¹⁴⁵ Deregulated natural gas prices were low, making natural gas-fired power plants cheaper.¹⁴⁶ Meanwhile, for coal-fired power plants the cost of controlling emissions of sulfur dioxide by installing “scrubbers,” or flue gas desulfurization equipment, was high.¹⁴⁷ However, the 1990s saw the retirement of only seven of the original 263 coal-fired plants originally subjected to new regulation under the 1990 Clean Air Act Amendments.¹⁴⁸ Why so few, when Congress expected that the 1990 Clean Air Act Amendments would finally put many of the coal-fired dinosaurs to rest?¹⁴⁹ The answer is that Congress underestimated the power of the economic incentives they had created—by grandfathering—for power plants to be patched up and kept running. Legislating an expensive regulatory pollution control requirement that only applied to new construction created an enormous incentive to maintain existing, grandfathered plants.

The identifiability bias thus has an economic side as well. While legislatures respond to the call of identifiable constituents that demand grandfathering of their polluting facilities, they ignore the economic interests of new entrants. New entrants invariably have a more efficient way of producing what incumbents produce; otherwise they would not be seeking to enter the industry. Because of the substantial overlap of environmental and economic interests, the story of grandfathering in the electricity generating industry not only illustrates the identifiability bias against environmental protection, but also economic progress.

B. *Bias in the Judiciary – Standing*

The question of standing has long been a prickly one for environmental plaintiffs. Article III of the Constitution requires federal judges to carefully consider whether a plaintiff is the proper party to seek relief before a court.¹⁵⁰ In order to establish standing to sue, a plaintiff must show:

145. Hsu, *supra* note 134, at 434-35.

146. Michael C. Blumm et al., *Beyond the Parity Promise: Struggling to Save Columbia Basin Salmon in the Mid-1990s*, 27 ENVTL. L. 21, 100 (1997).

147. See, e.g., A. DENNY ELLERMAN ET AL., *MARKETS FOR CLEAN AIR: THE U.S. ACID RAIN PROGRAM 241-42* (2000) (reviewing in 2000 the state of scrubber cost and technology and noting advances in the late 1990s in both reducing cost and improving efficiency).

148. Hsu, *supra* note 134, at 435.

149. BIEWALD ET AL., *supra* note 134, at 2.

150. *Flast v. Cohen*, 392 U.S. 83, 99 (1968) (“The ‘gist of the question of standing’ is whether the party seeking relief has ‘alleged such a personal stake in the outcome of the controversy as to assure that concrete adverseness which sharpens the presentation of issues upon which the court so largely depends for illumination of difficult constitutional questions.’” (citing *Baker v. Carr*, 369 U.S. 186, 204 (1962))).

(1) it has suffered an “injury in fact” that is (a) concrete and particularized and (b) actual or imminent, not conjectural or hypothetical; (2) the injury is fairly traceable to the challenged action of the defendant; and (3) it is likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision.¹⁵¹

All three of these elements have posed problems for environmental plaintiffs, who have often complained of diffuse, uncertain injuries—injuries that are not traceable to specific injurers—and injuries that have numerous causes, so that they may not be redressable. All three of these elements pose identifiability problems. This is not to say that the standing doctrine is misguided—but it is important to recognize its systemic propensity to filter out environmental lawsuits, so that appropriately narrow solutions can be fashioned.

1. *Injury in fact*

In the seminal 1972 case *Sierra Club v. Morton*,¹⁵² the U.S. Supreme Court upheld the dismissal of a complaint by the Sierra Club on the grounds that it had not alleged that a planned ski resort development would result in an “injury in fact” to actual members of the Sierra Club.¹⁵³ The decision was deemed to be something of a victory for the environmental movement because of the recipe laid out in the opinion for meeting standing requirements,¹⁵⁴ and because the Sierra Club was granted leave to amend its complaint to meet those requirements, which they did;¹⁵⁵ the Sierra Club’s persistence ultimately helped derail the proposed ski resort.¹⁵⁶ However, the case represents a major turning point for environmental litigation in that it placed an enduring burden on plaintiffs to show legally cognizable harm, insisting on “concrete and particularized,” and “actual or imminent, not conjectural or hypothetical” harm.¹⁵⁷ For most environmental or ecological harms, which tend to be widespread and diffuse, it is difficult to identify a specific plaintiff or group of persons whom have suffered “concrete and particularized” harm.¹⁵⁸ Also, the

151. *Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc.*, 528 U.S. 167, 180-81 (2000).

152. 405 U.S. 727 (1972).

153. *Id.* at 734-36, 741.

154. *But see* Daniel A. Farber, *Stretching the Margins: The Geographic Nexus in Environmental Law*, 48 STAN. L. REV. 1247, 1249 (1996) (noting that the Sierra Club had used a more “globalist” approach to environmental standing).

155. *See* *Sierra Club v. Morton*, 348 F. Supp. 219 (N.D. Cal. 1972).

156. *See* ROBERT V. PERCIVAL ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE, AND POLICY 980 (4th ed. 2003).

157. *Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc.*, 528 U.S. 167, 180 (2000).

158. *See, e.g., Fla. Audubon Soc’y v. Bentsen*, 94 F.3d 658, 667-68 (D.C. Cir. 1996) (finding no particularized harm where plaintiffs challenged failure of Internal Revenue

nature of some environmental lawsuits are such that they seek to prevent some future harm, so that courts might look skeptically at whether the harm is “actual or imminent.”¹⁵⁹ As Justice Kennedy wrote in his concurring opinion in *Lujan v. Defenders of Wildlife*, the Court will not “entertain citizen suits to vindicate the public’s nonconcrete interest in the proper administration of the laws.”¹⁶⁰

Why is this an identifiability problem? “Concrete and particularized” injuries occur to *people* that are concrete and particularized. Unidentifiable individuals are exposed to substantial risks that courts have not deemed to be “actual and imminent” injuries. The nature of environmental harm is such that it rarely attaches to such identifiable individuals, but only *populations* of individuals. Two of the theories of identifiability illustrate how this doctrine biases against environmental protection: the diffuse and widespread nature of environmental or ecological harms make the *reference group* necessarily large, reducing the human compulsion to act; and the proactive nature of most environmental lawsuits renders relief *ex ante* rather than *ex post*, making relief or preventative action seem less compelling.

In its recent decision in *Massachusetts v. Environmental Protection Agency*,¹⁶¹ the Court seems to have retreated somewhat from the restrictive *Lujan* approach, albeit by a narrow 5-4 majority. Importantly, the Court upheld standing in a case involving the EPA’s refusal to regulate greenhouse gas emissions, which is perhaps the quintessential environmental problem in that it involves diffuse and unidentifiable plaintiffs, diffuse and unidentifiable defendants, and latency and causation issues. Nevertheless, in focusing upon Massachusetts as lead plaintiff, the Court held that Massachusetts, as a “*quasi-sovereign*,”¹⁶² had suffered injury-in-fact by virtue of its

Service to carry out environmental impact statement for tax treatment of methyl tertiary butyl ether).

159. See Albert C. Lin, *The Unifying Role of Harm in Environmental Law*, 2006 WIS. L. REV. 897, 945-68.

160. *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 581 (1992). Justice Kennedy concurred:

While it does not matter how many persons have been injured by the challenged action, the party bringing suit must show that the action injures him in a concrete and personal way. This requirement is not just an empty formality. It preserves the vitality of the adversarial process by assuring both that the parties before the court have an actual, as opposed to professed, stake in the outcome, and that “the legal questions presented . . . will be resolved, not in the rarified atmosphere of a debating society, but in a concrete factual context conducive to a realistic appreciation of the consequences of judicial action.”

Id. (citing *Valley Forge Christian Coll. v. Americans United for Separation of Church and State, Inc.*, 454 U.S. 464, 472 (1982) (Kennedy, J., concurring)).

161. 127 S. Ct. 1438 (2007).

162. *Id.* at 1454. Justice Stevens wrote that “[j]ust as Georgia’s ‘independent interest . . . in all the earth and air within its domain’ supported federal jurisdiction a century ago, so

“interest independent of and behind the titles of its citizens, in all the earth and air within its domain. It has the last word as to whether its mountains shall be stripped of their forests and its inhabitants shall breathe pure air.”¹⁶³ The Court continued: “That Massachusetts does in fact own a great deal of the ‘territory alleged to be affected’ only reinforces the conclusion that its stake in the outcome of this case is sufficiently concrete to warrant the exercise of federal judicial power.”¹⁶⁴

That the Court found injury-in-fact and upheld standing for climate change risks is a very significant victory for environmentalists and a noteworthy development in standings jurisprudence.¹⁶⁵ However, in terms of environmental law, one must not lose sight of the fact that it was the state of Massachusetts that was deemed to have standing, and largely by virtue of the fact that it “own[ed] a great deal” of the territory threatened by climate change.¹⁶⁶ Would the same result have been obtained for an individual? Or a public interest organization? The Court evidently felt it necessary to assert that “[o]nly one petitioner needs to have standing to authorize review,”¹⁶⁷ leaving us to wonder if the environmental organization Environmental Defense, a plaintiff to the suit, would have had standing had it brought the suit alone.

That an “injury-in-fact” requirement, even in light of *Massachusetts v. EPA*, will still be a gatekeeper for now and forever is an identifiability bias. The bias exists in the difficulty of identifying people that suffer the kinds of injuries caused by environmental degradation, as compared with the ease of identifying people that suffer economic injuries supposedly caused by environmental regulation. In this sense, the bias is a structural one, reflecting a bias of our political and constitutional values, and favoring tangible, economic harms over less tangible, less measurable harms. And it is worth bearing in mind that in *Massachusetts v. EPA*, the Court was swayed by what is now a mountain of evidence raising the probability that the accumulation of

too does Massachusetts’ well-founded desire to preserve its sovereign territory today.” *Id.* (citing *Georgia v. Tenn. Copper Co.*, 206 U.S. 230, 237 (1907)).

163. *Id.* (citing *Tenn. Copper*, 206 U.S. at 237).

164. *Id.*

165. Before *Massachusetts v. EPA*, the question had been one of great interest among academics, especially given Judge Sentelle’s concurring opinion in *Massachusetts v. EPA*, 415 F.3d 50, 59-61 (2005). See Bradford C. Mank, *Standing and Global Warming: Is Injury to All Injury to None?*, 35 EVNTL. L. 1 (2005).

166. *Massachusetts*, 127 S. Ct. at 1454. “Because the Commonwealth owns a substantial portion of the state’s coastal property, it has alleged a particularized injury in its capacity as a landowner.” *Id.* at 1456 (citations and internal quotations omitted).

167. *Id.* at 1441 (citing *Rumsfeld v. Forum for Academic and Institutional Rights, Inc.*, 547 U.S. 47, 52 n.2 (2006)).

greenhouse gases poses substantial risks.¹⁶⁸ Had this suit been brought just ten years ago when the science of climate change was quite alarming but not as conclusive—remember that the 1987 Climate Protection Act required EPA to develop a national policy¹⁶⁹—it is far from clear that the same result with respect to standing would have been obtained. It is the nature of the “facts” which need to seem plausible to establish “injury-in-fact” that act as the court gatekeeper and that keep out some environmental lawsuits that should be heard.

2. *Traceability to Action of Defendant*

The second requirement of the standing test, that an injury be traceable to the defendant, is really an *unidentifiability* problem: it is very often impossible for victims of pollution or other environmental or ecological insult to identify their perpetrators. Air and water pollution usually have many emitters, ecological degradation and wildlife habitat loss, many infringers. Identifying them and tracing them to an alleged injury is an essential pleading requirement.

Modern realities may have eroded the traceability bar. The seminal tort case *Sindell v. Abbott Laboratories*¹⁷⁰ created a “market share” theory of liability that enables plaintiffs to hold defendants liable for a defective product in proportion to the defendants’ market shares, if the product in question is produced by all defendants in accordance with the same formula.¹⁷¹ This theory of liability, while sometimes questioned,¹⁷² has nevertheless held up over time. In *Agency for Health Care Administration v. Associated Industries of*

168. See *id.* at 1446. The first paragraph of Justice Stevens’s opinion is:

A well-documented rise in global temperatures has coincided with a significant increase in the concentration of carbon dioxide in the atmosphere. Respected scientists believe the two trends are related. For when carbon dioxide is released into the atmosphere, it acts like the ceiling of a greenhouse, trapping solar energy and retarding the escape of reflected heat. It is therefore a species—the most important species—of a “greenhouse gas.”

Id. Justice Stevens’s opinion goes on to survey the many climate change reports and studies over several decades submitted by plaintiffs, and concludes in its holding on standing that “petitioners’ submissions as they pertain to Massachusetts have satisfied the most demanding standards of the adversarial process. EPA’s steadfast refusal to regulate greenhouse gas emissions presents a risk of harm to Massachusetts that is both actual and imminent.” *Id.* at 1455 (internal quotations omitted).

169. See *supra* notes 55-56 and accompanying text.

170. 607 P.2d 924 (Cal. 1980).

171. *Id.* at 936-38.

172. See, e.g., *Smith v. Eli Lilly & Co.*, 560 N.E.2d 324 (Ill. 1990); *City of Chicago v. Am. Cyanamid Co.*, 823 N.E.2d 126 (Ill. App. Ct. 2005); *Skipworth by Williams v. Lead Indus. Ass’n*, 690 A.2d 169 (Pa. 1997); *Martin v. Abbott Labs.*, 689 P.2d 368 (Wash. 1984).

Florida, Inc.,¹⁷³ the Florida Supreme Court upheld a state statute's allowance of a market-share theory of liability as applied to tobacco manufacturers,¹⁷⁴ permitting plaintiffs to recover against the defendants based on defendants' market share in tobacco products.¹⁷⁵

A possible extension of *Sindell* and *Agency for Health Care Administration* would be to impose liability on polluters based on a share of pollution.¹⁷⁶ It is conceivable that a statutorily created cause of action for pollution share liability would similarly be upheld. This would require, however, that there be some linearity between pollution and harm, and that, as in the case of some air pollutants, there be fairly extensively and deeply studied pollutants such as fine particulate matter.¹⁷⁷

As a general matter, the traceability prong of the standing inquiry remains a hurdle. Courts have shown some willingness to entertain novel theories on liability such as market share liability, even if courts have indicated a willingness to defer to legislatures in creating statutory remedies. However, the traceability prong still seems very important from a due process point of view. In that sense, this requirement, in that it reflects a fundamental value of our notion of justice, is a structural identifiability bias. Again, this is not to say that it is misplaced. But insofar as the traceability requirement systematically filters out environmental lawsuits, it is a bias that requires that the doctrine of standing be tweaked.

3. Redressability

The standing requirement that a plaintiff suffer a harm that is redressable is, in some ways, another way of establishing causation,¹⁷⁸ and as such, poses an identifiability bias. The way that the redressability requirement biases environmental law is similar to the way that the traceability requirement does: it filters out claims in which the link between polluter and victim is probabilistic or statistical in nature. Redressability is an even finer filter, however. Not only must there be some sort of a link between polluter and victim, but the claim must be such that the court can afford a remedy

173. 678 So. 2d 1239 (Fla. 1996). Significantly, the court stated in dicta that joint and several liability was also possible, although not as a concurrent theory with market-share liability. *Id.* at 1256-57.

174. Medicaid Third-Party Liability Act, FLA. STAT. § 409.910 (1995).

175. *Agency for Health Care*, 678 So. 2d at 1255-56. This scheme served as a template for tobacco liability in many other states, as well as in the Canadian province of British Columbia. *British Columbia v. Imperial Tobacco*, [2005] S.C.R. 49.

176. Shi-Ling Hsu & Austen L. Parrish, *Litigating Canada-US Transboundary Harm: International Environmental Lawmaking and the Threat of Extraterritorial Reciprocity*, 48 VA. J. INTL. L. 1, 41-45 (2007).

177. See *supra* note 46.

178. Mank, *supra* note 165, at 27.

to the victim.¹⁷⁹ With truly widespread pollution problems, such as global climate change, the difficulty of identifying not only the victims but also the defendants is manifest.

Enter *Massachusetts v. EPA*.¹⁸⁰ In holding that the EPA's refusal to regulate greenhouse gas emissions from automobiles, which account for about six percent of global carbon dioxide emissions,¹⁸¹ was a redressable harm, the Court swept away much of the identifiability bias embodied in the redressability requirement. Significantly, the Court held that "regulating motor-vehicle emissions will not by itself *reverse* global warming, [but] it by no means follows that we lack jurisdiction to decide whether EPA has a duty to take steps to *slow* or *reduce* it."¹⁸² Apparently, redressability no longer means that the court must be able to afford the plaintiff a *complete* remedy, something that would be impossible in most environmental disputes.

Before celebrating the victory for environmentalists, it is worth noting the reliance of the Court on the Clean Air Act's judicial review provision, which provides a right to petition for review of a long list of administrative transgressions.¹⁸³ The Court wrote that "a litigant to whom Congress has accorded a procedural right to protect his concrete interests . . . here, the right to challenge agency action unlawfully withheld . . . can assert that right without meeting all the normal standards for redressability and immediacy."¹⁸⁴ The Court perhaps consciously limits its holding to those situations where Congress has spoken—and has by statute pronounced that some environmental harms shall be considered redressable. While most other federal environmental statutes provide rights to seek judicial review of administrative decisions or to bring citizen suits to enforce non-discretionary lapses of administration,¹⁸⁵ injuries not connected with a federal statute may not be considered redressable if, as is the case for most environmental injuries, the injurers are many and therefore unidentifiable.

4. *Standing Requirements: A Filter as a Structural Bias*

Standing has been historically important in filtering out lawsuits with many plaintiffs on the theory that no single plaintiff can

179. *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 561-63 (1992).

180. 127 S. Ct. 1438 (2007).

181. *Id.* at 1458.

182. *Id.*

183. 42 U.S.C. § 7607(b)(1) (2006).

184. *Massachusetts*, 127 S. Ct. at 1453 (citations and internal quotations omitted).

185. *See, e.g.*, Clean Water Act § 505, 33 U.S.C. §1365 (2000); Comprehensive Environmental Response, Compensation, and Liability Act § 310, 42 U.S.C. § 9659 (2000); Toxic Substances Control Act § 19, 15 U.S.C. § 2618 (2000); Toxic Substances Control Act §§ 207(e)-207(f), 15 U.S.C. §§ 2647(e)-2647(f) (2000).

adequately represent the interests of everyone and no court can adequately adjudicate the rights of so many not appearing before it.¹⁸⁶ From one constitutional perspective, one championed by Justice Scalia,¹⁸⁷ legislatures are the appropriate bodies to deal with such questions, being elected bodies and having at their disposal greater fact-finding resources.¹⁸⁸ Under this view, an identifiability bias against widespread environmental harm is an *appropriate* reflection of our notions of judicial modesty and judicial economy— notions that are fundamental to our separation of powers.

But certainly the judiciary is not meant to punt *all* of these types of questions to legislatures. For one thing, the entire corpus of administrative law pertains to adjudications that, in some way, affect large classes of individuals with potentially disparate sets of interests, environmental interests being one of them.¹⁸⁹ The question then becomes to what extent our notions of judicial modesty and judicial economy conflict with our notion of the universality of justice.

The Court itself has wondered whether standing is truly a constitutional bar or a rule of self-restraint which, if counterbalanced by sufficiently compelling policy considerations, could be broken.¹⁹⁰ Even Justice Roberts, in his scathing dissent in *Massachusetts v. EPA*, acknowledges so much, complaining that the Court had created “SCRAP [*U.S. v. Students Challenging Regulatory Agency Procedures*] for a new generation,”¹⁹¹ which has become “emblematic not of the looseness of Article III standing requirements, but of how utterly manipulable they are if not taken seriously as a matter of

186. For example, in class action lawsuits, plaintiffs “must allege and show that they personally have been injured, not that injury has been suffered by other, unidentified members of the class to which they belong and which they purport to represent.” *Warth v. Seldin*, 422 U.S. 490, 502 (1975).

187. Justice Scalia is well known for his skepticism of environmental claims, denying standing to an environmental organization that had alleged actual injury to its members because the allegations were not geographically specific enough, *Lujan v. Nat’l Wildlife Fed’n*, 497 U.S. 871 (1990), and because the allegations did not include concrete, specific plans to study an endangered species that was jeopardized by a challenged governmental action, *Lujan v. Defenders of Wildlife*, 504 U.S. 555 (1992).

188. Mank, *supra* note 165, at 21-22 (citing, among others, *Lujan*, 504 U.S. at 576-77; *Duke Power Co. v. Carolina Env’tl. Study Group, Inc.*, 438 U.S. 59, 80 (1978); *United States v. Richardson*, 418 U.S. 166, 176-77 (1974)).

189. STEPHEN G. BREYER ET AL., *ADMINISTRATIVE LAW AND REGULATORY POLICY: PROBLEMS, TEXT, AND CASES* 3 (4th ed. 1999).

190. *Flast v. Cohen*, 392 U.S. 83, 92 (1968); *see also* Louis L. Jaffe, *Standing to Secure Judicial Review: Private Actions*, 75 HARV. L. REV. 255, 303 (1961).

191. *Massachusetts v. Env’tl. Prot. Agency*, 127 S. Ct. 1438, 1471 (2007) (Roberts, C.J., dissenting) (citing *United States v. Students Challenging Regulatory Agency Procedures*, 412 U.S. 669 (1973)). The SCRAP case is considered of questionable precedential value. *See Lujan*, 497 U.S. at 889 (“The SCRAP opinion, whose expansive expression of what would suffice for § 702 review under its particular facts has never since been emulated by this Court, is of no relevance here . . .”).

judicial self-restraint.”¹⁹² But if standing is just a rule of self-restraint, how are courts to evaluate the tenuousness of claims for standing purposes, and decide when to exercise self-restraint?

To answer this question, it is useful to repeat a thought exercise posed earlier in this Article: what if we could actually name, see, and identify certain victims of pollution the way that we can identify victims of a plane crash? What if we knew, beforehand, the names of 30,000 individuals that would die in the coming year from air pollution from power plants? What would we then demand of our judicial system in terms of seeking redress? Would we not be in an uproar if the judiciary simply demurred, “it’s not my job?”

Certainly, courts have not constricted standing in the way that Justice Scalia had hoped.¹⁹³ Rather, subsequent cases show some openness in interpreting injury-in-fact.¹⁹⁴ But courts have still been skeptical of injuries to unidentifiable individuals. As Professor Robin Kundis Craig has argued, courts have historically been unduly skeptical of environmental claims, ironically “dissociating” public health concerns with the concept of “injury.”¹⁹⁵ Even when federal statutes have *specified* public health objectives and health-based standards,¹⁹⁶ courts have often used the injury-in-fact inquiry to search for *private* injury, seemingly bypassing any thought of public injury.¹⁹⁷ In so doing, one is tempted to conclude that some judges are really just skeptical of links between pollution and public health, or injury to anybody.¹⁹⁸ If that is true, one wonders if a restrictive standings analysis is really about judicial modesty or judicial hubris.

192. *Id.*

193. Robert V. Percival, *Environmental Law in the Twenty-first Century*, 25 VA. ENVTL. L.J. 1, 28 (2007) (“The retirement of Justice Sandra Day O’Connor also opens up the possibility that the Court will revive Justice Scalia’s long-standing campaign to restrict the standing of environmental plaintiffs . . .”).

194. *See, e.g.*, *Friends of the Earth, Inc., v. Laidlaw Envtl. Servs. (TOC), Inc.*, 528 U.S. 167, 183-84 (2000) (“[T]he affiant members’ reasonable concerns about the effects of those discharges, directly affected those affiants’ recreational, aesthetic, and economic interests.”); *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 582 (1992) (Stevens, J., dissenting) (“[W]e have no license to demean the importance of the interest that particular individuals may have in observing any species or its habitat, whether those individuals are motivated by esthetic enjoyment, an interest in professional research, or an economic interest in preservation of the species.”); *City of Davis v. Coleman*, 521 F.2d 661, 671-72 (9th Cir. 1975); *Scenic Hudson Pres. Conference v. Fed. Power Comm’n*, 354 F.2d 608, 615-17 (2d Cir. 1965), *cert. denied*, 384 U.S. 941 (1966).

195. Craig, *supra* note 43, at 155.

196. *Id.* at 158-74.

197. *Id.* at 174-83.

198. Justice Scalia, who has campaigned vigorously for a restricted standing doctrine for environmental plaintiffs (and realized such in *Defenders of Wildlife v. Lujan* and *Lujan v. National Wildlife Federation*), nevertheless found it obvious that the Endangered Species Act protected, within its zone of interests, the interests of regulated property owners to be free of “needless economic dislocation produced by agency officials zealously but unintelligently pursuing their environmental objectives.” *Bennett v. Spear*, 520 U.S. 154, 176-77 (1997). In another Endangered Species Act case, Scalia bitterly dissented from

C. *Bias in Administrative Agencies – Regulatory Reform*

Regulatory agencies, as extensions of the executive branch of government, are responsive to the same kinds of political pressures as the executive. As in the case of legislative and judicial identifiability biases, the less obvious and more troubling cases are those in which an identifiability bias is formalized or made routine in a way that permanently or systematically affects administrative decisionmaking. For administrative agencies, laws and regulations that institutionalize a preference for identifiable constituents are too common and too inconspicuous to sound warning bells.

As noted in Part IV.C. above, Bureau of Land Management (BLM) field officials have typically paid much more attention to identifiable constituents—their neighbors—than unidentifiable ones—environmentalists—even if the latter are given a voice by Washington D.C. lawmakers and bureaucrats. In fact, much of this preference for local interests is written into regulations. Regulations of grazing permits to private individuals utilizing federal public land emphasize the need to “consult, cooperate, and coordinate with” grazing permittees. BLM officials must “consult, cooperate, and coordinate with” affected permittees whenever the bureau issues or renews any lease,¹⁹⁹ modifies the terms of any lease,²⁰⁰ adjusts grazing boundaries,²⁰¹ and certainly when it plans to implement a reduction or a closure or partial closure of federally-leased rangeland.²⁰² This rigid adherence to a process guaranteeing access to identifiable grazing permittees also guarantees that everyone else,

a majority ruling that certain land use prohibitions did not amount to a compensable “taking” under the Fifth Amendment to the Constitution, opining that “[t]he Court’s holding that the hunting and killing prohibition *incidentally* preserves habitat on private lands imposes unfairness to the point of financial ruin—not just upon the rich, but upon the simplest farmer who finds his land conscripted to national zoological use.” *Babbitt v. Sweet Home Chapter of Cmty. for a Great Or.*, 515 U.S. 687, 714 (1995) (Scalia, J., dissenting) (emphasis added). Judge David Sentelle of the Court of Appeals for the D.C. Circuit has similarly expressed disbelief that the ESA could possibly halt development activity, writing in *National Association of Home Builders v. Babbitt* that

we may take it as a given that the statute forbidding the taking of endangered species can be used, provided it passes constitutional muster, to prevent counties and their citizens from building hospitals or from driving to those hospitals by routes in which the bugs smashed upon their windshields might turn out to include the Delhi Sands Flower-Loving Fly or some other species of rare insect. That leaves the question for today as: by what constitutional justification does the federal government purport to regulate local activities that might disturb a local fly?

130 F.3d 1041, 1061 (D.C. Cir. 1997) (Sentelle, J., dissenting).

199. 43 C.F.R. § 4130.2(b) (2006).

200. *Id.* § 4130.3-3(a).

201. *Id.* § 4110.2-4.

202. *Id.* § 4110.3-3. Interestingly, until 2006, this latter regulation also required the consultation with “the interested public.” 43 C.F.R. § 4110.3-3 (1995).

including the federal taxpayer, will be under-represented. Because this is such a formalized, routine process, the identifiability bias is more a matter of the structure of administrative decisionmaking than a random effect on a random decisionmaker.

Access, participation, and transparency have always been demanded from parties affected by administrative decisionmaking. From the earliest days of the administrative state, there has been steady pressure for reform, and it has typically taken the form of a call for greater transparency and accountability.²⁰³ The Administrative Procedure Act²⁰⁴ (APA), enacted in 1946, requires federal agencies to follow a set procedure for rulemaking that includes announcement of the proposed rulemaking,²⁰⁵ and an opportunity for public comment²⁰⁶ at least thirty days before a final rulemaking can be made and published.²⁰⁷ In 1990, Congress provided a means of further liberalizing the rulemaking process, passing the Negotiated Rulemaking Act of 1990,²⁰⁸ which authorized agencies to include regulated parties in the very process of developing a rule, by creating “negotiated rulemaking committee[s]” that would include not only agency officials but “significantly affected” persons.²⁰⁹ The idea behind negotiated rulemaking was to make the administrative rulemaking process less adversarial, more cooperative, and more conducive to constructive information sharing,²¹⁰ goals that seemed difficult to quibble with.²¹¹

Of course, negotiated rulemaking provides greater transparency, accountability, and greater representation—for identifiable parties. It is telling that the preamble states that “[n]egotiated rulemaking, in which *the parties who will be significantly affected by a rule* participate in the development of the rule, can provide significant advantages over adversarial rulemaking,” and that “[n]egotiated

203. David Markell, “Slack” in *the Administrative State and its Implications for Governance: The Issue of Accountability*, 84 OR. L. REV. 1, 7-19 (2005).

204. 5 U.S.C. §§ 551-559 (2006).

205. *Id.* § 553(b).

206. *Id.* § 553(c).

207. *Id.* § 553(d).

208. Pub. L. No. 101-648, 5 U.S.C. §§ 581-590 (1990).

209. 5 U.S.C. § 565 (1990).

210. The preamble to the Act includes findings such as “[a]gencies currently use rulemaking procedures that may discourage the affected parties from meeting and communicating with each other, and may cause parties with different interests to assume conflicting and antagonistic positions and to engage in expensive and time-consuming litigation over agency rules,” and “[a]dversarial rulemaking deprives the affected parties and the public of the benefits of face-to-face negotiations and co-operation in developing and reaching agreement on a rule . . . [and] deprives them of the benefits of shared information, knowledge, expertise, and technical abilities possessed by the affected parties.” Pub. L. No. 101-648, §§ 2(2), 2(3).

211. See William Funk, *Bargaining Toward the New Millennium: Regulatory Negotiation and the Subversion of the Public Interest*, 46 DUKE L.J. 1351, 1353 (1997) (noting that virtually all of the academic literature was supportive of the Act).

rulemaking can increase the acceptability and improve the substance of rules, *making it less likely that the affected parties will resist enforcement or challenge such rules in court.*²¹² The question raised by more skeptical scholars was, what about those not represented in the negotiated rulemaking committees?²¹³ As William Funk has pointed out, it is odd that the Act contemplates participation in the negotiated rulemaking process by “parties,” but there is no mention of the public or its interest.²¹⁴ Perhaps even more revealing, the Act requires that the “convenor”—the person charged with assembling a negotiated rulemaking committee—must ascertain the names of persons who are willing and qualified to represent interests that will be “significantly affected by [the] proposed rule, *including residents of rural areas.*”²¹⁵ Just who did Congress have in mind when the Negotiated Rulemaking Act was drafted? “Residents of rural areas” probably does not mean environmental organizations or public interest organizations.

Following on the heels of negotiated rulemaking, the Clinton administration, facing strong challenges from congressional Republicans who sought to curb environmental and ecological regulation, embarked upon a series of initiatives that it dubbed as “regulatory reinvention.”²¹⁶ The specific reinvention initiatives also had catchy names, such as “Project XL,” “Habitat Conservation Planning,” and “Brownfields redevelopment,” and each created a somewhat formalized program of agency negotiation with regulated and potentially regulated parties.²¹⁷ Project XL was an initiative that authorized the EPA to grant ad hoc waivers to regulated parties to undertake activities if the EPA believed that the ultimate result would be “superior environmental performance.”²¹⁸ Habitat Conservation Planning authorized the U.S. Fish and Wildlife Service to grant incidental take permits under the Endangered Species Act if a landowner facing ESA would agree to undertake super-compensatory mitigation measures to improve endangered species

212. Pub. L. No. 101-648 § 2(4-5) (emphases added).

213. Cf. Funk, *supra* note 211, at 1382-87 (“Thus, agencies are influenced to see their role not as serving the public interest, but as generating a consensus among the parties to the negotiation. Public choice theory is not resisted; it is adopted with a vengeance.” *Id.* at 1386.); Susan Rose-Ackerman, *Consensus Versus Incentives: A Skeptical Look at Regulatory Negotiation*, 43 DUKE L.J. 1206, 1211 (1994). (“[R]egulatory negotiation is not democratically legitimate unless all interested parties are adequately represented. Agreement among only the subset of interests that have organized advocates is not sufficient.”).

214. Funk, *supra* note 211, at 1382-87.

215. 5 U.S.C. § 583(b)(2) (emphasis added).

216. Hsu, *supra* note 84, at 33.

217. See *infra* notes 218-19.

218. Regulatory Reinvention (XL) Pilot Projects: XL Community Pilot Program, 60 Fed. Reg. 55569-02 (Nov. 1, 1995).

habitat and if permitted actions will “not appreciably reduce the likelihood of survival of the species in the wild.”²¹⁹ The Brownfields Redevelopment program allowed the EPA to grant a landowner immunity under the Comprehensive Environmental Response, Compensation and Liability Act²²⁰ (CERCLA) if she agreed to undertake some cleanup measures that might not otherwise be required or undertaken.

All of these reinvention measures, developed in a congressional climate that was decidedly hostile to government regulation and to the Democratic Clinton administration, were responses to pressures to make regulatory agencies more responsive and flexible.²²¹ The result was a regime of negotiation with regulated parties. The effect, of course, was to formally and *structurally* grant access and a voice to regulated parties. Environmental organizations, to the extent that they represent the public interest of unidentifiable individuals, were generally not at the table. And while there is no empirical evidence that the regulatory bargains struck under reinvention programs were systematically disadvantageous to the public interest,²²² one worries about the effect of having a whole system of essentially *ex parte* negotiations.²²³

Administrative agencies make mistakes. The identifiability bias is one class of errors that administrative agencies can make. Stakeholders to administrative decisions thus demand some transparency and even participation in order to protect themselves from administrative error. Given the vast amounts of information about any specific administrative dispute, it seems logical to open up administrative decisionmaking processes to stakeholders. But this is the crux of the structural identifiability bias. Just small amounts of information about only some stakeholders are enough to influence decisionmaking. In retrospect, it seems obvious: with increased transparency and participation comes influence. Unidentified individuals will never fully benefit from transparency or participate.

219. 16 U.S.C. § 1539(a)(2)(B)(iv) (2000).

220. 42 U.S.C. §§ 9601-9675 (2000).

221. Hsu, *supra* note 84, at 34.

222. *Id.* at 38-42.

223. See, e.g., Rena I. Steinzor, *Reinventing Environmental Regulation: The Dangerous Journey from Command to Self-Control*, 22 HARV. ENVTL. L. REV. 103, 141-43 (1998). Before Regulatory Reinvention, there was Negotiated Rulemaking, the regulatory practice developed in the early 1990s to engage interested parties in a rulemaking *before* a rule is drafted up and published for public comment by the agency. See, e.g., Philip J. Harter, *Assessing the Assessors: The Actual Performance of Negotiated Rulemaking*, 9 N.Y.U. ENVTL. L.J. 32, 32 (2000). With this earlier experience as well, public interest organizations were shut out and many worried that regulated agencies were being hoodwinked by regulated parties. Funk, *supra* note 211, at 1371-74 (1997); Rose-Ackerman, *supra* note 213, at 1210.

VI. WHY DO STRUCTURAL IDENTIFIABILITY BIASES FORM?

An extended discussion of liberalism and its influence on Western democratic political systems is beyond the scope of this Article, but it is worth a brief digression to illustrate why identifiability biases run so deep and how systematic and unconscious this bias is against environmental protection.

Liberalism, in all its various forms,²²⁴ has one defining characteristic: a focus on the rights and autonomy of *individuals*.²²⁵ Americans, having adopted a Lockean liberalism,²²⁶ with its particular concern with the protection of private property rights,²²⁷ have taken up in earnest this emphasis on individual rights, casting

224. A roster of “liberals” would include a very diverse list of political philosophers, political scientists, and legal scholars from Locke, who is most frequently associated with the ideal of private property rights protection, *see, e.g.*, JOHN LOCKE, SECOND TREATISE OF GOVERNMENT ch. XI, § 138 (1690) (“[T]he supreme power cannot take from any man any part of his property without his own consent.”), to Rawls, best known for an unflinching concern for those least well off, *see, e.g.*, JOHN RAWLS, A THEORY OF JUSTICE 62 (1971) (“All social values—liberty and opportunity, income and wealth, and the bases of self-respect—are to be distributed equally unless an unequal distribution of any, or all, of these values is to everyone’s advantage.”), and from Mill, a utilitarian, *see, e.g.*, JOHN STUART MILL, UTILITARIANISM 10 (Bobbs-Merrill 1957) (“The creed which accepts as the foundation of morals ‘utility’ or the ‘greatest happiness principle’ holds that actions are right in proportion as they tend to promote happiness; wrong as they tend to produce the reverse of happiness.”), to Dworkin, a critic of utilitarianism, *see, e.g.*, RONALD DWORKIN, TAKING RIGHTS SERIOUSLY, at vii (Harvard Univ. Press, 2001) (“This is the theory of utilitarianism, which holds that law and its institutions should serve the general welfare, and nothing else The critical portions of these essays criticize both parts of the theory”). Hence, as Rogers M. Smith has written, “[t]here was, of course, never any single, authoritative version of liberalism.” ROGERS M. SMITH, LIBERALISM AND AMERICAN CONSTITUTIONAL LAW 13 (1985).

225. WILL KYMLICKA, MULTICULTURAL CITIZENSHIP: A LIBERAL THEORY OF MINORITY RIGHTS 34 (1995) (“A liberal democracy’s most basic commitment is to the freedom and equality of its individual citizens. This is reflected in constitutional bills of rights, which guarantee basic civil and political rights to all individuals”); SMITH, *supra* note 224, at 14 (“Liberalism’s most distinctive feature is thus its insistence that government should be limited so as to free individuals to undertake private as well as public pursuits of happiness, even if this option erodes public spiritedness in practice.”).

226. *Id.* at 15 (“Locke is crucial . . . because the political philosophy of liberalism is historically linked with a whole range of distinctive developments that are best encompassed in his writings, such as parliamentary movements, new constitutional limits on government, economic mercantilism and nascent capitalism.”); *id.* at 16 (“[Locke] defines the principles liberals pursue; and Americans have always evaluated constitutional doctrines and devices largely in terms of their serviceability for liberal ends.”); LAURENCE H. TRIBE & MICHAEL C. DORF, ON READING THE CONSTITUTION 70-71 (1991) (“Undoubtedly, one of the most influential thinkers for American statesmen of that era was the seventeenth-century English political philosopher John Locke.”).

227. LOCKE, *supra*, note 224, Ch. VII, § 87 (“Man being born . . . with a title to perfect freedom and an uncontrolled enjoyment of all the rights and privileges of the law of Nature, equally with any other man . . . hath by nature a power . . . to preserve his property - that is, his life, liberty, and estate, against the injuries and attempts of other men.”); *Id.* Ch. IX, § 124 (“The great and chief end, therefore, of mens uniting into commonwealths, and putting themselves under government, is the preservation of their property.”); TRIBE & DORF, *supra* note 226, at 71 (“In his *Second Treatise on Government*, Locke spelled out a natural rights theory of the origin of private property.”).

most constitutional questions as one of state versus individual.²²⁸ In privacy cases such as *Olmstead v. United States*,²²⁹ in which a liquor trafficker contested a wiretapping-aided conviction on Fourth Amendment grounds, one would expect a great judicial tussle over the scope of individual rights. In an enduring dissent, Justice Brandeis declared that the Constitution conferred on individuals, “as against the government, the right to be let alone”²³⁰ But even in seemingly purely economic cases such as *Chicago, Milwaukee & St. Paul Railway Co. v. Minnesota*,²³¹ a railroad rate regulation case, the Court took on a palpable individual rights focus, upholding plaintiffs’ complaint that unfavorable freight tariffs were “*pro tanto* a taking and depriv[ed] the company of its property without due process of law.”²³² In *McCulloch v. Maryland*,²³³ the Court actually wondered if the Constitution’s Necessary and Proper Clause²³⁴ authorized the federal government to establish a national bank of the U.S., even in the wake of a five-year period of brutal inflation and economic chaos. Private banks feared, and the Court feared for them, that the federal bank would simply be a profit-making corporation with a competitive advantage by virtue of being free from state taxation.²³⁵ Even the very nature of the U.S. Constitution—that of enumerated, not inherent, powers and authorizing the federal government to act only within the ambit of the enumerated powers²³⁶—is a basis for limiting federal governmental action.

228. LAURENCE H. TRIBE, *AMERICAN CONSTITUTIONAL LAW* 2 (2d ed. 1988) (“That all lawful power derives from the people and must be held in check to preserve their freedom is the oldest and most central tenet of American constitutionalism.”). The question of “regulatory takings” has clearly been couched in terms of the power of the state to take versus constitutional protections of private property. Constitutional law scholar Richard Epstein, in his book on regulatory takings of property, writes

This book is an extended essay about the proper relationship between the individual and the state. . . . The question of governance is how the natural rights over labor and property can be preserved in form and enhanced in value by the exercise of political power, defined by Locke “to be a right of making laws with penalties of death, and consequently all less penalties, for regulating and preserving of property, and of employing the force of the community in the execution of such laws”

RICHARD EPSTEIN, *TAKINGS: PRIVATE PROPERTY AND THE POWER OF EMINENT DOMAIN* 3 (1985).

229. 277 U.S. 438 (1928).

230. *Id.* at 478.

231. 134 U.S. 418 (1890).

232. *Id.* at 440-41.

233. 17 U.S. 316 (1819).

234. “Congress shall have [the] Power . . . [t]o make all Laws which shall be necessary and proper for carrying into Execution the foregoing Powers, and all other Powers vested by this Constitution” U.S. CONST. art. I, § 8.

235. *THE OXFORD COMPANION TO THE SUPREME COURT OF THE UNITED STATES* 536-38 (Kermit L. Hall ed., 1992) (discussing *McCulloch v. Maryland*, 17 U.S. 316 (1819)).

236. JOHN E. NOWAK & RONALD D. ROTUNDA, *CONSTITUTIONAL LAW* 118 (5th ed. 1995).

In focusing upon the constant power struggle between individuals and states, however, this liberal perspective deflects attention from the beneficiaries of state action. State action is always undertaken with some public benefit in mind, even if public choice theorists would view it with skepticism. In fact, this skepticism, itself a product of a focus on individual rights, has been incorporated into institutions, practices, and doctrines in a way that guarantees a level of protection of property and economic rights. The protection of the right “to be let alone” has become such a basic instinct in public policy that it has structurally protected all manner of activities and land uses that produce environmental externalities.

Take for example the pervasive practice of grandfathering, which derives inspiration from Article I, section 9 of the Constitution, which provides that “No Bill of Attainder or ex post facto Law shall be passed.”²³⁷ This prohibition on ex post facto regulation applies to criminal prosecutions, not environmental regulations,²³⁸ but the Constitutional enshrinement of such a prohibition is a strong signal to lawmakers that our system of government very reluctantly imposes hardships by virtue of changes in law. No grandfathering statute has specifically invoked Locke, but who can miss the obvious motivation of protecting property and economic rights, especially those activities that are economically productive in nature, those that “mix” labor with property?²³⁹

So, too, with regulatory reform, there is always an animating theme of protecting important property and economic rights from administrative action, a theme dating back to the *Chicago, Milwaukee & St. Paul Railway Co. v. Minnesota* case.²⁴⁰ In a legal system in which administrative adjudications are becoming more and more important, liberal instincts ensure that individual rights are not trampled by arbitrary and capricious administrative action. So providing “accountability” from administrative agencies and greater “access” for regulated parties are goals that are clearly driven by liberal instincts to protect property and economic rights in the face of

237. U.S. CONST. art. I, § 9.

238. See *Cummings v. Missouri*, 71 U.S. 277, 299 (1866).

239. Locke famously theorized that ownership of property can come about by mixing one’s labor with property. LOCKE, *supra* note 224, § 20. Locke is most often and ardently invoked by civil libertarians advocating for smaller government, but there is literature suggesting that Locke himself might not have been as enthusiastically libertarian. Locke was more interested in an “ordered” liberty—meaning protection for the landed gentry, rather than for the masses, and Locke recognized the need for strong governmental authority to preserve that order. See, e.g., David DeGroot, *The Liberal Tradition and the Constitution: Developing a Coherent Jurisprudence of Parental Rights*, 78 TEX. L. REV. 1287, 1296-99 (2000) (noting that Locke also wrote, in addition to his famous passages on individual rights, that “every particular man must part with his right to his liberty and entrust the magistrate with as full a power over all his actions as he himself hath”).

240. 134 U.S. 418 (1890).

an ever-expanding administrative state. Even the notion of separating the central powers of federal government, inspired by Montesquieu,²⁴¹ has as its goals the prevention of accumulation of federal power and the protection of individual rights.²⁴² Hence, even the doctrine of standing, a key separator of powers in the federal government, can be traced to a liberal concern for individual rights.

Of course, liberals have a ready answer: an important part of the liberal state is the harm principle, which calls for governmental action to prevent harm to some individuals within the state.²⁴³ But “harm,” as Albert Lin has noted, is an extremely difficult notion to wrestle down when one speaks of environmental harms.²⁴⁴ Here is where liberals fail the environment: relying upon the amorphous harm principle as the sole justification for any infringement of individual rights creates an inherent inertia. In effect, environmental causes have been saddled with the burden of proof, and proof is often hard to come by in environmental cases. If the requirement is to produce a victim and a concrete harm, the environmental side is at a severe disadvantage because of the inherent difficulty of identifying victims. The less identifiable an individual is, the less concrete the harm.

If a legal system is established that presumptively honors the exercise of individual liberty and individual rights, but is willing to entertain grievances of harm imposed by one upon another, great importance is attached to the characterization of the harm. So what if, as in the case of many environmental harms, the harm is difficult to prove and difficult to attach to identifiable individuals? Herein lies the irony of the Dworkin class of liberals, who subscribe to Dworkin’s concept of rights as “trumps”²⁴⁵ in order to correct power imbalances. The irony is that those powerful and narrow interests that are the source of governmental failure have much more adroitly exploited the “rights” concept than have any public interest organizations, particularly environmental ones.

241. BARON DE MONTESQUIEU, *THE SPIRIT OF THE LAWS* 152 (Franz Neumann ed., Thomas Huent, trans., Hafner Press 1949) (“Again, there is no liberty, if the judiciary power be not separated from the legislative and executive. Were it joined with the legislative, the life and liberty of the subject would be exposed to arbitrary control; for the judge would be then the legislator. Were it joined to the executive power, the judge might behave with violence and oppression.”).

242. TRIBE, *supra* note 228, at 2-3.

243. JOHN STUART MILL, *ON LIBERTY* 68 (Gertrude Himmelfarb ed., Penguin Classics 1974) (1859) (“That the only purpose for which power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others.”).

244. Lin, *supra* note 159, at 921.

245. Ronald Dworkin famously wrote that rights are “political trumps held by individuals.” DWORKIN, *supra* note 224, at xi.

VII. COUNTERING THE IDENTIFIABILITY BIAS

A. *The Occasional Environmental Bias*

Those advocating on behalf of environmental causes have not missed out completely on the identifiability effect. Occasionally, an environmental catastrophe occurs that draws attention to a specific, identifiable group of persons. In such circumstances, sympathy for identifiable victims, and sometimes outrage at identifiable polluters, creates a groundswell for change and overwhelms any legislative or executive resistance. These are the occasional identifiability biases in favor of environmental protection.

In the mid-1970s, fifty-five-gallon drums of toxic waste began surfacing in the Niagara Falls community of Love Canal.²⁴⁶ Heavy rains had caused landfill caps to erode, and property that had been used as a toxic chemical disposal site spilled contaminants into an entire neighborhood.²⁴⁷ Within the course of a week in April of 1978, New York State Health Commissioner Robert Whalen declared the area a public health threat. By August, Whalen had ordered the evacuation of all women and children in the area; New York Governor Hugh Carey announced the state purchase of 238 homes in the area and the evacuation of all residents; and President Jimmy Carter dispatched federal funding to assist in the relocation and clean-up.²⁴⁸ Media attention was intense and no doubt drove legislative and executive impulses to act decisively. The result was the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)²⁴⁹ or “Superfund” law, which passed in the House of Representatives by a vote of 351 to 23 and was adopted by the Senate two months later, becoming law on December 11, 1980.²⁵⁰

It has been argued that the “availability heuristic”²⁵¹ explains the unusual decisiveness on the part of state and federal lawmakers. This probably accounts for some of the momentum for legislation, but not all of it. Media frenzies never last more than a few weeks, but this account played out over the course of at least two years, culminating in the law’s passage in 1980. Identifiability provides a more enduring explanation for the continued interest in passing Superfund. The media frenzy died down, but the words “Love Canal” will forever conjure up a memory of what happened to a group of *people*. In addition to reducing the reference group size to that of a

246. University at Buffalo Libraries, Love Canal @ 25 Exhibit, <http://ublib.buffalo.edu/libraries/asl/exhibits/lovecanal.html> (last visited Feb. 15, 2008).

247. *Id.*

248. *Id.*

249. 42 U.S.C. §§ 9601-9675 (2000).

250. See Library of Congress, THOMAS, H.R. 7020, <http://thomas.loc.gov/cgi-bin/bdquery/z?d096:HR07020:@@X>.

251. Jolls et al., *supra* note 32, at 1520-22, and accompanying text.

community of several thousand residents, the Love Canal story was successful because most Americans could identify, and identify with, the middle-class residents of Love Canal. Because media attention was intense, images and footage of Love Canal residents and their travails became familiar fare to the American TV-viewing public. Even without environmental organizations driving a campaign, the identifiability effect attached itself to the Love Canal story and propelled it into history, as the genesis of one of the most important and copied environmental statutes.²⁵²

Other events have similarly seized public attention and locked focus onto a group of identifiable individuals in a way that has produced reform or legislation. In the wake of the horrendous tragedy in Bhopal, India, in which thousands of people were killed by an accidental release of methyl isocyanite,²⁵³ and in the wake of an eerily similar incident in West Virginia,²⁵⁴ Congress passed the Emergency Planning and Community Right-to-Know Act. The act required firms with “extremely hazardous” substances to report their possession to the EPA and to local authorities and to coordinate with local authorities on emergency plans.²⁵⁵ In Canada, a scandalous cover-up of an *E. coli* bacteria problem by local water officials caused an outbreak in Walkerton, Ontario that killed seven people and sickened thousands, some permanently,²⁵⁶ and this also led to a number of regulatory and legislative changes throughout Canada.²⁵⁷ From time to time, these events affecting a *specific* population serve as reminders of the human consequences of environmental malfeasance.

What about structural obstacles to remedying environmental harms? Can environmental plaintiffs overcome standing obstacles, for instance? Occasionally, environmentalists can find an identifiable

252. CERCLA has been copied by jurisdictions throughout the world. A number of states have their own “Superfund statutes.” See Ronald G. Aronovsky, *Back from the Margins: An Environmental Nuisance Paradigm for Private Cleanup Cost Disputes*, 84 DENV. U. L. REV. 395, 424 (2006). Most recently, the province of British Columbia passed the B.C. Environmental Management Act, which contains provisions that are, in many places, identical to the language of CERCLA. Michael J. Robinson-Dorn, *The Trail Smelter: Is What’s Past Prologue? EPA Blazes a New Trail for CERCLA*, 14 N.Y.U. ENVTL. L.J. 233, 310 (2006).

253. Joseph J. Lisa, *Negligence-Based Environmental Crimes: Failing to Exercise Due Care Can be Criminal*, 18 VILL. ENVTL. L.J. 1, 22 (2007).

254. PERCIVAL ET AL., *supra* note 156, at 483.

255. 42 U.S.C. §§ 11001-11050 (2000).

256. *Canadian Man Jailed for Role in E. Coli Outbreak*, EPOCH TIMES, Dec. 20, 2004, <http://english.epochtimes.com/news/4-12-20/25115.html>.

257. DAVID R. BOYD, UNNATURAL LAW: RETHINKING CANADIAN ENVIRONMENTAL LAW AND POLICY 18, 355 n.16 (2003) (noting the passage of the Ontario Safe Drinking Water Act, 2002 S.O., ch. 32 (Can.), the Quebec Drinking Water Regulation, R.R.Q. ch. Q-2, r. 4.1 (2003), the Manitoba Drinking Water Safety Act, R.S.M., ch. 36, D-101 (2002) (Can.), and the Saskatchewan Environmental Management and Protection Act, 2002 S.S., ch. E-10.21 (Can.)).

proxy for environmental harm, if there is a specific individual or group that can satisfy the injury-in-fact requirement. The Inuit people of Alaska and Northern Canada, whose way of life is highly dependent upon the integrity of the Arctic ecosystem, constitute a highly identifiable group of people.²⁵⁸ More importantly, however, they may be said to be suffering a “concrete and particularized” injury from global climate change.²⁵⁹ The National Snow and Ice Data Center in Boulder, Colorado recently reported that the average sea ice extent for September 2007 had shrunk to a shocking record low that was 23 percent lower than the previous record for the month of September, and that the Northwest Passage had opened for the first time in recorded history.²⁶⁰ The 4th IPCC Assessment, released in February 2007, made it quite clear that the shrinkage in Arctic sea ice is the result of human activity.²⁶¹ While there remains substantial uncertainty about the specific effects of global climate change, almost every credible projection includes a prediction that the Arctic Ocean will become significantly warmer, floating sea ice will become much more rare—probably disappearing during summers—and the entire balance of life will be changed, with the result that the traditional Inuit life that includes whaling and hunting would likely be

258. For Inuit Circumpolar Conference (ICC) Chair and lead petitioner, Sheila Watt-Cloutier, a petition and hearing is the latest of her attempts to leverage the identifiability of her people to gain support for action on climate change. Petition of Sheila Watt-Cloutier, Petition to the Inter American Commission on Human Rights Seeking Relief from Violations Resulting from Global Warming Caused by Acts and Omissions of the United States (Watt-Cloutier v. U.S.) (Dec. 7, 2005), *available at* http://www.ciel.org/Publications/ICC_Petition_7Dec05.pdf [hereinafter ICC PETITION]. Long aware of the power of the identifiability of her people, she urged in a 2002 speech to the Harvard Club of Ottawa that “climate change is not to Inuit solely an environmental or even an[] economic issue, it is a matter of cultural health and survival. The media use images of disappearing ice and thinner and fewer polar bears to characterize climate change in the North. We need to give climate change a human face—an Inuit face.” Inuit Circumpolar Council Conference, Inuit in Global Issues, Speaking at the Harvard Club, Feb. 4, 2002, <http://www.inuitcircumpolar.com/index.php?ID=78&Lang=En>.

259. *See, e.g.*, Rachel D’oro, *Coastal Alaskans Face Physical, Cultural Erosion*, BOSTON GLOBE, Dec. 27, 2006, at A6 (describing how the Inuit people of the coastal town of Newtok have had to move for the second time in fifty years due to flooding and erosion, typical of many Alaskan native villages—184 out of 213— that have been trying to adjust to warmer temperatures, persistent flooding, and a dramatic shrinkage of sea ice and concomitantly shorter hunting seasons).

260. Press Release, National Snow and Ice Data Center, Arctic Sea Ice Shatters All Previous Record Lows (Oct. 1, 2007), http://nsidc.org/news/press/2007_seaiceminimum/20071001_pressrelease.html.

261. 4TH IPCC, *supra* note 68, at 10. The observed widespread warming of the atmosphere and ocean, together with ice mass loss, support the conclusion that it is *extremely unlikely* that global climate change of the past fifty years can be explained without external forcing, and *very likely* that it is not due to known natural causes alone. *Id.* The 8.1% and 23.2% figures are derived by multiplying the IPCC estimates of 2.7% of ice loss per decade by the three decades since 1978. Similarly, 23.2% is 7.4% times three. *Id.* at 8.

impossible.²⁶² And that would in turn mean a breakup of the cultural customs that are predicated upon a cold, frozen, climate.

While the interests of the Inuit do not coincide perfectly with that of all humankind in reducing greenhouse gases, they overlap sufficiently for the Inuit to be an effective proxy. A lawsuit brought by Inuit peoples against those responsible for greenhouse gas emissions would serve the dual purposes of vindicating a variety of property rights of the Inuit²⁶³ and spurring the reduction of greenhouse gases, to the benefit of everyone.²⁶⁴

B. *More Systematic Fixes for the Identifiability Bias*

The diffuse nature of most environmental harms means that the pertinent reference group is large, and therefore not easily identifiable, at least not as identifiable as a group that might be harmed by regulation. If we are certain that this is true at least half the time, then there exists a bias against environmental regulation. Environmentalists will too often lose a people-based debate, more often than if lawmakers were given information about unidentifiable victims.

How, then, to counter the identifiability bias? This Article proposes three types of strategies for curbing identifiability biases, both incidental and structural. First, environmental lawmaking should generally be drafted liberally with “absolute” terms, or terms that provide environmental protection with a “trump.”²⁶⁵ Where there

262. See, e.g., DAVID HUNTER ET AL., INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 626 (2d ed. 2002) (discussing international consensus that greenhouse emissions were having a substantial effect on the environment).

263. See, e.g., Nunavut Waters and Nunavut Surface Rights Tribunal Act, 2002 S.C., ch. 10 (Can.), available at <http://dsp-psd.communication.gc.ca/Collection-R/LoPBdP/LS/371/c33-e.htm>; Nunavut Land Claims Agreement, 1993 S.C., ch. 29 (Can.), available at http://www.ainc-inac.gc.ca/pr/agr/nunavut/index_e.html. The Nunavut Land Claims Agreement, apart from creating a separate Canadian territory, was a settlement agreement between the Inuit people and the government of Canada. See Preamble – Nunavut Land Claims Agreement, http://www.ainc-inac.gc.ca/pr/agr/nunavut/pre_e.html.

264. See Shi-Ling Hsu, *A Realistic Evaluation of Climate Change Litigation Through the Lens of a Hypothetical Lawsuit*, 78 U. COLO. L. REV. (forthcoming 2008). The Inuit Circumpolar Conference (ICC), an organization representing the Northern Aboriginal people of all Northern countries, has filed a petition with the Inter-American Commission on Human Rights (IACHR) in Washington, D.C., a human rights branch group of the Organization of American States. ICC PETITION, *supra* note 258. While the Commission cannot issue any declarations with legal import, its findings of fact may have some precedential value in a court of law, should lawsuit be brought. The IACHR initially rejected the petition when it was filed in December 2005, but announced that it would reconsider that decision, holding a hearing on March 1, 2007, to determine whether the impacts of climate change constitute a human rights violation within the meaning of its charter. See, e.g., *Human Rights Body Reconsiders Inuit Climate Change Petition*, CBC NEWS, Feb. 6, 2007, <http://www.cbc.ca/canada/north/story/2007/02/06/climate-hearing.html>.

265. Amy Sinden, *In Defense of Absolutes: Combating the Politics of Power in Environmental Law*, 90 IOWA L. REV. 1405, 1410-11 (2005).

is a legal provision that has as its purpose the protection of some environmental good, discretion should be viewed as the enemy. Discretion in environmental disputes has more often than not resulted in some adjustment in favor of a regulated group.²⁶⁶ Second, where absolutes are not appropriate or possible for political reasons (and they will often not be), legislative and administrative action should be more frequently guided by cost-benefit analysis. Cost-benefit analysis still contains many flaws and is still susceptible to manipulation. But it is less susceptible to manipulation than many alternative decisionmaking tools, and it is entirely possible that a good many of the flaws can be ameliorated with a set of “best practices” or standards by which to evaluate the cost-benefit analysis.²⁶⁷ Third, since environmental harm often affects large groups, environmental claims should be brought, when possible, by large groups. Whereas a small risk to an individual does not seem like “harm” in the sense that a court is likely to entertain, a substantial risk to members of a population is more likely to be considered “harm.” Class action lawsuits are one way of addressing diffuse environmental harms; a more general strategy of claim aggregation, with attendant legal theories to support such claims, is called for.

1. *Curbing Discretion: The ESA*

For all the trouble that the Endangered Species Act (ESA) has been through, it is worth bearing in mind that in its application, it has actually been quite consistent in its primary goal of preserving biological diversity. Whatever one’s view on the ESA—and there are certainly detractors²⁶⁸—few would argue that courts and administrative agencies have been forced to pay some attention to biological diversity because of the ESA. Few would have predicted that the U.S. Supreme Court in *Tennessee Valley Authority v. Hill*²⁶⁹ would rule against the Tennessee Valley Authority and rule in favor of protecting the habitat of the ugly, useless, three-inch-long snail darter. Plaintiff’s attorney and now Professor Zygmunt Plater, representing the snail darter and suing to stop completion of a dam that would have destroyed the habitat of the snail darter, found himself responding to a skeptical Justice Powell, who asked, “[w]hat

266. *Id.*

267. See Daniel H. Cole, Towards ‘Best Practice’ Standards in Environmental Benefit-Cost Analysis, at 3, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=918834#PaperDownload.

268. See Dirk Kempthorne, Governor of Idaho, *RX for the ESA: The Endangered Species Act at Thirty*, in SPECIES PROTECTION AND THE LAW: ENDANGERED SPECIES ACT, BIODIVERSITY PROTECTION, AND INVASIVE SPECIES CONTROL 223 (ALI-ABA Course of Study Apr. 6-8, 2005).

269. 437 U.S. 153 (1978).

are these fish good for, anyway? Can you eat them? Are they good for bait? And isn't that the question that everybody would want to ask? Why stop a humongous hydroelectric dam for a stupid little minnow?"²⁷⁰ As all environmental lawyers know, Plater was famously successful in winning the case, but not in convincing Justice Powell, who bitterly dissented, calling the cessation of construction of the dam an " 'absurd result'—in the words of the District Court of this case" and calling for the imposition of "common sense."²⁷¹ Chief Justice Burger's majority opinion, however, is the one that has endured:

One would be hard pressed to find a statutory provision whose terms were any plainer than those in § 7 of the Endangered Species Act. Its very words affirmatively command all federal agencies "to *insure* that actions *authorized, funded, or carried out* by them do not *jeopardize* the continued existence" of an endangered species This language admits of no exception. . . . Concededly, this view of the Act will produce results requiring the sacrifice of the anticipated benefits of the project and of many millions of dollars in public funds. But examination of the language, history, and structure of the legislation under review here indicates beyond doubt that Congress intended endangered species to be afforded the highest of priorities.²⁷²

Both Justice Powell's dissent and Chief Justice Burger's majority opinion contain important lessons for drafters of future environmental statutes. Justice Powell's call for "common sense" is a cautionary flag: common sense is code for subconsciously yielding to some kind of identifiability bias.²⁷³ Common sense will invariably draw people to looking at the *tangible* human aspects of environmental decisionmaking, and for all the reasons set out in this Article, will slant the decisionmaking in favor of the more tangible humans.²⁷⁴

270. Zygmunt J.B. Plater, Mercer University College of Law Virtual Guest Speaker Program, Topic: The Snail Darter, The Tellico Dam, and Sustainable Democracy—Lessons for the Next President from a Classic Environmental Law Controversy (Feb. 12, 2002), <http://www.law.mercer.edu/elaw/zygplater.html#lecture>.

271. *Tenn. Valley Auth. v. Hill*, 437 U.S. at 196 (Powell, J., dissenting).

272. *Id.* at 173-74 (citations omitted).

273. Although the Court was interested in the costs of the dam, it is worth remembering that the costs are only meaningful because they signify some sort of tangible human suffering. The Tellico Dam was part of a regional economic development plan, one that would help create jobs in a chronically depressed Southeastern Tennessee economy. Plater, *supra* note 270.

274. One wonders whether Justice Powell would have dissented as bitterly had the plaintiffs found a way to emphasize the plight of the 340 farmers who had land in the area to be flooded by the Tellico Dam and whose properties were taken to make way for the dam. Professor Plater's lecture contains some anecdotes about some of the more colorful farmers that resisted the condemnation and subsequent dam construction. *Id.* Because of

Chief Justice Burger's opinion provides guidance on how to counter the "common sense" identifiability bias. As Professor Plater emphasized, the mandatory nature of the ESA—the fact that the ESA provides that "[e]ach federal agency *shall*" ensure that its actions do not jeopardize endangered species²⁷⁵ has made all the difference. This is not to deny critics of the ESA that mandatory provisions of this nature sometimes create their own escape hatches;²⁷⁶ but no one can argue that the ESA, because of its mandatory, discretion-curbing provisions, has not served as a powerful impediment to the extinguishment of endangered species.

Mandatory or "absolute" provisions in legislation or regulations can cure some identifiability biases. The ESA prevented the U.S. Supreme Court from exercising a bias. Some biases, especially structural ones, can be cured; a regulatory takings case—with a constitutional question—would obviously trump even a statute with mandatory provisions. But if public lands grazing reform were ever to take place, surely some of the vast discretion that has been conferred upon local BLM officials would be best replaced with absolute provisions. For those cases in which the political stars are aligned and there exists a mandate for true environmental reform, the use of absolute provisions as environmental "trumps"²⁷⁷ would have to be an important way of curbing the identifiability bias. Particularly when there are irreversible environmental effects involved—such as species extinction—some absolutism seems to be a properly draconian form of environmental regulation. And even if regulatory reform continues to soak into administrative decisionmaking, it would certainly be possible to include some absolute provisions into the rulemaking and regulatory negotiation rules that protect environmental interests.

2. *Curbing Discretion: NEPA*

Another beacon for environmentalists is the National Environmental Policy Act (NEPA),²⁷⁸ one of the most copied statutes in the world.²⁷⁹ One of the few parsimonious U.S. environmental

the formal eminent domain proceedings, however, the farmers had no real legal basis on which to object. *Id.*

275. 16 U.S.C. § 1536(a)(2) (2000) (emphasis added); Plater, *supra* note 270 ("Tell me about the word 'shall.' If it were 'may,' nothing would have happened.")

276. See Andrew P. Morriss & Richard L. Stroup, *Quartering Species: The "Living Constitution," the Third Amendment, and the Endangered Species Act*, 30 ENVTL. L. 769, 806 (2000) (describing how habitat conservation plans provided relief from the otherwise absolute prohibitions of the ESA).

277. See Sinden, *supra* note 265, at 1484.

278. National Environmental Policy Act, 42 U.S.C. §§ 4321-4347 (2000).

279. Percival estimates that over eighty countries and twenty-five states have adopted some form of NEPA. PERCIVAL ET AL., *supra* note 156, at 783.

statutes, NEPA simply requires that federal agencies undertaking federal actions (that would include permitting private parties to undertake activities that fall under the jurisdiction of the agency) conduct an assessment of the environmental impacts of the activity.²⁸⁰ NEPA imposes no substantive obligations on an agency,²⁸¹ and NEPA does not require that an agency “elevate environmental concerns over other appropriate considerations.”²⁸² Agencies enjoy a fairly lenient “arbitrary, [or] capricious” standard of review under the Administrative Procedure Act.²⁸³ But NEPA has bared its procedural teeth often in its thirty-five year history, requiring agencies to go back and repeat sloppily-done review processes and requiring agencies to take into account information that it had failed to consider the first time around.²⁸⁴ NEPA has even forced a federal agency to backpedal on commitments made to a highly identifiable aboriginal group on whaling rights because the agency did not engage in an environmental review before making the commitment.²⁸⁵

Like the ESA, NEPA has its own landmark improbable victories. For NEPA, the case *Calvert Cliffs’ Coordinating Committee, Inc. v. U.S. Atomic Energy Commission*²⁸⁶ was a watershed event. The D.C. Circuit Court of Appeals required the Atomic Energy Commission to not only perform an environmental impact statement pursuant to NEPA, but also to take it into account in its decision as to whether to license a nuclear power plant.²⁸⁷ To lawyers unfamiliar with administrative law or environmental law, the holding seems absurd—forcing the Atomic Energy Agency to look at and consider its own reports seems like a surreal victory. Yet, forcing a very powerful agency to go back and redo a lengthy decision process under NEPA should not be trivialized. Although NEPA is “stunningly simple”—forcing agencies to stop, consider, and disclose the environmental

280. National Environmental Policy Act § 102, 42 U.S.C. § 4332 (2000).

281. See *Vt. Yankee Nuclear Power Corp. v. Natural Res. Def. Council*, 435 U.S. 519, 558 (1978).

282. *Strycker’s Bay Neighborhood Council, Inc. v. Karlen*, 444 U.S. 223, 227 (1980).

283. *Hanly v. Kleindienst*, 471 F.2d 823, 828 (2d Cir. 1972).

284. See, e.g., *Thomas v. Peterson*, 753 F.2d 754 (9th Cir. 1985) (requiring the consideration of environmental impacts of connected or related federal permitting activities); *Sierra Club v. U.S. Army Corps of Eng’rs*, 701 F.2d 1011 (2d Cir. 1983) (requiring consideration of information that was submitted by another federal agency and rejecting an agency’s reliance on information that was known to be inaccurate); *Calvert Cliffs’ Coordinating Comm., Inc. v. U.S. Atomic Energy Comm’n*, 449 F.2d 1109 (D.C. Cir. 1971) (requiring the Atomic Energy Commission to actually consider a report on the impacts of nuclear energy, rather than simply insert it in the administrative record).

285. *Metcalf v. Daley*, 214 F.3d 1135, 1145 (9th Cir. 2000).

286. 449 F.2d 1109 (D.C. Cir. 1971).

287. *Id.* at 1128-29.

impacts of a project²⁸⁸—the legislation has played an important role in a number of major environmental cases.²⁸⁹ Because it has achieved so much with so few words, it is hard not to admire NEPA’s “genius.”²⁹⁰

By contrast, the Canadian experience with environmental assessment provides an unfortunate example of what happens when permitting agencies are vested with wide discretion with respect to environmental impact assessments. While much of the Canadian Environmental Assessment Act (CEAA)²⁹¹ mimics NEPA, the inconsistency in judicial applications robs the CEAA of its effectiveness²⁹² and certainly prevents it from acting as a bulwark against identifiability bias.

In *Friends of the West Country Ass’n v. Canada*,²⁹³ a Canadian Federal Court of Appeal²⁹⁴ held that the permitting agency had the authority to determine the scope of a project for environmental assessment purposes. The issue comes up in environmental assessment cases in which a project proponent and a permitting agency segment a project into different phases, aspects, or components so as to make the environmental impacts seem small, even if the cumulative impacts of the whole project are large. The Federal Court of Appeal held, however, in an opinion by now Supreme Court Justice Marshall Rothstein, that the permitting agency responsible for the environmental assessment has wide discretion to determine the scope of the project.²⁹⁵ This was an incredible act of deference to the Canadian Coast Guard, which had permitted the construction of two bridges without requiring it to consider the cumulative effects of the bridges and the effects of the logging road that necessitated the bridges or the logging operations that would make use of the road and bridges.²⁹⁶ The environmental assessments for both of the bridges simply stated that the scope of the environmental assessment included the “site and downstream of

288. Bradley C. Karkkainen, *Toward a Smarter NEPA: Monitoring and Managing Government’s Environmental Performance*, 102 COLUM. L. REV. 903, 909 (2002).

289. See, e.g., notes 269-72, 282-84 and accompanying text.

290. Karkkainen, *supra* note 288, at 904. William Rodgers describes NEPA as “[t]he most admired of all the environmental laws It is admired for its form, its structure, and its robustness. It is praised for its eloquence of formulation and for the cleverness in the way it was attached to existing agency mandates.” William H. Rodgers, Jr., *The Most Creative Moments in the History of Environmental Law: The “Whats,”* 2000 U. ILL. L. REV. 1, 31.

291. 1992 S.C., ch. 37 (Can.).

292. See generally Andrew Green, *Discretion, Judicial Review, and the Canadian Environmental Assessment Act*, 27 QUEEN’S L.J. 785 (2002) (describing the vagueness of the CEAA and the Federal courts’ lack of improvement of the situation).

293. [1998] 4 F.C. 340.

294. The Canadian equivalent of the U.S. federal court of appeals.

295. *Friends of the West Country*, [1998] 4 F.C. 340 at paras. 12-28.

296. *Id.* at paras. 2-5, 12.

the bridge” and that the agency did not consider there to be any cumulative effects, since the bridge would be “isolated from other man-made structures by several kilometers.”²⁹⁷ No mention in either assessment was made of the other bridge, or of the logging road or subsequent logging operations.²⁹⁸ This case is on all fours with the U.S. case *Thomas v. Peterson*,²⁹⁹ in which the Ninth Circuit Court of Appeals invalidated an environmental assessment under NEPA that considered the construction of a logging road in isolation of the logging plan that had already been developed for the area. The difference? The CEAA does not have, as NEPA does, binding regulations on project scoping that mandates the inclusion of related projects in an environmental assessment. Canadian courts have given agencies wide latitude in determining what projects should be included in scoping and environmental assessment.³⁰⁰

While NEPA can certainly be improved,³⁰¹ it has been surprisingly successful in compelling agencies to confront and consider environmental effects that might otherwise be overlooked, even if no substantive result is required. NEPA may not have been drafted with unidentifiable individuals in mind, but it has been a great equalizer in forcing agencies to consider the interests of those less obviously affected by projects sponsored or permitted by federal agencies. And the procedural-only mandates of NEPA only underscore the main thesis of this Article—that what is most lacking is a *sustained attention* on those indirectly, remotely, or less obviously affected by projects having an impact on the environment.

3. Cost-Benefit Analysis

Curing structural identifiability biases requires structural reform, which, given the deep liberal roots of Western political and legal institutions, may be difficult. However, there is one structural reform that seems to have gained at least a toehold in the public policymaking realm: cost-benefit analysis. Although cost-benefit analysis is caricatured by some as a stratagem for deregulation,³⁰²

297. *Id.* at para. 31.

298. *Id.*

299. 753 F.2d 754, 761 (9th Cir. 1985).

300. In *Friends of the West Country*, Justice Rothstein did, however, rule that the Canadian Coast Guard abused its discretion in failing to take into account the cumulative impacts of the other projects, even if they were not included in the scope of the review. [1998] 4 F.C. 340 at paras. 30-40.

301. Brad Karkkainen has remarked that the NEPA process has often been “paper-rich but information-poor,” noting that the procedural requirements have forced agencies to produce documentation of their environmental considerations, rather than carefully taking account of the environmental considerations themselves. Karkkainen, *supra* note 288, at 909-37.

302. FRANK ACKERMAN & LISA HEINZERLING, PRICELESS: ON KNOWING THE PRICE OF EVERYTHING AND THE VALUE OF NOTHING 41-60 (2004). Ralph Nader, in a tribute to the

the use of cost-benefit analysis enjoys fairly bipartisan political acceptance, with President Clinton's adoption of the practice through Executive Order 12866.³⁰³ President Clinton's version of cost-benefit analysis was considerably more flexible than President Reagan's original Executive Order 12291, which provided that for "major" regulatory actions (defined as having an economic impact of \$100 million or more),³⁰⁴ "[r]egulatory action *shall not be undertaken* unless the potential benefits . . . outweigh the potential costs . . ."³⁰⁵ By contrast, President Clinton's executive order required agencies to assess costs and benefits and would only propose or adopt a regulation "upon a reasoned determination that the benefits . . . *justify* its costs."³⁰⁶ President Clinton's executive order thus mandates cost-benefit analysis, but only as a piece of important information, not a decision rule. A 2000 rulemaking for establishing a new arsenic standard for drinking water involved an extensive cost-benefit analysis; in the end, the EPA chose a level at which the costs of compliance slightly exceeded the benefits.³⁰⁷ EPA took the position that because of the exclusion of some nonquantifiable benefits, and given considerable uncertainties in the analysis, the benefits *justified* the costs, even if they did not exceed them.³⁰⁸ Given the continued uncertainties with respect to cost-benefit analysis—as the arsenic rulemaking demonstrates—this approach of being a "tool, not a rule," seems appropriate.

There continues to be substantial concern, led by academics, over the use of cost-benefit analysis in environmental law. Criticism takes one of two forms: (i) pointing out methodological flaws that render cost-benefit analysis unreliable,³⁰⁹ and (ii) categorical rejection, on mostly deontological grounds, of cost-benefit analysis as a policy-making tool.³¹⁰ The latter form of objection seems unhelpful,

book, wrote "*Priceless* takes apart the barren but intricate hokum of deregulatory formulaics that have duped key members of the mass media and frozen your rights to a cleaner, safer, and more efficient marketplace and environment." *Id.* at back cover.

303. Exec. Order No. 12,866, 58 Fed. Reg. 51,735 (Sept. 30, 1993).

304. Exec. Order No. 12,291, 46 Fed. Reg. 13,193 § 1(a)(3)(b)(1) (Feb. 17, 1981).

305. *Id.* § (a)(3)(e)(b) (emphasis added).

306. Exec. Order No. 12,866, 58 Fed. Reg. 51,735, § 1(b)(6) (emphasis added).

307. Environmental Protection Agency, National Primary Drinking Water Regulations, 66 Fed. Reg. 6976-01, 7022 (Jan. 22, 2001) (to be codified at 141 C.F.R. pt. 23).

308. *Id.*

309. See, e.g., SIDNEY A. SHAPIRO & ROBERT L. GLICKSMAN, RISK REGULATION AT RISK: RESTORING A PRAGMATIC APPROACH (2003); Lisa Heinzerling, *Markets for Arsenic*, 90 GEO. L.J. 2311 (2002) [hereinafter Heinzerling, *Markets for Arsenic*]; Lisa Heinzerling, *Regulatory Costs of Mythic Proportions*, 107 YALE L.J. 1981 (1998) [hereinafter Heinzerling, *Regulatory Costs*]; Lisa Heinzerling, *The Rights of Statistical People*, 24 HARV. ENVTL. L. REV. 189 (2000); Thomas O. McGarity, *A Cost-Benefit State*, 50 ADMIN. L. REV. 7 (1998); Richard W. Parker, *Grading the Government*, 70 U. CHI. L. REV. 1345 (2003).

310. ACKERMAN & HEINZERLING, *supra* note 302, at 35-40; MARK SAGOFF, THE ECONOMY OF THE EARTH 8-9 (1988).

especially when it involves one or two stories of cost-benefit analysis gone bad, followed by an extrapolation to all that is wrong with economics in environmental law.³¹¹ A more nuanced critique of cost-benefit analysis takes a meta-view of cost-benefit analysis and observes two things: (i) current U.S. environmental law, mostly legislated in the 1970s, was not driven by cost-benefit analysis; and (ii) in the current period of environmental inaction,³¹² cost-benefit analysis currently seems to be doing more to hinder environmental regulation than advance it.³¹³ Hence, this critique goes, advocates of cost-benefit analysis really haven't made the case that cost-benefit analysis can enhance environmental protection rather than, as critics charge, hinder it.

This meta-view critique is true as far as it goes, but ignores all else that could account for the current period of congressional and executive inaction. The fundamental problem with environmental law is that since the 1970s, public opinion on environmental law has become more nuanced and complex over time. A much ballyhooed 2004 essay, *The Death of Environmentalism*, argued that the failure of the environmental movement and of environmental organizations has been that they have ignored the changing view of environmentalism in an American household concerned with a variety of issues, many of which are economic.³¹⁴ This is bad news for academic environmentalists, as it demeans the importance of their profession, although the grand importance of global climate change may pull environmentalism back onto the front burner. But even if environmentalism gets a shot in the arm from the increasing

311. Ackerman and Heinzerling actually make great hay from the fact that Italian economist Vilfredo Pareto was one of Benito Mussolini's favorite teachers, and how Mussolini Mussolini "looked forward to every one [of Pareto's lectures]." ACKERMAN & HEINZERLING, *supra* note 302, at 33 (quoting BENITO MUSSOLINI, MY AUTOBIOGRAPHY 14 (1928)). As the authors point out, "Pareto's connection to Fascism is not usually mentioned in economics textbooks." *Id.* This suggestion that economists have fascist tendencies is somewhat inconsistent with Ackerman and Heinzerling's base claim that a group of antiregulatory zealots have captured the regulatory process. *Id.* at 41-60. Ackerman and Heinzerling also open their book with a particularly grievous example of an affluent driver who killed two elderly pedestrians while driving and using her cell phone, and argued that this kind of behavior is legitimized by the cost-benefit analyses that had been done on regulating the use of cell phones while driving. *Id.* at 1-3.

312. No major federal environmental legislation has passed since the 1990 Clean Air Act Amendments.

313. See, e.g., Robert R.M. Verchick, *The Case Against Cost-Benefit Analysis*, 32 ECOLOGY L.Q. 349, 372 (2005) (reviewing ACKERMAN & HEINZERLING, *supra* note 302).

314. Michael Shellenberger & Ted Nordhaus, *The Death of Environmentalism: Global Warming Politics in a Post-Environmental World* (2004), available at http://www.thebreakthrough.org/images/Death_of_Environmentalism.pdf. The essay was the subject of much discussion in the blogosphere, as well as print media. See, e.g., Felicity Barringer, *Paper Sets Off a Debate on Environmentalism's Future*, N.Y. TIMES, Feb. 6, 2005, § 1, at 18; Nicholas D. Kristof, *I Have a Nightmare*, N.Y. TIMES, Mar. 12, 2005, at A15.

awareness of global climate change, those arguing for greater environmental protection will still have to answer the question of how much, and how. That there is much low-hanging fruit to be currently picked to arrest climate change dodges that question.³¹⁵

No critic of cost-benefit analysis has truly grappled with the relation of environmentalism to the overall ordering of society. Virtually all environmental critics of cost-benefit analysis take as their starting point the unquestioned need for more environmental protection, without examining why. This Author agrees with that assessment, but gaining more popular acceptance of why we protect the environment is not a step that can be skipped over. This Article argues that one way to remind ourselves of the importance of protecting the environment is to remind ourselves of the unidentifiable beneficiaries of environmental law. In moving forward in a world that is concerned with the environment, but also economic concerns, cost-benefit analysis is one of the few ways of accounting for unidentifiable individuals.

The identifiability bias suggests that there must be some way of placing the unidentifiable victims of environmental harm on an equal footing with the identifiable economic victims of environmental regulation. To do this, there must be a common metric. One possible metric could be a measure of the total lives saved, but this has two problems. First, a lives-saved metric would ignore the many illnesses and non-fatal health problems caused by pollution. Failure to account for them would raise a bias itself. Second, a lives-saved metric would require an estimate of how many lives are saved by not spending money on environmental protection and instead investing money in economic growth. That economic growth produces more health is, at least in commonly accepted measures, beyond dispute. But exactly how much wealth produces an extra human life is a thorny question, one that as yet lacks the empirical support of the flipside question of how much a human life is “worth.”³¹⁶ Another possibility would be to include not just lives saved, but a whole menu of health benefits of pollution prevention.³¹⁷ However, this is just like cost-benefit analysis, except without the final step—some way of

315. See, STERN REVIEW, *supra* note 72 (noting that actions amounting to about 1% of world GDP may save 5% to 20% of world GDP, forever).

316. See, e.g., ROBERT W. HAHN ET AL., AEI-BROOKINGS JOINT CENTER FOR REGULATORY STUDIES, DO FEDERAL REGULATIONS REDUCE MORTALITY? (2000), available at <http://www.aei-brookings.org/admin/authorpdfs/page.php?id=106>; Randall Lutter et al., *The Cost-per-Life-Saved Cutoff for Safety-Enhancing Regulations*, 37 ECON. INQUIRY 599 (1999).

317. ACKERMAN & HEINZERLING, *supra* note 302, at 212-16.

grappling with the comparability of lives saved with other health outcomes.³¹⁸

When considered in this light, the idea of monetization becomes more palatable, if only because it can be used to measure the effects of so many kinds of environmental harm. Attempts to monetize some environmental harms are controversially inaccurate, but stopping there would beg the all-important question: how do we weigh the importance of the environmental benefits against the economic costs of regulation? The alternatives that have been suggested by environmental advocates and legal scholars thus far have their own problems, an extensive discussion of which is beyond the scope of this Article. Suffice it to say, however, that these alternative paradigms do not address the identifiability bias. Cost-benefit analysis addresses the identifiability bias because the measure of human sacrifice is not identifiability-dependent. The loss of human life and the illness caused by pollution is accounted for and balanced against the economic value of the pollution-producing activity. That we make this balancing is indisputable, as we very consciously undertake risk, as individuals and as a society. The goal of cost-benefit analysis ought to be to emulate how we undertake risks and reproduce it in environmental policy.

Since there is already a fair bit of current practice, and with a great deal of emphasis being placed on cost-benefit analysis under the Bush Administration,³¹⁹ how might cost-benefit analysis be changed to be more of an aide to environmental protection? First, critics are correct in that a great deal of variation does exist in cost-benefit practices,³²⁰ lending misplaced credence to the claim that it is “hopelessly indeterminate.”³²¹ A helpful way forward would be, as Professor Daniel Cole has suggested, convening a National Academy

318. Ackerman and Heinzerling argue that in evaluating a variety of risks to human health, “there is no formula.” *Id.* at 209. Given their vituperative prose, they even come perilously close to endorsing cost-benefit analysis:

Much of the information used in an atomistic analysis would also be relevant in what we call the holistic approach, where costs as a whole (usually monetary) and benefits as a whole (often largely nonmonetary) are considered together—but are not forced to be expressed in the same units. Scientific information on risks to life, health, and the environment, and economic data on the likely effects of regulation on businesses and individuals, are of obvious importance to decisions about public policy.

Id. at 212.

319. President Bush’s head of the Office of Information and Regulatory Affairs in the Office of Management and Budget was John D. Graham, a proponent of cost-benefit analysis and a frequent target of Ackerman and Heinzerling. *See, e.g.*, ACKERMAN & HEINZERLING, *supra* note 302 at 41; Lisa Heinzerling, *Risking it All*, 57 ALA. L. REV. 103, 109 (2005); Lisa Heinzerling, *Statutory Interpretation in the Era of OIRA*, 33 FORDHAM URB. L.J. 1097, 1100 (2006).

320. Cole, *supra* note 267, at 3.

321. Sinden, *supra* note 265, at 1454.

of Sciences panel to develop a set of “best practices” of cost-benefit analysis, against which agencies’ cost-benefit analyses might be judged for their veracity and usefulness.³²² All but the most vehement critics of cost-benefit analysis concede that if done properly, it can serve as an important piece of information. What has been sorely lacking is some credible account of what it means to do a cost-benefit analysis “properly.” The best chance at settling most of a bitter and sometimes personal debate³²³ is to call on a body such as the National Academy of Sciences, which still carries considerable weight and good repute. A set of standards would also help avoid the time-consuming turf wars between the Office of Management and Budget and the separate regulatory agencies, most notably EPA,³²⁴ and conduct a searching inquiry of a number of issues in need of resolution, including the appropriate social discount rate, if any.³²⁵

Second, few mechanisms currently exist in which a cost-benefit analysis is compelled in order to consider a regulation that was not yet in the making; the executive orders merely call for cost-benefit analysis when a regulation is proposed. The Office of Information and Regulatory Affairs at the Office of Management and Budget

322. Cole, *supra* note 267, at 3.

323. The following excerpts are illustrative of the sometimes personal nature of the debate:

It is not hard to discover who started the myths of absurdly expensive regulations. Follow the footnotes back to the original sources, and again and again they lead to the same few, repeatedly cited studies, by John Morrall, John Graham, Tammy Tengs, Ralph Keeney, W. Kip Viscusi, and Randall Lutter. The tales of ‘killer regulations’ are based on just a handful of authors, and on an even smaller handful of hard facts.

Lisa Heinzerling & Frank Ackerman, Comment, *The Humbugs of the Anti-Regulatory Movement*, 87 CORNELL L. REV. 648, 649 (2002).

Richard Belzer, Robert Crandall, John Graham, Wendy Gramm, Robert Hahn, Thomas Hopkins, Robert Litan, Randall Lutter, John Morrall, and W. Kip Viscusi are not exactly household names. But they have had an influence on attitudes towards protective regulation that is out of all proportion to their name recognition and their size as a group. These analysis and their institutional homes . . . are responsible for generating the critical pieces of ‘antiregulatory’ data and analysis, upon which the second Bush administration bases its ardently pro-industry stance.

ACKERMAN & HEINZERLING, *supra* note 302, at 41.

Any close observer of the regulatory process has learned by now that the government often requires the expenditure of a huge sum of money—sometimes billions of dollars—to save a single human life. She has also learned that there are many regulatory options available that would produce the same benefits at a far lower cost. She has learned these things largely from a table prepared during the 1980s by an economist at the Office of Management and Budget named John Morrall.

Heinzerling, *Regulatory Costs*, *supra* note 309, at 1983.

324. See, e.g., Cole, *supra* note 267, at 8-20; Eric A. Posner, *Controlling Agencies With Cost-Benefit Analysis: A Positive Political Theory Perspective*, 68 U. CHI. L. REV. 1137 (2001).

325. See, e.g., Cole, *supra*, note 267, at 8-20; Douglas A. Kysar, *Discounting, On Stilts*, 74 U. CHI. L. REV. 119 (2007).

(OMB) can send a “prompt letter” to federal agencies “to suggest an issue that OMB believes is worthy of agency priority.”³²⁶ In other words, this is a way that OMB can tell agencies about a problem worthy of regulation. It would be unfair to say that OMB has idled this mechanism, having issued thirteen prompt letters since 2001, when the prompt letter was created. Prompt letters have called for regulation requiring the labeling of foods containing transfatty acids,³²⁷ the maintenance by certain employers of automatic external defibrillators,³²⁸ greater disclosure for federal housing lenders Fannie Mae and Freddie Mac,³²⁹ better disclosure of data under the EPA’s toxic release inventory,³³⁰ and, if one were generous, a prompt letter was one of many forces pushing EPA to develop a rule regarding particulate matter pollution.³³¹ However, in the hands of an agency that has as its primary mission the questioning of regulation,³³² this does not seem quite enough.

In addition to endorsing Professor Cole’s proposal, this Article immodestly proposes a new mechanism: the *citizen prompt letter*. Like citizen suits, the citizen prompt letter is intended to provide a voice to otherwise under-represented interests. However, something more must be required than the simple, three-page requests that the

326. Office of Management and Budget, OIRA Prompt Letters, http://www.whitehouse.gov/omb/inforeg/prompt_letter.html [hereinafter OMB Prompt Letter Web Site] (last visited Feb. 15, 2008).

327. Letter from John D. Graham, Administrator, Office of Information and Regulatory Affairs, to Tommy G. Thompson, Secretary of Health and Human Services (Sept. 18, 2001), available at http://www.whitehouse.gov/omb/pubpress/hhs_prompt_letter.html.

328. Letter from John D. Graham, Administrator, Office of Information and Regulatory Affairs, to John Henshaw, Assistant Secretary of Labor, Occupational Health and Safety Administration (Sept. 18, 2001), available at http://www.whitehouse.gov/omb/pubpress/osha_prompt_letter.html.

329. Letter from John D. Graham, Administrator, Office of Information and Regulatory Affairs, to Armando Falcon, Jr., Director, Office of Federal Housing Enterprise Oversight (May 29, 2002), available at http://www.whitehouse.gov/omb/inforeg/prompt_ofheo_052902.html. The prompt letter was sent to the Office of Federal Housing Enterprise Oversight (OFHEO), the agency regulating housing lenders Fannie Mae and Freddie Mac, urging the agency to mandate greater disclosures from the federal lenders. OFHEO responded that they were working “expeditiously to complete the review and develop proposals for a rulemaking.” Letter from Armando Falcon, Jr., Director, Office of Federal Housing Enterprise Oversight, to John D. Graham, Administrator, Office of Information and Regulatory Affairs (June 28, 2002), available at http://www.whitehouse.gov/omb/inforeg/prompt_ofheo_response.pdf. In December, 2004, scandal over unorthodox and misleading accounting practices forced out several Fannie Mae officials, including, ironically, former OMB director Franklin Raines. David S. Hilzenrath, *Fannie Mae’s Top Executives Leaving Firm*, WASH. POST, Dec. 22, 2004, at A01.

330. Letter from John D. Graham, Administrator, Office of Information and Regulatory Affairs, to Kim T. Nelson, Assistant Administrator, Office of Environmental Information, U.S. Environmental Protection Agency (Mar. 4, 2002), available at http://www.whitehouse.gov/omb/inforeg/epa_tri3_prompt030402.html.

331. Robert W. Hahn & Cass R. Sunstein, *A New Executive Order For Improving Federal Regulation? Deeper and Wider Cost-Benefit Analysis*, 150 U. PA. L. REV. 1489, 1523 (2002).

332. *Id.* at 1523-24.

OIRA director can issue,³³³ otherwise it would be simple to flood an agency with spurious requests. I thus propose that unlike the current prompt letter process, a citizen prompt letter must be supported by a cost-benefit analysis, demonstrating that the benefits of a proposed regulation would exceed the costs. Agencies would be required within some period of time to respond to requests by any person calling for study of a regulation, if the request is supported by a *credible* cost-benefit analysis that the costs of regulation would be outweighed by the benefits. What would “credible” mean? That is something that the future National Academy of Sciences panel would help determine. For those that would worry that such a mechanism would produce a flurry of frivolous requests, the mere trouble of compiling a cost-benefit analysis would surely discourage the gadfly environmentalist from flooding agencies with regulation requests. Second, with a set of National Academy of Sciences best practices standards in place, it would be an easier administrative matter to summarily dismiss those requests and cost-benefit analyses that do not pass muster.

As in the case of prompt letters, an agency response could be of the nature of “you’re right, we’re working on it.”³³⁴ In the case of a request not supported by a cost-benefit analysis or attached to a cost-benefit analysis that does not meet standards set out by the National Academy of Sciences panel, an agency response could simply be of the nature “go away, your request does not meet the standards required of [the code provisions governing submission of citizen prompt letters].” While it is true that this process will certainly generate disputes over what cost-benefit analyses pass muster and which do not, and while it is true that some agencies will, out of sheer laziness, issue some “go away” letters even where regulation is warranted, our lessons from NEPA indicate that the mere existence of this process is important. Agencies often respond perfunctorily to comments about rulemaking, but that does not diminish the importance of the process of notice and comment itself. The fact that regulated industries spend millions of dollars in legal fees submitting comments through their lawyers, or that environmental organizations spend an enormous amount of energy submitting comments, is evidence of the innate importance of the notice and comment process. For cost-benefit critics who find fault with the

333. See generally OMB Prompt Letter Web Site, *supra* note 326.

334. See, e.g., Letter from Armando Falcon, Jr., Director, Office of Federal Housing Enterprise Oversight, to John D. Graham, Administrator, Office of Information and Regulatory Affairs (June 28, 2002), available at http://www.whitehouse.gov/omb/infoereg/prompt_ofheo_response.pdf; Letter from Christine Todd Whitman, Administrator, U.S. Environmental Protection Agency, to John D. Graham, Administrator, Office of Information and Regulatory Affairs (Mar. 12, 2002), available at http://www.whitehouse.gov/omb/infoereg/prompt_pm.pdf.

transparency of cost-benefit analysis,³³⁵ a citizen prompt letter process could not make the situation worse, and could well make it better. Any response from an agency other than “go away” would reveal some information about the assumptions of the agency in balancing costs and benefits.

This proposal must certainly bring more information into administrative agencies. The question might then be, would this process bring *too much* information into an agency? Would citizen prompt letters provide information that would *skew* an agency’s view of a problem? In particular, does a citizen prompt letter proposal heighten the danger of rent-seeking through regulation?

George Stigler’s *The Theory of Economic Regulation*,³³⁶ the inspiration for much public choice theory and the intellectual grist for much of what became the deregulation movement, might suggest that if citizen prompt letters lead to more regulation, overall economic efficiency might be ill-served. Stigler’s focus was more on economic regulation, where the state’s power to coerce may be used to restrict entry into markets and protect incumbents.³³⁷ This danger is not trivial with respect to environmental regulation. Most environmental lawyers are familiar with Ackerman and Hassler’s *Clean Coal/Dirty Air*, in which the authors explain the imposition of scrubber technology on coal-fired power plants as a way of preserving mining jobs, because mandating scrubber technology preserved the usefulness of the dirty, high-sulfur coal mined in the Appalachians.³³⁸ The victims of such rent-seeking are those that may have benefited from market entry or who may have prospered by an electricity industry much less dependent upon coal—ironically, unidentifiable victims. But Stigler’s concern with rent-seeking is considerably more troubling in the area of economic regulation than in environmental regulation.

For this reason, and because this Article only seeks to correct biases in environmental law, I propose, as an experimental first step, that *only the EPA* be made to respond to citizen prompt letters. Doubtless, there are many other agencies that issue environmental regulations from time to time, and virtually all federal agencies carry out activities that have some environmental impacts. But as this might be considered by some to be a fairly radical proposal, it seems prudent to focus initial efforts on studying this process on only one

335. Heinzerling, *Markets for Arsenic*, *supra* note 309, at 2333.

336. George Stigler, *Economic Regulation*, *supra* note 111.

337. *Id.* at 5-6 (describing how the Civil Aeronautics Board artificially restricted entry into aviation and how savings and loan regulation has limited competition in banks, and hypothesizing that “the regulatory policy will often be so fashioned as to retard the rate of growth of new firms”).

338. BRUCE A. ACKERMAN & WILLIAM T. HASSLER, *CLEAN COAL/DIRTY AIR* 31 (1981).

agency, and on the one that makes a controversial use of cost-benefit analysis.

This Author has written elsewhere on the problems of command-and-control environmental regulation, on the preferability of a taxation scheme or a tradeable permit scheme,³³⁹ but the rent-seeking possibilities in environmental abatement, of the sort chronicled by Ackerman and Hassler, seem less dangerous. For one thing, a cost-benefit analysis would, in this author's opinion, reveal the economic and environmental superiority of a taxation scheme or a tradeable permits scheme. Second, there may be environmental engineering firms that wish to mandate installation of their particular abatement technology, but there will also be firms that would be required to pay for that technology, that would resist regulation. The history of environmental law is not dotted with instances of over-regulation.³⁴⁰

This proposal would supplant none of the existing executive orders, rules, regulations, and administrative law that speak to rulemaking, administrative procedure, or cost-benefit analysis. Promulgating a new rule would still require a "reasoned determination that the benefits justify its costs."³⁴¹ All of administrative law, including notice and comment provisions, remain. All that this proposal adds is the ability for citizens and citizen groups to participate in the cost-benefit analysis and to use cost-benefit analysis in a way that may advance regulation, not just question it.

Would Congress go for such a proposal? It is certainly possible, of course, and perhaps even probable, that such a program would increase the strain on agency resources. But in a time in which neither environmentalists nor regulated industry groups are happy with the job that federal agencies are doing, does it not make sense to open up agencies to more citizen input? Every administrative law scholar has either argued or acknowledged that agencies have trouble collecting pertinent information on regulation; this proposal would simply force agencies to consider the cost-benefit information that is thrust before them. Of course, filtering out the useless, non-credible information is time-consuming, but the value of incoming

339. Shi-Ling Hsu, *What's Old is New: The Real Problem with New Source Review*, 36 ENVTL. L. REP. 10095 (2006); Shi-Ling Hsu, *Some Quasi-behavioral Arguments for Environmental Taxation*, in 5 CRITICAL ISSUES IN ENVIRONMENTAL TAXATION (Nathalie Chalifour et al. eds., forthcoming 2008).

340. *But see* Hahn & Sunstein, *supra* note 331, at 1490-93. One of the authors' main points, however, is that cost-benefit analysis would reduce the instances of over-regulation, a proposition with which this Author has no quarrel. *See id.*

341. Exec. Order No. 12,866, 58 Fed. Reg. 51,735, § 1(b)(6) (Sept. 30, 1993). President Clinton's Executive Order 12,866 was amended by President Bush's Executive Order No. 13,422, 72 Fed. Reg. 2763 (Jan. 18, 2007).

information must surely outweigh the administrative hassle of sifting. Throw in an apparent increase in congressional interest in the concept of cost-benefit analysis,³⁴² and this proposal may actually be a political winner.

The political winds have changed, subtly enough that most Washington, D.C. environmentalists and academic environmentalists have failed to notice that while the median voter remains concerned about the environment, she is also concerned with economic well-being, especially in a globalized world of brutal economic competition. Despite this, most important new initiatives aimed at strengthening environmental protection would probably justify themselves quite easily, if only the effort were made to compare the benefits with the costs. With some adjustments and some enhanced credibility lent by National Academy of Sciences intervention, cost-benefit analysis may serve an important role in garnering some representation of the interests of unidentifiable individuals.

4. *Claim Aggregation*

The nature of environmental and ecological harms is, at least for most ex ante wrongs, probabilistic. For example, the environmental wrong that is perpetrated by a polluter upon some downwind population is an increase in risk of some disease caused by the pollution. From an individual perspective, such inchoate harm is generally not actionable under traditional tort principles.³⁴³ In *Metro-North Commuter Railroad Co. v. Buckley*,³⁴⁴ the Supreme Court rejected a claim for risk damages by a pipefitter that had been negligently and repeatedly exposed to asbestos dust by his employer. Writing for a seven-member majority, Justice Breyer ruled that absent any physical symptoms of asbestos-related illness, the exposure did not amount to an actionable “physical impact” that would support a claim for negligently inflicted emotional distress.³⁴⁵ Importantly, Justice Breyer seemed particularly concerned with the potential that an award of damages in a case like this would open the floodgates to more claims, many of which would be fraudulent.³⁴⁶ In

342. Hahn & Sunstein, *supra* note 331, at 1508.

343. Claire Finkelstein, *Is Risk a Harm?*, 151 U. PA. L. REV. 963, 964 n.4 (2003) (citing W. PAGE KEETON ET AL., PROSSER AND KEETON ON THE LAW OF TORTS § 30 (5th ed. 1984)); John C.P. Goldberg & Benjamin C. Zipursky, *Unrealized Torts*, 88 VA. L. REV. 1625, 1636-37 (2002).

344. 521 U.S. 424 (1997).

345. *Id.* at 430-33. The claim was founded on the Federal Employers’ Liability Act, 45 U.S.C. § 51 et seq., which codified many common law rules, including plaintiff’s negligent infliction of emotional distress claim.

346. *Id.* at 433-34 (“Those reasons [of public policy for limiting negligent infliction of emotional distress claims] include (a) special ‘difficult[y] for judges and juries’ in separating valid, important claims from those that are invalid or ‘trivial,’ . . . (b) a threat of

other words, Justice Breyer feared, as does traditional tort law, that harmed plaintiffs may simply be too hard to identify in order to justify recovery.

Given the difficulty facing individual plaintiffs exposed to *potential* harm, or an *increased risk of harm*³⁴⁷ (which describes many environmental wrongs), persons exposed to large-scale environmental risks would be well-advised to aggregate large-scale risk-based claims,³⁴⁸ through, among other mechanisms, class action lawsuits. The lack of individualized adjudication that has civil proceduralists wringing their hands³⁴⁹ is a small price to pay if the alternative is no legal recognition at all of any claim.³⁵⁰ Individuals have had difficulty establishing a harm from risk on an individual level, but risks imposed upon a population actually result in harm to a *statistically* identifiable number of individuals within the population, translating a mere risk of harm into an actual harm, albeit not suffered by every individual within that population. Whereas individual plaintiffs such as Buckley, having only a risk to show as harm and having a hard time meeting the threshold of proof, a group of individuals may be able to meet the burden as a group, because they can show with statistical certainty that *some* of which will suffer harm. Moreover, a collectivized claim for the imposition of a risk, if successful, serves deterrence and compensation policies of tort law.³⁵¹

An aggregation of claims for environmental wrongs in the form of heightened risk exposure helps solve the identifiability problem not only because the evidentiary task is less onerous than it would be for individualized claims, but also because it creates a reference group that is smaller and thus more identifiable than that of simply society at large. An aggregation of plaintiffs creates a reference group that can be thought of as having suffered a group wrong—a downwind community that now faces higher rates of lung cancer, or a community with a toxic waste problem and a higher incidence of childhood leukemia. This is heuristically much easier to envision and identify, and therefore stands a better chance of overcoming the kind of legislative and judicial resistance that has plagued environmental advocacy in the past. While not every environmental wrong will take on the status of a Love Canal or a Woburn or a Bhopal, the creation

‘unlimited and unpredictable liability,’ . . . and (c) the ‘potential for a flood’ of comparatively unimportant, or ‘trivial,’ claims.” *Id.* at 433).

347. Andrew R. Klein, *A Model for Enhanced Risk Recovery in Tort*, 56 WASH. & LEE L. REV. 1173, 1179-82 (1999).

348. David Rosenberg, *Individual Justice and Collectivizing Risk-Based Claims in Mass-Exposure Cases*, 71 N.Y.U. L. REV. 210 (1996).

349. *Id.* at 212-14 (Professor Rosenberg’s lament).

350. *Id.* at 241-48.

351. *Id.* at 236-48.

of a discrete reference group will at least counterbalance the identifiability bias, while the aggregation of wrongs serves to create a legally cognizable harm.

Environmental advocates can learn from lawyers representing mass claimants in other substantive areas. Securities fraud and antitrust violations share much in common with environmental wrongs. All three types of wrongs involve harms that might be small when viewed from an individual perspective, but since they may involve many individuals, can be quite large in the aggregate. All three typically involve many unidentifiable victims. All three involve collective action problems in terms of the low incentives of individuals to bring claims,³⁵² and all three have made use of class action lawsuits.³⁵³ However, only securities cases and antitrust cases have a solid body of case and statutory law on measuring damages. For securities law, the “fraud on the market” theory³⁵⁴ has become well-settled law, as have other price-based theories,³⁵⁵ and consumer welfare damage theories have become a part of antitrust law,³⁵⁶ along with the statutory treble damages.³⁵⁷ However, no theory of environmental or natural resource damages has taken root in such a way as to provide a default method of ascertaining environmental or natural resource damages. As noted in the discussion above on cost-benefit analysis, environmentalists have generally resisted monetizations of environmental and natural resource goods and outcomes.³⁵⁸ This is not helpful from the standpoint of recovery for environmental wrongs. As many detractors of environmental regulation have learned, invoking cost figures does not necessarily cheapen the human hardships (real or not) of environmental regulation and does not necessarily reduce their identifiability.

VIII. CONCLUSION

Because humans have natural propensities to identify with other humans and to sympathize with other humans that are known to them, overcoming an identifiability bias in lawmaking is a difficult task. Lawmaking should obviously reflect human values and, to some extent, human propensities. Sympathy is not something that should

352. Christopher R. Leslie, *The Significance of Silence: Collective Action Problems and Class Action Settlements*, 59 FLA. L. REV. 71 (2007).

353. See, e.g., *Green v. Wolf Corp.*, 406 F.2d 291, 295 (2d Cir. 1968).

354. See, e.g., *Basic Inc. v. Levinson*, 485 U.S. 224, 241-47 (1988).

355. See, e.g., *Dura Pharms., Inc., v. Broudo*, 544 U.S. 336, 342-45 (2005); *Green v. Occidental Petroleum Corp.*, 541 F.2d 1335, 1344 (9th Cir. 1976).

356. David C. Hjelmfelt & Channing D. Strother, Jr., *Antitrust Damages for Consumer Welfare Loss*, 39 CLEV. ST. L. REV. 505, 520 (1991).

357. See, e.g., *Am. Soc. of Mech. Eng'rs, Inc. v. Hydrolevel Corp.* 456 U.S. 556, 572-76 (1982).

358. See *supra* note 309 and accompanying text.

be expunged from lawmaking processes. But sympathy is also not a human propensity that should be driving policy, least of all environmental policy. Our sympathy for identifiable individuals must be bounded by a realization that others, not necessarily known to us, die and suffer. Just recognizing that we will naturally harbor an identifiability bias would be progress in itself. Structural reforms might be considered that would build in considerations other than the immediate and visceral effects on identifiable individuals, communities, and groups. In addition, maintaining the existing safeguards, such as the Endangered Species Act and the National Environmental Policy Act, will be vital.

Substantively debiasing environmental policy to compensate for identifiability bias is a taller order. This would require that we grapple with the question of how we compare the harm done to identifiable victims with unidentifiable ones. In the regulatory arena, this is the business of cost-benefit analysis, which is clearly unfinished. In other arenas, it requires the evaluation of delicate ethical tradeoffs, the making of which is clearly a large job before us.

In some ways, the identifiability bias should be obvious to those involved in making environmental law and policy. The very reason that we need environmental law is to protect those things that we might not otherwise think to protect or take insufficient care to protect in a competitive market economy. Identifiability is thus just one aspect of the overall goal of environmental law. But whereas we remain cognizant of the market failures that give rise to the general need for environmental law, our hubris has caused us to sometimes forget that we do not always have all of the stakeholders in front of us. We thus do not have sufficient safeguards built in to protect those that most need protecting, those that we cannot identify.