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ENVIRONMENTAL HEDONISM OR, SECURING THE ENVIRONMENT THROUGH THE COMMON LAW

GEORGE P. SMITH, II* & DAVID M. STEENBURG**

We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.

—The Declaration of Independence, ¶ 1, July 4, 1776¹

INTRODUCTION AND . . . OVERVIEW

While the pursuit of happiness did not morph into the U.S. Constitution as a constitutional right to pleasure, much “sentimentalism” still infects contemporary thinking about issues concerning the management and the use of the environment as a construct for finding a level of peace and harmony and—at the same time—of safeguarding the beauties of nature for future generations to behold and honor.² Over the years, efforts have been mounted to enact a conservation bill of rights which would, in turn, provide recognition of a cognizable right to a decent environment.³ A constitutional amendment to secure and safeguard environmental rights for all citizens has even been thought of as holding great promise to do for the environment what was done by the Fifth Amendment to the Constitution for civil rights.⁴

While a right with constitutional status would, indeed, create a judicial opportunity for its enforcement by the courts, it would also provide the courts with an ultimate level of unfettered authority. Thus, a judicially declared constitutional right cannot be overruled subsequently by

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¹ The United States Declaration of Independence, para. 2 (U.S. 1776).

² JOSEPH L. SAX, DEFENDING THE ENVIRONMENT: A STRATEGY FOR CITIZEN ACTION 234 (1970).

³ *Id.* at 235.

⁴ *Id.*

the legislatures.⁵ Yet, a court enforcing a statutory right which may have the exact wording contained in a constitutional provision may, by subsequent legislation, be overruled.⁶

Other fundamental uncertainties have pervaded these notions for environmental law-making for quite some time.⁷ How would environmental rights be enforceable, and who would enforce them, are but two concerns.⁸ Early thought suggested a separate specialized court for the environment could be created—much as other specialized courts were created for the International Trade, Customs and Patents, and Tax, for example.⁹

Accommodating ecological values in environmental protection is exceedingly complicated and difficult as is assessing risks for environmental misconduct.¹⁰ Comparative risk assessment (“CRA”) has been developed, however, and allows scientific experts to analyze “the best available data to decide which environmental risks are the worst.”¹¹ A risk ordering, then, may be made by decision makers for determining priorities for affirmative environmental actions. Normally, the decision reached is that “more resources should be directed toward higher risks than toward lower risks.”¹²

Important though scientific risk assessments are in environmental policy-making, normative issues pervade the whole of environmental law. Four such fundamental issues are: the extent of equity among risk-bearers; the nature of public obligations to future generations as well as other species; the extent to which individual risk preferences should be subordinated

⁵ *Id.* at 236.

⁶ *Id.*

⁷ *Id.* at 235.

⁸ George P. Smith, II, *The Environment and The Judiciary: A Need for Co-operation or Reform?*, 3 B. C. ENVTL. AFF. L. REV. 627 (1974). Interestingly, since 1970, almost all federal environmental legislation has authorization for citizen enforcement and often possibilities of reimbursement of enforcement costs. ENVIRONMENTAL LAW AND POLICY: NATURE, LAW, AND SOCIETY 57 (Zygmunt J.B. Plater, Robert H. Abrams, Robert L. Graham, Lisa Heinzerling, David A. Wirth, & Noah D. Hall eds., 4th ed. 2010) [hereinafter ENVIRONMENTAL LAW AND POLICY].

⁹ Smith, *supra* note 8. See George P. Smith, II, *Does The Environment Need A Court?*, 57 JUDICATURE 150 (1973) (discussing the practicality of establishing a federal court for the environment).

¹⁰ ENVIRONMENTAL LAW AND POLICY, *supra* note 8, at 117.

¹¹ Jonathan Bender, *Societal Risk Reduction: Promise and Pitfalls*, 3 N.Y.U. ENVTL. L. J. 255, 255 (1994).

¹² *Id.* Expanding CRAs to encompass all health and safety risks under a process denominated SRR or societal risk reduction, has been encouraged by some. *Id.* at 256, 262–63. See generally STEPHEN BREYER, *BREAKING THE VICIOUS CIRCLE: TOWARD EFFECTIVE RISK REGULATION* (1999) (discussing the complexities of regulating decision-making).

to collective decision making; and whether CRAs should be given greater emphasis in policy-making.¹³ Indeed, the very substance of modern environmental law has been termed a “composite of moral decisions.”¹⁴

The present system of environmental law-making runs a precarious gamut of rank “forms of special interest politics” to governmental actions which are “manifestations of selfish political behaviors.”¹⁵ Without regard for cost or economic efficiency, numerous statutory provisions seek to validate absolutist rights.¹⁶ Slow methodical efforts by the U.S. Environmental Protection Agency to identify—industry by industry—the best available technology which should be attained for environmental safety defy swift, decision policy-making.¹⁷ Bursts of regulatory innovation come spasmodically from the states, the courts, and from administrative agencies, the White House, and Congress.¹⁸ Environmental reforms “should aspire both to improve the effectiveness of environmental protections and to highlight the moral discourse that has traditionally shaped environmental law.”¹⁹ Land use regulation presents a perfect paradigm of dysfunctionality in environmental management.²⁰

Under what is termed the Subsidiarity Principle, local governments—acting in wide environmental settings from land use to federal pollution legislation—are recognized as the primary decision-making units where most rational allocation decisions can, and should, be made.²¹ Indeed, at its most elementary level of application, this principle acknowledges that “it is the individual who is best suited to make land use decisions.”²² Yet, when national standards for environmental management are set by federal legislation, it remains for the central government to be the decisive decision maker. Co-operative federalism is, however, the ideal goal.²³

¹³ Donald T. Hornstein, *Reclaiming Environmental Law: A Normative Critique of Comparative Risk Analysis*, 92 COLUM. L. REV. 562, 565 (1992).

¹⁴ *Id.* at 631.

¹⁵ *Id.*

¹⁶ *Id.* at 630.

¹⁷ *Id.*

¹⁸ *Id.* at 630–31.

¹⁹ *Id.* at 629.

²⁰ See JOHN R. NOLON, PROTECTING THE ENVIRONMENT THROUGH LAND USE LAW: STANDING GROUND ch. 1 (2014) (surveying the history and outreach by environmental law).

²¹ ENVIRONMENTAL LAW AND POLICY, *supra* note 8. See generally Symposium, *Federalism and The New Nationalism*, 123 YALE L. J. 1889 (2014) (analyzing the history of federalism and its contemporary reconfigurations).

²² ENVIRONMENTAL LAW AND POLICY, *supra* note 8, at 368.

²³ *Id.*

Owing to countless dislocations between the states and the federal government, national land use and the present “environmental legal system” are deficient—this, principally, because there is an absence of a “cogent framework of laws.”²⁴ While the preservation of open land is now seen as an integral part of an “overall community development and conservation strategy,”²⁵ charting a balanced strategy which accommodates development and conservation is quite challenging.²⁶ Considerable strength would be achieved if the reach of environmental law were broadened to include land use.²⁷

Presently, zoning is a traditional method for dealing with determining the points of balance within each state and its communities.²⁸ Indeed, the primacy of local power in this approach is paramount to any sustained level of progress and ultimate success.²⁹ “Cooperative government,” also referred to as “reflexive law regimes” is thought to be the preferred method of organization for aligning land use planning with environmental management.³⁰ Accordingly, reflexive laws either “prescribe or suggest decision making processes that involve all relevant government agencies [e.g., federal, state and local] and private sector and civic stakeholders in developing and achieving performance-based solutions.”³¹

The Common Law must be acknowledged and accepted as the foundational framework of the regulatory state at all three levels of governance: municipal, state, and federal.³² Nuisance Law,³³ and particularly the law of anticipatory nuisance,³⁴ and the emergence of aesthetic nuisance,³⁵

²⁴ NOLON, *supra* note 20, at 255.

²⁵ *Id.* at 178. Because Open Space Preservation serves multiple functions, defining it presents difficulties in precision. Open spaces are commonly seen, however, as including “parks, ball fields, pastures and meadows, scenic vistas,” as well as “fragile environmental areas, such as wetlands, ridgelines, and habitats” or “simply underdeveloped . . . land left in its natural state for conservation purposes.” *Id.* at 175.

²⁶ *See id.* at 177–78.

²⁷ *See id.* at 168–69.

²⁸ *See id.* at 178.

²⁹ NOLON, *supra* note 20, at 176.

³⁰ *Id.* at 40.

³¹ *Id.*

³² ENVIRONMENTAL LAW AND POLICY, *supra* note 8, at ch. 3.

³³ *See generally* George P. Smith, II, *Nuisance Law: The Morphogenesis of an Historical Revisionist Theory of Contemporary Jurisprudence*, 74 NEB. L. REV. 658 (1995).

³⁴ *See generally* George P. Smith, II, *Re-validating The Doctrine of Anticipatory Nuisance*, 29 VT. L. REV. 687 (2004).

³⁵ *See generally* George P. Smith, II, & Griffin W. Fernandez, *The Price of Beauty: An Economic Approach to Aesthetic Nuisance*, 15 HARV. ENVTL. L. REV. 53 (1991).

together with the outreach of the Doctrine of Public Trust,³⁶ provide a strong arsenal in safeguarding the environment. Indeed, the adaptability of the law of nuisance to any and all permutations of environmental unreasonableness is owing in very large measure to the guidance of the *Restatement (Second) of Torts* (“the *Restatement*”);³⁷ and the framework that it provides for testing whether conduct is reasonable or tortious (i.e., unreasonable).³⁸ The *Restatement* provides direction and focus to the most well-established guiding common law principle of the law of nuisance, *sic uteris tuo ut alienum non laedas*, which mandates the use of one’s property not be injurious to another’s property.³⁹

Sic uteris’s eponymous “legacy” to the law of nuisance is seen when it is realized as a framework for shaping the perimeter of the threshold inquiry whether a particular set of facts may be characterized as being a nuisance.⁴⁰ Under this admittedly open-ended maxim, any conduct which interferes with a property owner’s enjoyment of his or her real property is held actionable as a form of strict liability.⁴¹ In a very real way, then, the *Restatement* “fleshes out” what are the vectors of force which classify conduct as unreasonable.⁴²

Part I of this Article investigates whether a “right” to environmental hedonism can be claimed and compensated for when the environment is degraded. Building upon the economic and mathematical uncertainties in assessing any claim for loss of enjoyment of the environment, Part II considers the evaluation of environmental harms *ex post* through use of restorative damages—as allowed under the *Restatement (Second) of Torts*—and concludes that because of the ambiguities in public policy for not only determining what is an “appropriate” case for award of restorative damages but also in evaluating the nature and scope of environmental injuries,

³⁶ See generally George P. Smith, II, & Michael W. Sweeney, *The Public Trust Doctrine and Natural Law: Emanations Within a Penumbra*, 33 B. C. ENVTL. AFF. L. REV. 307 (2006).

³⁷ RESTATEMENT (SECOND) OF TORTS §§ 822, 827, 828 (1979).

³⁸ *Id.* at §§ 827, 828.

³⁹ Daniel R. Coquillette, *Masses From an Odd Manse: Another Look at Some Historic Property Cases About the Environment*, 64 CORNELL L. REV. 761, 793 (1979). See also Lawrence H. White, *Economic and Nuisance Law: Comment on Manson*, 8 HARV. J. L. & PUB. POL’Y 213 (1985) (analyzing *Sic uteris*’s usefulness in shaping a case in nuisance).

⁴⁰ Smith, *supra* note 34, at 680. See Richard A. Epstein, *Modern Environmentalists Overreach: A Plea for Understanding Background Common Law Principles*, 37 HARV. J. L. & PUB. POL’Y 23 (2014) (analyzing the importance of Common Law Nuisance in the basic framework of environmental protection).

⁴¹ Smith, *supra* note 34, at 680–81.

⁴² RESTATEMENT (SECOND) OF TORTS §§ 827, 828. See Smith, *supra* note 34, at 698.

restorative damages are deficient as a tool for protecting environmental degradations. Part III studies the *parens patriae* powers of the government to manage and to protect the environment as a source for securing the environment and finds justification for its exercise in the application and use of the Doctrine of Public Trust. Part IV examines the common law of nuisance—and especially anticipatory and aesthetic nuisance—concluding, as such, that this body of law provides the strongest remedial base for protecting assaults on the environment.

I. HEDONIC DAMAGES

Hedonism is recognized as a “doctrine or theory of ethics in which pleasure is regarded as the chief good or the proper end of action.”⁴³ One who embraces this ancient Greek philosophy is, then, seen as a hedonist.⁴⁴ Thus, one who finds happiness and pleasure by and through use of the environment may be properly termed an environmental hedonist.⁴⁵

Hedonic damages are intended to compensate victims for the loss of enjoyment of life’s pleasures. The theory underlying hedonic damages is based on the notion that “the value of life cannot be reduced to measurements of economic productivity,” but rather consists in those experiences and pleasures that “make life valuable to its holder.”⁴⁶ As Michael Brookshire and Stan Smith, two of the leading proponents for hedonic damages, explain:

The hedonic value of life refers to the value of pleasure, the satisfaction, or the “utility” that human beings derive from life, separate and apart from the labor or earnings value of life. To determine the hedonic loss, we seek to measure the value of human beings separate from the value of their output as mere “economic machines.”⁴⁷

⁴³ OXFORD ENGLISH DICTIONARY at 98 (J.A. Simpson & E.S.C. Weiner eds. 2d ed. 1989).

⁴⁴ *Id.*

⁴⁵ MICHAEL L. BROOKSHIRE & STAN V. SMITH, ECONOMIC/HEDONIC DAMAGES: THE PRACTICE BOOK FOR PLAINTIFF AND DEFENSE ATTORNEYS 164 (1990 & 1992–1993 cum. Supp.).

⁴⁶ Joseph A. Kuiper, *The Courts, Daubert, and Willingness-to-Pay: The Doubtful Future of Hedonic Damages Testimony Under the Federal Rules of Evidence*, 1996 U. ILL. L. REV. 1197, 1205 (1996). See generally Andrew Jay McClurg, *It's a Wonderful Life: The Case for Hedonic Damages in Wrongful Death Cases*, 66 NOTRE DAME L. REV. 58 (1990) (arguing that life itself has intrinsic value which should be recognized in tort law).

⁴⁷ BROOKSHIRE & SMITH, *supra* note 45. Interestingly, Jeremy Bentham’s very notion of utilitarianism has become, for some economists, a measurable factor. Termed, “hedonimetrists,”

A. Sherrod v. Berry

The term “hedonic damages” was first introduced to courts in the case of *Sherrod v. Berry*.⁴⁸ In *Sherrod*, a nineteen-year-old man, Ronald Sherrod, was in a vehicle with his friend, Gary Duckworth, who had recently robbed a local store.⁴⁹ Officer Berry stopped Sherrod and Duckworth and ordered them to exit the vehicle.⁵⁰ After exiting the vehicle, Berry alleged that he saw Sherrod reach for his left breast pocket. Berry then proceeded to fire at him because he believed Sherrod was armed.⁵¹ Sherrod and Duckworth were both unarmed and no weapon was found in the car.⁵²

Lucien Sherrod, the father of the victim, brought a wrongful death action against Officer Berry, the City of Joliet, Illinois, and the city’s Police Chief under 42 U.S.C. §1983.⁵³ At trial, Lucien Sherrod enlisted Stan Smith, an economist educated at the University of Chicago and co-author of the leading guide for attorneys on hedonic damages, as an expert witness to prove the damages that he suffered from the loss of his son.⁵⁴ The defendants filed a motion *in limine* asking that Smith’s testimony on the hedonic value of Ronald’s life be excluded on the grounds that it was speculative.⁵⁵ The motion was denied and the court ruled that such testimony was not speculative and was both relevant and material and would aid the jury in the determining the proper amount of damages if it found for Sherrod.⁵⁶

utility is measured as a “quantum of pleasure or pain.” Led today by Nobelist Daniel Kahneman of Princeton, hedonic states of satisfaction can be evaluated and measured not only by actual self-reports of pleasure and observation of facial features, but also by planting electrodes into human scalps that “reveal . . . the frequency of voltages of electrical waves in their left forebrain which sparks up when they are feeling good.” Quantifying hedonic damages in dollar amounts obviously remains problematic. *Economics discovers its feelings*, THE ECONOMIST, Dec. 23, 2006, at 33.

⁴⁸ *Sherrod v. Berry*, 629 F. Supp. 159 (N.D. Ill. 1985), *aff’d*, 827 F.2d 195 (7th Cir. 1987), *vacated and remanded on other grounds*, 835 F.2d 1222 (7th Cir. 1988).

⁴⁹ *Sherrod*, 629 F. Supp. at 161.

⁵⁰ *Id.*

⁵¹ *Sherrod v. Berry*, 827 F.2d 195, 199 (7th Cir. 1987), *reh’g granted and opinion vacated*, 835 F.2d 1222 (7th Cir. 1988), *reh’g en banc*, 856 F.2d 802 (7th Cir. 1988).

⁵² *Sherrod v. Berry*, 629 F. Supp. 159, 162 (N.D. Ill. 1985), *aff’d*, 827 F.2d 195 (7th Cir. 1987), *reh’g granted and opinion vacated*, 835 F.2d 1222 (7th Cir. 1988), *reh’g en banc*, 856 F.2d 802 (7th Cir. 1988), *rev’d*, 856 F.2d 802 (7th Cir. 1988).

⁵³ *Id.*

⁵⁴ *Sherrod*, 629 F. Supp. at 162.

⁵⁵ *Id.*

⁵⁶ *Id.*

At trial, Smith offered testimony about both the economic value and “hedonic value” of Ronald’s life.⁵⁷ The court asked Smith to define the word “hedonic” for the jury as used in the expression “the hedonic value of life” and Smith testified that:

It derives from the word pleasing or pleasure. I believe it is a Greek word. It is distinct from the word economic. So it refers to the larger value of life, the life at the pleasure of society, if you will, the life—the value including economic, including moral, including philosophical, including all the value with which you might hold life, is the meaning of the expression “hedonic value.”⁵⁸

Smith then proceeded to testify that he believed the hedonic value of life could be estimated between three to thirty times the present value of lost future earnings.⁵⁹ The jury awarded Lucien Sherrod \$450,000 for lost parental companionship, \$300,000 for economic loss to the estate, \$1,700 for funeral expense, and for the first time in the American legal system, \$850,000 for the hedonic value of Ronald’s life.⁶⁰

On appeal to the U.S. Court of Appeals for the Seventh Circuit, the defendants contended that the trial court erred in admitting Smith’s testimony on the hedonic value of Ronald’s life.⁶¹ On this point, the Seventh Circuit affirmed the trial judge’s admission of Smith’s testimony, noting that “[t]he testimony of expert economist Stanley Smith was invaluable to the jury in enabling it to perform its function of determining the most accurate and probable estimate of the damages recoverable for the hedonic value of Ronald’s life.⁶² The Seventh Circuit concluded that the trial court committed no error by admitting Smith’s testimony.”⁶³

B. Willingness to Pay

Although there are many different approaches to computing hedonic damages, most hedonic experts use the “willingness to pay” (“WTP”) approach.⁶⁴ This approach measures the value of human life by examining

⁵⁷ *Id.* at 162–63.

⁵⁸ *Id.* at 163.

⁵⁹ *Id.*

⁶⁰ *Sherrod*, 629 F. Supp. at 159–60.

⁶¹ *Sherrod*, 827 F.2d at 205.

⁶² *Id.* at 195, 206.

⁶³ *Id.*

⁶⁴ BROOKSHIRE & SMITH, *supra* note 45, at 167.

“what we pay to prevent the loss of life, [or] what we pay for life-saving measures.”⁶⁵ The WTP approach utilizes three models in order to quantify the value of life for a jury: “(1) consumer willingness to purchase safety devices; (2) worker willingness to accept higher compensation for a greater risk of death; and (3) the government’s willingness to impose safety regulations on private industries and the costs of these regulations.”⁶⁶ Each of these models seeks to ascertain how much one would pay to avoid death.⁶⁷

The first model evaluates consumer behavior by looking at the price a consumer is willing to pay for a safer product or safety device, such as a smoke detector or a car with airbags, and the reduction of the risk of death resulting from such a purchase.⁶⁸ This information is then used to calculate how much people value life by multiplying the probability that the safer product or safety device will save a life by the cost of the product or device.⁶⁹

The second model, often called the “individual avoidance” approach, assumes that workers will demand higher wages for jobs that entail a significant risk of death.⁷⁰ In this model, higher wages are linked exclusively with “direct forms of compensation.”⁷¹ For example, consider an eighteen-year-old man earning twenty thousand dollars a year as a retail store clerk—“an occupation with a negligible work-related risk of death.”⁷² Suppose that he is then offered a job as an assemblyman in an automobile factory, a position that has a one in 10,000 annual risk of death. If he accepts this position for an additional \$10,000 in salary, then, under this theory, he has accepted “certain death for 10,000 times this amount, or \$50,000,000 dollars.”⁷³ Thus, under this theory, the eighteen-year-old man values his life at fifty million dollars.

⁶⁵ *Scharrel v. Wal-Mart Stores, Inc.*, 949 P.2d 89, 92 (Colo. App. 1997) (quoting an economist serving as an expert witness on hedonic damages).

⁶⁶ Victor E. Schwartz & Cary Silverman, *Hedonic Damages: The Rapidly Bubbling Cauldron*, 69 BROOK. L. REV. 1037, 1061–62 (2004).

⁶⁷ BROOKSHIRE & SMITH, *supra* note 45, at 166–70.

⁶⁸ *Id.* at 167.

⁶⁹ For example, “assume that consumers make an aggregate expenditure of \$150 million dollars on smoke detectors, and that these smoke detectors are estimated to save fifty lives each year. This represents an aggregate safety expenditure of \$150 million divided by fifty lives or \$3 million per statistical life saved.” Schwartz & Silverman, *supra* note 66, at 1062 n.116.

⁷⁰ See BROOKSHIRE & SMITH, *supra* note 45, at 167.

⁷¹ Edward P. Berlá et al., *Hedonic Damages and Personal Injury: A Conceptual Approach*, 3 J. FORENSIC ECON. 1, 5 (1989), available at http://expertecon.com/Assets/Documents/Pub_Hedo_Jour.pdf [<http://perma.cc/9PLQ-Q59E>].

⁷² Schwartz & Silverman, *supra* note 66, at 1062.

⁷³ *Id.* at 1063. When administrative agencies fail to show the benefits of an agency regulation do not appear to justify costs, OIRA will, under Executive Orders 12,866 and 13,563 raise questions regarding whether the agency should proceed with its actions. A

The third model is based on the cost-benefit analysis government agencies employ in assessing whether to adopt safety regulations.⁷⁴ This utilization of cost-benefit analysis was mandated by Executive Order 12,291 and was signed into law by President Reagan in 1981.⁷⁵ Under this order, agencies are required to conduct a cost-benefit analysis for regulations that will have a significant economic impact and then submit the cost-benefit analysis to the White House's Office of Information and Regulatory Affairs ("OIRA").⁷⁶ Most of these analyses demonstrate "[a] willingness to implement legislation at a cost of approximately two million dollars per life saved [and] very little legislation beyond three million."⁷⁷

After determining the value of life from one of these three models, experts who subscribe to the WTP approach "subject this amount to a 'loss of the pleasure of life' ['LPL'] scale to determine hedonic damages."⁷⁸ Under this scale, an individual's "degree of diminution of life that has been experienced from the date of injury to the date of the evaluation" will be assessed and then "the degree of diminution of life over the individual's remaining life span" will be estimated, with most estimates ranging from the high six figures to high seven-figure amounts.⁷⁹

C. *Criticisms of the Willingness-to-Pay Model*

There are numerous difficulties in calculating the value of life through the willingness-to-pay model and indeed even the proponents of the willingness-to-pay model recognize that it depends on "several unprovable assumptions."⁸⁰ First, the WTP model rests on the assumption

challenged agency must demonstrate that the benefits from their action "justify" the costs, not that they "exceed" the costs . . . [E]ven if the monetized benefits are lower than the monetized costs, the costs must nonetheless be justified." CASS R. SUNSTEIN, VALUING LIFE: HUMANIZING THE REGULATORY STATE 37 (2014). See also chs. 2, 4, and 5, as well as app. E where values for mortality and morbidity, based on age and medical morbidities, are analyzed.

⁷⁴ *Id.*; see *Michigan v. EPA*, 135 S. Ct. 2699 (2015) (re-affirming the fact that administrative agencies are no longer given discretion to ignore the economic consequences of their actions nor will they be allowed to act when the consequences of their regulatory schemes generate costs which are disproportionate to the project's benefits); Andrew Grossman, *Michigan v. EPA: A Mandate for Agencies to Consider Costs*, CATO SUP. CT. REV. at 281 (2014–15).

⁷⁵ Exec. Order No. 12,291, 46 Fed. Reg. 13,193 (Feb. 17, 1981).

⁷⁶ *Id.*

⁷⁷ *Anderson v. Neb. Dep't of Soc. Servs.*, 538 N.W. 2d 732, 743 (Neb. 1995).

⁷⁸ Schwartz & Silverman, *supra* note 66, at 1063.

⁷⁹ Berlá et al., *supra* note 71, at 4.

⁸⁰ Kuiper, *supra* note 46, at 1211 (citing *Stanley v. Smith, Hedonic Damages in Wrongful*

that the hedonic value of life may be independent of its economic value.⁸¹ The hedonic value of a high-income individual is not greater or less than the hedonic value of a person with a minimal income.⁸² Second, the model assumes that the hedonic value of life is “independent of socioeconomic characteristics” such as gender, wealth, education, and cultural capital.⁸³ Third, the model assumes that the hedonic value of life is tied to life expectancy and that individuals value life equally at different ages.⁸⁴ Finally, the model assumes that the “hedonic value of each future year has a zero real discount rate” and therefore the dollar value for each future year need not be adjusted for inflation.⁸⁵

The willingness-to-pay model also assumes that individuals accurately perceive “probabilities of injury” and are “free to bargain over the reductions of such risks.”⁸⁶ Furthermore, the model assumes that “individuals will behave rationally when balancing risks and expenditures.”⁸⁷

Another problem confronting courts’ use of hedonic damages is the growing research pointing to “hedonic adaptation,” that is, the remarkable ability of individuals to bounce back from difficult life circumstances. Individuals who experience difficult life occurrences such as illness, injury, unemployment, and divorce “often reclaim much of the hedonic losses initially incurred as a result of the relevant event.”⁸⁸ In light of such “hedonic” adaptation, many commentators have been quick to point out its implications for non-economic damages and that, at the very least, “current damage awards are likely inflated from a hedonic perspective.”⁸⁹

D. *The Admissibility of Hedonic Damages Testimony After Daubert*

Another difficulty in the effectiveness of hedonic damages as a remedy for environmental harms is the likelihood that hedonic damages

Death Cases, A.B.A. J., Sept. 1988, at 73 and Wolfgang W. Franz, *Hedonic Damages: Applying the Methodology, Examining the Pros and Cons*, 16 TRIAL DIPL. J. 23, 27 (1993).

⁸¹ *Id.*

⁸² *Id.*

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ Kuiper, *supra* note 46, at 1211.

⁸⁷ *Id.*

⁸⁸ David E. DePianto, *Tort Damages and the (Misunderstood) Money-Happiness Connection*, 44 ARIZ. ST. L. J. 1385, 1387–89 (2012).

⁸⁹ *Id.* at 1388. See, e.g., Cass Sunstein, *Illusory Losses*, 37 J. LEGAL STUD. S157 (2008); Sean H. Williams, *Self-Altering Injury: The Hidden Harms of Hedonic Adaptation*, 96 CORNELL L. REV. 535 (2011).

testimony is inadmissible in the wake of the Supreme Court's decision in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*⁹⁰ Traditionally, the American judicial system had a "laissez-faire approach toward the admissibility of expert testimony,"⁹¹ and the only significant limitation placed on expert testimony was that it be "beyond the ken of the jury."⁹² The main exception to this was that "many jurisdictions applied the general acceptance test of *Frye v. United States* to scientific testimony, mostly in criminal cases."⁹³ The *Frye* "general acceptance" standard,⁹⁴ which was named after the 1923 case in which it originated, established that scientific evidence was inadmissible if the techniques, theories, or principles on which it was based had not gained the support of the scientists' peers.⁹⁵

The purpose of the *Frye* test was to prevent the introduction into evidence of scientific testimony based on specious or untested scientific theories or principles.⁹⁶ However, "contrary to myth . . . *Frye* was not traditionally a significant barrier to expert testimony."⁹⁷ In the decades following the promulgation of the *Frye* standard, federal courts significantly varied in their application of *Frye*, and further complicating its application, federal courts disagreed about whether *Frye* had "survived" the enactment of the Federal Rules of Evidence in 1975.⁹⁸

This confusion ended when the Supreme Court adopted a reliability test for expert testimony in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*⁹⁹ The plaintiffs, two minor children and their parents, sued Merrell Dow Pharmaceuticals, Inc., alleging that the children's serious birth defects had been caused by the mother's prenatal ingestion of Benedictin, a prescription drug marketed by Merrell Dow.¹⁰⁰ In its defense, Merrell

⁹⁰ DePianto, *supra* note 88, at 1387–88.

⁹¹ See David E. Bernstein, *The Unfinished Daubert Revolution*, 10 ENGAGE 35, 37 (2009), available at <http://ssrn.com/abstract=1354733> [<http://perma.cc/5VRA-PEBK>].

⁹² DAVID H. KAYE, DAVID E. BERSTEIN, & JENNIFER L. MNOOKIN, *THE NEW WIGMORE: A TREATISE ON EVIDENCE—EXPERT EVIDENCE* § 2.1.1 (Richard D. Friedman, 2nd ed. 2010).

⁹³ *Id.* § 1.2.

⁹⁴ *Frye v. United States*, 293 F. 1013, 1013 (D.C. Cir. 1923).

⁹⁵ Andre A. Moenssens, *Admissibility of Scientific Evidence—An Alternative to the Frye Rule*, 25 WM. & MARY L. REV. 545, 548 (1984).

⁹⁶ See Paul C. Giannelli, *The Admissibility of Novel Scientific Evidence: Frye v. United States, a Half-Century Later*, 80 COLUM. L. REV. 1197, 1224 (1980); John William Strong, *Questions Affecting the Admissibility of Scientific Evidence*, 1970 U. ILL. L.F. 1, 14.

⁹⁷ David E. Bernstein, *The Misbegotten Judicial Resistance to the Daubert Revolution*, 89 NOTRE DAME L. REV. 27, 31 n.28 (2013).

⁹⁸ Kuiper, *supra* note 46, at 1219.

⁹⁹ *Daubert v. Merrell Dow Pharms.*, 509 U.S. 579 (1993).

¹⁰⁰ *Id.* at 582.

Dow produced the affidavit of Dr. Steven H. Lamm, a noted epidemiologist and expert on the risks associated with chemical substances.¹⁰¹ The affidavit concluded that the maternal use of Benedictin was not a risk factor for birth defects and Merrell Dow moved for summary judgment.¹⁰²

The petitioners responded to this affidavit with the testimony of eight other experts, who concluded that Benedictin can cause birth defects on the basis of the “[animal] studies, chemical structure analyses,” and “the ‘reanalysis’ of previously published . . . studies.”¹⁰³ Applying the *Frye* test, the district court rejected the petitioners’ expert testimony and granted Merrell Dow’s motion for summary judgment,¹⁰⁴ noting that scientific testimony is only admissible if the theories and principles on which the testimony is based are “sufficiently established to have general acceptance in the field to which [they] belong.”¹⁰⁵

On appeal, the plaintiffs argued that their expert testimony met the *Frye* test because it was based on generally accepted scientific techniques and principles.¹⁰⁶ The Court of Appeals for the Ninth Circuit rejected the plaintiffs’ contention and affirmed the district court’s judgment.¹⁰⁷ In reaching its decision, the Ninth Circuit adopted a particularly strict interpretation of *Frye* and concluded that the plaintiffs’ testimony did not satisfy the *Frye* test for scientific expert testimony because the experts’ studies “were unpublished, not subject to the normal peer review process and generated solely for use in litigation.”¹⁰⁸ It is not enough for the expert’s methodology, the court wrote, to meet “some of the requirements imposed by the scientific community; it must meet *all* of the essential requirements. Selective borrowing from generally accepted scientific methodology does not satisfy [this] rigorous standard.”¹⁰⁹ In reaching its decision, the Ninth Circuit relied almost exclusively on the *Frye* general acceptance standard and only referenced the Federal Rules of Evidence once in a footnote.¹¹⁰

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ *Id.* at 583.

¹⁰⁴ *Id.*

¹⁰⁵ *Daubert*, 509 U.S. at 583 (quoting *Daubert v. Merrell Dow Pharm., Inc.*, 727 F. Supp. 570, 572 (S.D. Cal. 1989)).

¹⁰⁶ *See id.* at 584–85.

¹⁰⁷ *Id.*

¹⁰⁸ *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 951 F.2d 1128, 1131 (9th Cir. 1991).

¹⁰⁹ *Id.*

¹¹⁰ Kuiper, *supra* note 46, at 1222.

In a unanimous decision, the Supreme Court reversed the Court of Appeals for the Ninth Circuit and held that the Federal Rules of Evidence, not *Frye*, provide the standard for admitting scientific expert testimony in federal courts.¹¹¹ In its decision, the court rejected *Frye* as an “austere standard, absent from and incompatible with the Rules”¹¹² and out of step with the Federal Rules of Evidence’s “liberal thrust and their general approach to relaxing the traditional barriers to ‘opinion’ testimony.”¹¹³

The Court’s decision in *Daubert* emphasized the trial judge’s role as a gatekeeper who must determine whether the testimony satisfies Rule 702.¹¹⁴ There are two prongs in the Rule 702 analysis. First, “the subject of an expert’s testimony must be ‘scientific . . . knowledge.’”¹¹⁵ The expert’s testimony must be “ground[ed] in the methods and procedures of science” and be more than “subjective belief or unsupported speculation.”¹¹⁶ The second prong of Rule 702 analysis is that the evidence or testimony must “assist the trier of fact to understand the evidence or to determine a fact in issue. This condition goes primarily to relevance.”¹¹⁷

Although the *Daubert* Court did not create a “definitive checklist or test” for federal judges to apply in assessing scientific testimony under Rule 702, the Court did offer four “general observations.”¹¹⁸ These “general observations” are the “heart and soul of the *Daubert* analysis” and provide guidance to trial judges in assessing whether evidence or testimony is scientific knowledge that will assist the trier of fact.¹¹⁹

First, trial judges should consider whether the proffered theory or technique can be tested. “Scientific methodology today is based on

¹¹¹ See *Daubert*, 509 U.S. at 579.

¹¹² *Id.* at 589.

¹¹³ *Id.* at 588.

¹¹⁴ *Id.* at 588–89. Rule 702 states:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if: (a) the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case.

See FED. R. EVID. 702.

¹¹⁵ *Daubert*, 509 U.S. at 589–90 (quoting FED. R. EVID. 702).

¹¹⁶ *Id.* at 590.

¹¹⁷ *Id.* at 591.

¹¹⁸ *Id.* at 593.

¹¹⁹ Kuiper, *supra* note 46, at 1225.

generating hypotheses and testing them to see if they can be falsified; indeed this methodology is what distinguishes science from other fields of human inquiry.”¹²⁰

Second, trial judges should consider whether “the theory or technique has been subjected to peer review and publication.”¹²¹ Although publication is not the “*sine qua non* of admissibility” and some “well-grounded but innovative theories will not have been published,” peer review and publication is a component of good science and “increases the likelihood that substantive flaws in methodology will be detected.”¹²²

The third factor courts should consider is “the known or potential rate of error . . . and the existence and maintenance of standards controlling the technique’s operation.”¹²³ The fourth factor is the “general acceptance” of a scientific theory or technique in the scientific community.¹²⁴ Although “general acceptance” is no longer the controlling factor in assessing scientific expert testimony, the *Daubert* Court reasoned that it is an important factor and that techniques or theories that were only able to attract minimal support in the scientific community “may properly be viewed with skepticism.”¹²⁵ Thus, although *Daubert* rejected the *Frye* standard, general acceptance continues to play a role in determining the admissibility of scientific expert testimony.¹²⁶

Finally, *Daubert* requires the trial judge to consider other relevant Federal Rules of Evidence in determining whether to admit scientific expert testimony.¹²⁷ The *Daubert* Court specifically noted that Rules 703, 706, and 403 were particularly relevant to this inquiry.¹²⁸ The Court

¹²⁰ *Daubert*, 509 U.S. at 593 (quoting Michael D. Green, *Expert Witnesses and Sufficiency in Toxic Substances Litigation: The Legacy of Agent Orange and Bendectin Litigation*, 86 Nw. U. L. REV. 645 (1992)).

¹²¹ *Daubert*, 509 U.S. at 593.

¹²² *Id.*

¹²³ *Id.* at 594.

¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ *Id.* at 595.

¹²⁷ *Daubert*, 509 U.S. at 595.

¹²⁸ FED. R. EVID. 703 states:

An expert may base an opinion on facts or data in the case that the expert has been made aware of or personally observed. If experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the subject, they need not be admissible for the opinion to be admitted. But if the facts or data would otherwise be inadmissible, the proponent of the opinion may disclose them to the jury only if their probative value in helping the jury evaluate the opinion substantially outweighs their prejudicial effect.

gave particular emphasis to the importance of Rule 403 and excluding relevant evidence, noting that “[e]xpert evidence can be both powerful and quite misleading because of the difficulty in evaluating it. Because of this risk, the judge in weighing possible prejudice against probative force under Rule 403 . . . exercises more control over experts than over lay witnesses.”¹²⁹

Post *Daubert* then, the question can be raised whether expert testimony on hedonic damages is admissible in federal courts. As *Daubert* made clear, before testimony on hedonic damages can be admitted, it must be evaluated under Rule 702. First, the proffered testimony must be “scientific knowledge.”¹³⁰ Second, it must “assist the trier of fact.”¹³¹

As discussed, above, the *Daubert* Court identified several factors courts should consider in determining whether testimony is scientific knowledge. An analysis of hedonic damages testimony using three of these factors—testability, peer review and publication, and the known or potential error rate—casts considerable doubt that hedonic damages are admissible under *Daubert*.

1. Testability

As the Court in *Daubert* noted, testability is at the heart of the scientific method.¹³² It appears doubtful that hedonic damages calculated under the willingness-to-pay model are testable. This model rests on the assumption that people are willing to pay to reduce the probability of death and that this willingness to pay is a reflection of the value that society places on human life. Most proponents of hedonic damages conclude that the value of the statistically average life is between \$0 and \$16,000,000 and base this range on what people spend on safety devices

FED. R. EVID. 706(a) states:

On a party’s motion or on its own, the court may order the parties to show cause why expert witnesses should not be appointed and may ask the parties to submit nominations. The court may appoint any expert that the parties agree on and any of its own choosing. But the court may only appoint someone who consents to act.

Although hedonic damages are not barred and the Federal Torts Claims Act, the federal government is not liable for punitive damages.

See *Molzof v. United States*, 502 U.S. 301, 306–08 (1992).

¹²⁹ *Daubert*, 509 U.S. at 595 (quoting Jack B. Weinstein, *Rule 702 of the Federal Rules of Evidence is Sound; It Should Not Be Amended*, 138 F.R.D. 631, 632 (1991)).

¹³⁰ FED. R. EVID. 702.

¹³¹ *Id.*

¹³² See Bender, *supra* note 11 and accompanying text.

and wage-risk premiums.¹³³ However, even assuming the data is correct “does not prove that this amount accurately reflects the value society places on human life” and indeed appears incapable of empirical testing.”¹³⁴

Numerous federal courts have come to this conclusion and rejected testimony on hedonic damages because it fails to meet the requirement of testability.¹³⁵ For example, in *Hein v. Merck & Co.*, the U.S. District Court for the Middle District of Tennessee declined to admit hedonic damages testimony in a personal injury suit.¹³⁶ The court concluded that unlike other forms of economic testimony on damages, hedonic damages testimony was incapable of validation and therefore untestable.¹³⁷ The U.S. District Court for the Eastern District of Wisconsin similarly found hedonic damages testimony inadmissible in *Estate of Sinthasomphone v. City of Milwaukee*.¹³⁸ In its decision, the court concluded that hedonic damages testimony is, by its very nature, incapable of empirical testing, for it attempts to “quantify something which cannot truly be determined: what is the value of human life?”¹³⁹ Thus, under *Daubert*, testimony on hedonic damages will face considerable difficulty in meeting the requirement of testability.

2. Peer Review and Publication

Another factor in determining whether expert testimony is scientific knowledge is whether it has been subjected to peer review and publication in the relevant scientific community.¹⁴⁰ Although hedonic damages has received considerable attention in law journals, this attention has not focused on the methodology underlying the willingness-to-pay model.¹⁴¹ The empirical studies that have been published on the willingness-to-pay model and its methodology and assumptions have been published almost exclusively by the forensic economists who created the theory of hedonic damages.¹⁴² Moreover, many of these same forensic economists routinely hire themselves out as expert witnesses to testify

¹³³ Kuiper, *supra* note 46, at 1228–29.

¹³⁴ *Id.* at 1229.

¹³⁵ *Id.* at 1228–29.

¹³⁶ *Hein v. Merck & Co.*, 868 F. Supp. 230, 235 (M.D. Tenn. 1994).

¹³⁷ *Id.* at 230.

¹³⁸ *Estate of Sinthasomphone by Sinthasomphone v. City of Milwaukee*, 878 F. Supp. 147, 152 (E.D. Wis. 1995).

¹³⁹ *Id.*

¹⁴⁰ See *supra* notes 121–22 and accompanying text.

¹⁴¹ Kuiper, *supra* note 46, at 1231.

¹⁴² *Id.*

about hedonic damages.¹⁴³ This should lead courts to question whether hedonic damages and the willingness-to-pay model have received the requisite objective scrutiny necessary to reveal substantial flaws and incorrect assumptions.¹⁴⁴ Finally, hedonic damages “has received virtually no attention from members of the economics community at large.”¹⁴⁵ Thus, the theory of hedonic damages has not been subjected to the scrutiny and peer review envisioned by *Daubert*, and, therefore, testimony on hedonic damages would likely not meet the requirement for peer review and publication.

3. Known or Potential Error Rate

In addition to testability and peer review and publication, courts consider the known or potential error rate of the theories or techniques underlying proffered scientific evidence.¹⁴⁶ Calculations on the value of life based on the willingness-to-pay model have produced an enormous range, with at least one study showing a range from zero dollars to over fifteen million dollars.¹⁴⁷ This enormous range raises considerable questions about the methodologies used in calculating hedonic damages and their known or potential error rate. At least one court has found this range unacceptably broad and, as a result, declined to admit hedonic damages testimony.¹⁴⁸ In *Ayers v. Robinson*, the district judge refused to admit the testimony of Stan Smith, declaring his methodology to be a “simple eyeballing technique.”¹⁴⁹ Such a technique, the judge wrote, “may have the advantage of ease, but it surely lacks scientific reliability in the sense of producing consistent results.”¹⁵⁰ Thus, it is unlikely that testimony on hedonic damages is admissible given how unknown its error rate is.

Present calculations are, arguably, less important than no calculation at all. Only when the environment assumes a legal personage—as do corporations, for example—will hedonic damages ever be an efficacious tool for remediating environmental impairment. Absent such a legal recognition, Common Law Doctrines of Nuisance and Public Trust will remain the mainstays in the legal arsenal to safeguard the environment.

¹⁴³ *Id.* at 1233.

¹⁴⁴ *Id.*

¹⁴⁵ *Id.* at 1234.

¹⁴⁶ See *supra* note 123 and accompanying text.

¹⁴⁷ Ted R. Miller, *The Plausible Range for the Value of Life—Red Herrings Among the Mackerel*, J. FORENSIC ECON. 17, 17 (1990).

¹⁴⁸ *Ayers v. Robinson*, 887 F. Supp. 1049, 1060–62 (N.D. Ill. 1995).

¹⁴⁹ *Id.* at 1060.

¹⁵⁰ *Id.*

Even though the majority of American jurisdictions have recognized that the loss of enjoyment of life is a compensable injury,¹⁵¹ it is highly unlikely that hedonic damages can serve as an effective remedy for remedying environmental harms and degradations for two principal reasons. First, it is unlikely that expert testimony on hedonic damages can be considered “scientific knowledge” that will “assist the trier of fact” under *Daubert* analysis.¹⁵² Furthermore, even if expert testimony on hedonic damages were admissible, there is no viable method for computing hedonic damages for environmental harms. As discussed above, there are numerous difficulties in computing the hedonic value of life by using the willingness-to-pay model. Yet, the computation of the hedonic value for environmental harm is even more speculative and subjective than that for the loss of life.

For these reasons, state courts have increasingly declined to admit expert testimony on hedonic damages.¹⁵³ Indeed, one forensic economist who has served as an expert witness on hedonic damages has stated that “[t]he period of time during which hedonic damage testimony has been important in forensic economics is coming to an end”¹⁵⁴ and that only in New Mexico and Nevada does hedonic damages testimony still stand a good chance of being admitted.¹⁵⁵

II. RESTORATION DAMAGES

Many commentators have proposed restoration damages as an objective and direct remedy for environmental harm.¹⁵⁶ Restoration damages could be applied for remediation or for losses of natural resources and would be included in either equitable injunctive relief or

¹⁵¹ M. MINZER, J. NATES, C. KIMBALL, D. AXELROD & R. GOLDSTEIN, DAMAGES IN TORT ACTIONS § 802 (1988). See Larry Bodine, *Hedonic Damages Catch On*, 14 NAT'L J. 6, 27–28 (1992) (discussing the widening recognition of hedonic damages).

¹⁵² *Daubert*, 509 U.S. at 592–94.

¹⁵³ Thomas Ireland, *The Last of Hedonic Damages: Nevada, New Mexico, and Running a Bluff*, 16 J. LEGAL ECON. 91, 95–96 (2009).

¹⁵⁴ *Id.* at 99. Interestingly, many economists themselves are skeptical of their own ability—or that of comparable experts—to actually quantify enjoyment. Collin Reed, *The Marginal Agent and Judicial Interpretation in The Marketplace*, 30 CONN. L. REV. 647, 649–51 (1998).

¹⁵⁵ Ireland, *supra* note 153, at 99. But see *Economics discovers its feelings*, *supra* note 47.

¹⁵⁶ ENVIRONMENTAL LAW AND POLICY, *supra* note 8, at 117. See Susan Verdicchio, *Environmental Restoration Orders*, 12 B.C. ENVTL. AFF. L. REV. 171, 174–78 (1985) (discussing the origins of restoration in the common law and its value as an environmental enforcement tool).

affirmative restorative injunctions.¹⁵⁷ The *Restatement* prescribes the damages for harm to land from a past invasion that does not result in a total destruction of value to include compensation for “the difference between the value of the land before the harm and the value after the harm, or at his election in an appropriate case, the cost of restoration that has been or may be reasonably incurred”¹⁵⁸ The comments to the *Restatement* further elaborate this principle:

Even in the absence of value arising from personal use, the reasonable cost of replacing the land in its original position is ordinarily allowable as the measure of recovery If, however, the cost of replacing the land in its original condition is disproportionate to the diminution in the value of the land caused by the trespass, unless there is a reason personal to the owner for restoring the original condition, damages are measured only by the difference between the value of the land before and after the harm On the other hand, if a building such as a homestead is used for a purpose personal to the owner, the damages ordinarily include an amount for repairs, even though this might be greater than the entire value of the building.¹⁵⁹

In addressing restoration damages, numerous courts have used the principles set forth in the *Restatement*.¹⁶⁰ However, decisions relying on the *Restatement* have resulted in little of the consistency or predictability that the *Restatement* authors intended “for the efficient allocation of resources and the achievement of policy objectives.”¹⁶¹ The following

¹⁵⁷ See Verdicchio, *supra* note 156, at 174. The real challenge in awarding damages for environmental injuries is to shape the award in such a manner as to incentivize the responsibility of a defendant to abate and/or correct environmental injuries which have occurred. Resolving this challenge may be accomplished by an award of temporary rather than permanent damages. With this strategy, a defendant is subjected to “the threat of continued future suits unless the nuisance is redressed.” DAN B. DOBBS, *LAW OF REMEDIES: DAMAGES—EQUITY—RESTITUTION* § 5.7(4) (2d ed. 1993); see Keith N. Hylton, *Punitive Damages and the Economic Theory of Penalties*, 87 *GEO. L.J.* 421 (1998) (analyzing economic theories of deterrence in the law of torts).

¹⁵⁸ *RESTATEMENT (SECOND) OF TORTS* § 929(1)(a) (1979).

¹⁵⁹ *Id.* § 929(1) cmt. b.

¹⁶⁰ See, e.g., *Sunburst Sch. Dist. No. 2 v. Texaco, Inc.*, 165 P.3d 1079, 1088–93 (Mont. 2007); *Osborne v. Hurst*, 947 P.2d 1356, 1358 (Alaska 1997); *Ayers v. Jackson Twp.*, 525 A.2d 287, 294 (N.J. 1987).

¹⁶¹ James R. Cox, *Reforming the Law Applicable to the Award of Restoration Damages as a Remedy for Environmental Torts*, 20 *PACE ENVTL. L. REV.* 777, 781 (2003). Valuing

sections will identify these areas of inconsistency in courts' application of the *Restatement* principles on restoration damages.

A. *Diminution in Value or Restoration Damages?*

The *Restatement* is surprisingly ambiguous concerning where an award of restoration damages is appropriate. Section 929 of the *Restatement* states that the “difference between the value of the land before the harm and the value after the harm” shall be awarded for the loss of value that results from the tortious conduct.¹⁶² Thus, the *Restatement* establishes a general rule that damages are to be measured based on the diminution in value to the property. The *Restatement* then states that in “appropriate case[s],” damages may be measured not on the diminution of property value, but rather “the cost of restoration that has been or may be reasonably incurred.”¹⁶³ However, there is no guidance in the *Restatement* about what constitutes an “appropriate case” and therefore commits the appropriateness of restoration damages to the discretion of the trial court.¹⁶⁴

The comment to this section states that when restoration damages are “disproportionate to the diminution in the value of the land,” an award of damages should be based on the diminution of value.¹⁶⁵ The comment then provides an ambiguous caveat—even when restoration damages are disproportionate to the diminution of property value, they may still be awarded if “there is a reason personal to the owner for restoring the original condition.”

Thus, the *Restatement* provides no bright-line rule for determining what is an “appropriate” case for an award of restoration damages, except when restoration damages are disproportionate to the diminution

environmental harms can be undertaken by several methods: determining the value of the environment as a commodity (use-value) and/or the value of the environment without regard to market value (non-use value). See Allan Kanner & Tibor Nagy, *Measuring Loss of Use Damage in Natural Resource Damage Actions*, 30 COLUM. J. ENVT'L. L. 417, 420 (2005). A strict market based evaluation only appreciates the natural environment as but a log in the economic machine. A recovery tied solely to a use-value basis is problematic if it fails to capture “the full value of the harm done to resources.” See Frank B. Cross, *Natural Resource Damage Valuations*, 42 VAND. L. REV. 269, 341 (1989). In determining the economic value of natural resources, environmental economists stress that the best measure of damages is the true value or replacement costs of the injured or destroyed resource. Smith, *supra* note 34, at 730.

¹⁶² RESTATEMENT (SECOND) OF TORTS § 929(1)(a)(1979).

¹⁶³ *Id.*

¹⁶⁴ *Id.* § 929.

¹⁶⁵ *Id.* § 929 (1) cmt. b.

in property value.¹⁶⁶ And yet even then, restoration damages can still be awarded if “there is a reason personal to the owner.”¹⁶⁷

This lack of a bright-line rule leaves trial courts with considerable discretion in awarding restoration damages. And indeed, many state appellate courts have articulated a need for such discretion and declined to create a bright-line rule.¹⁶⁸ For example, in *Board of County Commissioners of Weld County v. Slovek*, the Supreme Court of Colorado declined the Court of Appeal’s invitation to create a bright-line rule governing the plaintiff’s personal reason to seek restoration damages rather than diminution in property value.¹⁶⁹ The case involved a county-owned gravel pit from which water ran out and flooded the plaintiffs’ property.¹⁷⁰ The trial court rejected the plaintiffs’ argument that restoration damages should be awarded, and based damages on the diminution in value of the damaged property.¹⁷¹ The plaintiffs appealed and the Colorado Court of Appeals reversed the trial court and awarded restoration damages because restoration damages would “more effectively return plaintiffs to the position they were in prior to the injury.”¹⁷²

The Supreme Court of Colorado upheld the Colorado Court of Appeals’ reversal.¹⁷³ Notably, it declined to establish a bright-line rule establishing the cost of restoration as the *prima facie* award of damages where plaintiffs have a “personal reason” to seek restorative damages rather than damages based on the diminution in property value:

We conclude, however, that the considerations governing what is an “appropriate case” for departure from the market value standard are not susceptible to reduction to a set list and that no formula can be devised that will produce litmus-test certainty and yet retain the flexibility to produce fair results in all cases. Indeed, the cases reflect numerous examples of efforts by courts to extricate themselves from the bonds of rigid standards that yielded fair results in the cases that gave them birth, but that lead to perceptibly unjust consequences when applied to different facts. We

¹⁶⁶ *Id.* § 929 (1)(a).

¹⁶⁷ *Id.* § 929 (1) cmt. b.

¹⁶⁸ Cox, *supra* note 161, at 782.

¹⁶⁹ Bd. of Cnty. Comm’rs v. Slovek, 723 P.2d 1309, 1314 (Colo. 1986).

¹⁷⁰ *Id.* at 1311–13.

¹⁷¹ *Id.* at 1312.

¹⁷² Slovek v. Bd. of County Comm’rs, 697 P.2d 781, 783 (Colo. Ct. App. 1984).

¹⁷³ Slovek, 723 P.2d at 1317.

prefer to leave the selection of the appropriate measure of damages in each case to the discretion of the trial court, informed by the considerations previously discussed.¹⁷⁴

Although the Colorado Supreme Court's decision may be laudable in that it gives trial courts discretion in determining the appropriate measure for damages, its reluctance to establish a bright-line rule poses considerable problems for cases involving environmental harm and degradation. These cases typically involve significant, and often competing, public policy interests. Failure to weigh competing interests and establish bright line rules determining when restoration damages are appropriate "leaves uncertainty in an area in which unpredictability is itself a cost, as well as a barrier to cleanup and redevelopment."¹⁷⁵

Thus, both the *Restatement* and case law interpreting the *Restatement* are unclear regarding when it is appropriate to award restorative damages. This uncertainty and unpredictability reduces restorative damages effectiveness as a remedy for environmental harms.

B. Do Recipients of Restorative Damages Have an Obligation to Clean Up?

Another impediment to a default rule awarding restorative damages for environmental harm is the concern that the plaintiff will not use the award to "clean up" the environmental harm. This concern often leads courts to award damages based on the diminution of value even though restorative damages would enable the plaintiff to repair the environmental harm more effectively than an award for the diminution in property value.¹⁷⁶ For example, the court in *Roman Catholic Church of the Archdiocese of New Orleans v. Louisiana Gas Servicing Company* noted that "reason to believe the plaintiff will, in fact, make the repairs" should be a strong factor in determining whether to award restorative damages or diminution in value damages.¹⁷⁷

¹⁷⁴ *Id.* at 1315–16 (citation omitted).

¹⁷⁵ Cox, *supra* note 161, at 784.

¹⁷⁶ *Id.* at 782.

¹⁷⁷ *Roman Catholic Church of Archdiocese of New Orleans v. La. Gas Serv. Co.*, 618 So. 2d 874 (La. 1993). In this case, the Archdiocese of New Orleans owned an apartment complex that provided federally subsidized housing to two hundred low-income families. *Id.* at 874. The defendant, Louisiana Gas Service Company, supplied natural gas to the apartment units in the complex. *Id.* On December 24, 1983, equipment supplying the

However, courts have a limited capacity in ascertaining whether a plaintiff will in fact clean up.¹⁷⁸ Moreover, there may be a strong market disincentive to actually clean up the property after a plaintiff has been awarded restorative damages. For example, consider an environmental contamination where restoration costs greatly exceed the fair market value of the damaged property and there has been no state or federal enforcement action. In this hypothetical, a willing buyer might purchase the property for its positive value and take the risk that there will be no enforcement action. Thus, "there is a strong disincentive to actually effectuate cleanup, and an incentive instead to simply sell the property to someone who is willing to take the risk that cleanup may never be required."¹⁷⁹

This hypothetical raises a crucial problem for the effectiveness of restorative damages as a remedy for environmental harm and degradation: if a plaintiff is awarded restorative damages for environmental harm or degradation and there is no enforcement action or a third-party civil suit brought by neighboring property owners to force the property owner to cleanup his property, "how are the public's interests, and those of future property owners protected?"¹⁸⁰ Moreover, the plaintiff has been enriched unjustly, giving the property owner a windfall and resulting in an inefficient use of economic resources.

Some jurisdictions have statutory and regulatory schemes that legally obligate property owners to restore the environment for certain environmental contaminations. For instance, in *Nischke v. Farmer & Merchants Bank & Trust*, the Wisconsin Court of Appeals addressed the appropriate damages for plaintiffs whose property had been contaminated from an underground gasoline tank.¹⁸¹ The court noted that under the

natural gas to the apartment units malfunctioned and flooded the apartment units with dangerous amounts of gas, leading to a fire and other damages. *Id.*

¹⁷⁸ Cox, *supra* note 161, at 784.

¹⁷⁹ Importantly, courts may award restoration damages that exceed the diminution in market value when justified under the personal reasons exception. RESTATEMENT (SECOND) OF TORTS § 929 (1) cmt. b (1979). However, significant controversy has emerged regarding when the personal reasons exception may be invoked. All states that have considered this personal reasons exception utilize a three-part test to determine if a landowner qualifies for it: "1) Does the landowner have personal reasons for desiring restoration? 2) Is an award of restoration damages likely to be spent on restoration? 3) Is the cost of restoration reasonable?" Christopher E. Brown, *Dump It Here, I Need the Money: Restoration Damages for Temporary Injury to Real Property Held for Personal Use*, 23 B.C. ENVTL. AFF. L. REV. 699, 713-14 (1996). However, states vary considerably in their application of this basic test. *Id.* at 714.

¹⁸⁰ Cox, *supra* note 161, at 800.

¹⁸¹ *Nischke v. Farmers & Merchants Banks & Trust*, 522 N.W. 2d 542, 542 (Wis. Ct. App. 1994).

Wisconsin state law, the plaintiff “has a duty as a landowner in possession of discharged hazardous substances to take remedial measures to restore the environment.”¹⁸² Thus the court was able to address its concern that the plaintiff would be unjustly enriched if the state did not bring an enforcement action to effectuate cleanup because the “[plaintiff’s] obligation to take measures does not hinge upon the [state enforcement agency’s] case-load or whether it has brought an enforcement action against her. Under the statute and the code, Nischke is obligated to take these steps once notified by the department.”¹⁸³

Not all jurisdictions impose a duty on landowners to take remedial measures to restore the environment.¹⁸⁴ Furthermore, the scope of statutory and regulatory schemes is limited and cannot encompass all environmental harms and degradations.¹⁸⁵

C. *Equitable Trust*

One way to safeguard the public interest and avoid the potentially unjust enrichment of an awardee of restoration damages is through the creation of a “constructive trust” or “equitable trust.” Such a trust could be created for the benefit of current and future property owners, neighbors, and the general public.¹⁸⁶

In *Beatty v. Guggenheim Exploration Co.*, Justice Cardozo described a constructive trust as “the formula through which the conscience of equity finds expression.”¹⁸⁷ As Justice Cardozo writes, the very purpose of a constructive or equitable trust is to prevent unjust enrichment: “[w]hen property has been acquired in such circumstances that the holder of the legal title may not in good conscience retain the beneficial interest equity, converts him into a trustee.”¹⁸⁸

¹⁸² *Id.* at 551.

¹⁸³ *Id.* at 552.

¹⁸⁴ Cox, *supra* note 161, at 802.

¹⁸⁵ For instance, see Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), 42 U.S.C. §§ 9601–75 (1980). CERCLA, which was enacted by Congress on December 11, 1980, makes both current and former property owners jointly and severally liable for the cleanup of contaminated property. However, this liability for cleanup is limited to “hazardous materials” and the cleanup of “pollutants or contaminants.” *Id.* § 9602. Notably, natural gas and petroleum are excluded from the definitions of these three categories. *Id.* § 9601.

¹⁸⁶ Cox, *supra* note 161, at 802.

¹⁸⁷ *Beatty v. Guggenheim Exploration Co.*, 122 N.E. 378, 380 (N.Y. 1919) (citing *Moore v. Crawford*, 130 U.S. 122, 128 (1889)).

¹⁸⁸ *Id.*

Coupled with wider applications of equitable trust, principles which would have the effect of guaranteeing orders for restoration damages be used for specific purposes of restoring environmental integrity to damaged segments of the environment—rather than serving as a source of enrichment of plaintiffs—should be explored more fully.¹⁸⁹ Yet, a powerful central caveat to such efforts is the realization that restoration can often be more expensive than worthwhile and exceedingly protracted.¹⁹⁰

D. Complexities in the Computation of Damages

The enormity of the challenge of computing and applying damages to environmental degradations is seen dramatically in two paradigmatic cases: *Puerto Rico v. SS Zoe Solocotroni*¹⁹¹ and *BP Exploration v. Lake Eugenie Land and Development*.¹⁹²

In 1978, in *Solocotroni*, the U.S. Federal District Court gave judicial deference sustaining the statutory right of the Puerto Rico Environmental Quality Board to recover damages for harm caused by an oil spill of 1.5 million gallons for “the total value of the damages caused to the environment and/or natural resources”¹⁹³ to an ecosystem in an isolated peninsula, Bahia Sucia, in the territorial waters of Puerto Rico.¹⁹⁴ At the time of the accident, there were no plans to develop the peninsula as it was thought to have little value economically.¹⁹⁵ While the actual cleanup costs were set at \$840,366.01, the total damages for harm to marine organisms was determined by the District Court to be \$5,526,583.20;¹⁹⁶

¹⁸⁹ ENVIRONMENTAL LAW AND POLICY, *supra* note 8, at 117.

¹⁹⁰ See ENVIRONMENTAL LAW AND POLICY, *supra* note 8, at 117. See also 33 U.S.C. § 1321(f)(4)(5) and 42 U.S.C. § 9607(f)(1), which provide specifically for either restoration, rehabilitation, replacement, or the acquisition of the equivalent natural resources when they are damaged or destroyed.

¹⁹¹ *Puerto Rico v. SS Zoe Colocotroni*, 456 F. Supp. 1327 (D.P.R. 1978), *aff'd in part*, 628 F.2d 652 (1st Cir. 1980).

¹⁹² *Lake Eugenie Land & Dev., Inc. v. BP Exploration & Prod. (In re Deepwater Horizon)*, 732 F.3d 326, 337 (5th Cir. 2013). For a case of significant note from the standpoint of the damages awarded for an oil spill; see *Exxon Shipping Co. v. Baker*, 554 U.S. 471 (2008). As the consequence of a collision by the Exxon Valdez in Alaskan waters, damages were set properly at 287 million dollars in compensatory damages and 5 million in punitive. See ENVIRONMENTAL LAW AND POLICY, *supra* note 8, at 122. See also A. Mitchell Polinsky & Steven Shavell, *Punitive Damages: An Economic Analysis*, 111 HARV. L. REV. 870 (1998) (surveying the systems of economic incentive which act as a deterrence to acts seen as socially injurious).

¹⁹³ *Colocotroni*, 628 F.2d at 1345 (quoting L.P.R.A. § 1131(29)(1977)).

¹⁹⁴ *Id.*

¹⁹⁵ *Id.*

¹⁹⁶ Kevin T. Grady, *Commonwealth of Puerto Rico v. SS Zoe Colocotroni: State Actions for*

when final restoration of costs were tallied, the damages were set at \$6,086,083.20.¹⁹⁷ What gave this case landmark status was the court's recognition that a unique non-use environment had intrinsic value because of its own very existence.¹⁹⁸

On appeal to the U.S. Court of Appeals for the First Circuit, it was determined—again—that damages would be sustained but that the framework for determining fair and equitable damages would have to be reassessed on remand.¹⁹⁹ The central issue for the Appeals Court was how to determine restorative costs when the “damaged area greatly exceeds the ecological value of the damaged resources.”²⁰⁰ The more equitable environmental approach would be to assess an amount of damages equal to the value of the resources' ecological or ecosystem worth.²⁰¹ This ecosystem approach, then, “rests on the economic value that the non-economical living natural resources have to man.”²⁰²

When economically valuable natural resources of a state which have a significant ecological value—but have neither commercial nor market value—are injured, a computation should be made by the state of those costs which it may be expected reasonably to incur in order to restore or rehabilitate the environment of the affected area pre-ante.²⁰³ Alternatively, a state could assess restorative damages “at the cost of acquiring comparable lands for public parks, or alternative-site restoration.”²⁰⁴ Either method of computation presents a unique set of challenges which can properly be seen as almost insurmountable. The vectors of force at play in any cost/benefit analysis here are colored by the perspectives—environmental or socio-economic—of those advocating a point of equilibrium in the environmental balancing necessary to determine restoration.

Damages to Non-Commercial Living Natural Resources, 9 B.C. ENVTL. AFFAIRS L. REV. 394, 417 (1980).

¹⁹⁷ *Id.* at 417. For a further breakdown for the restorative damages sought, see *id.* at 398 n.25.

¹⁹⁸ *Id.*

¹⁹⁹ *Colocotroni*, 628 F.2d. at 652.

²⁰⁰ Grady, *supra* note 196, at 426.

²⁰¹ *Id.* at 426–27.

²⁰² *Id.* at 427. See also Kanner & Nagy, *supra* note 161. Although the standard of causation in toxic tort law is complicated and contentious, it is asserted nevertheless that the toxic tort doctrine (which essentially allows personal injury suits for harms caused by exposure to toxic substances) could be an important guide to reforming environmental standing issues in environmental suits (or in cases that allege a plaintiff's injury is due to a consequence of an environmental harm or a direct violation of environmental statutes). Note, *Causation in Environmental Law: Lessons from Toxic Torts*, 128 HARV. L. REV. 2256, 2259, 2272 (2015).

²⁰³ Grady, *supra* note 196, at 428.

²⁰⁴ *Id.*

The most recent Gulf Spill of 2010—termed the “worst offshore oil spill in U.S. history”²⁰⁵—continues to spawn litigation which may well continue for decades.²⁰⁶ Presently, BP has expended, or set aside, some 42.97 billion dollars (including costs for litigation and settlement of 25.87 billion).²⁰⁷ The initial cleanup of the oil spill is now complete, but the after effects continue to be monitored.²⁰⁸ Fines under the Clean Water Act for this oil spill have yet to be determined by trial.²⁰⁹ Presently, fines have been assessed at \$3.51 billion, and as much as \$18 billion may be imposed.²¹⁰ Eighty percent of monies from the fund will be directed to environmental restoration projects—with twenty percent placed in a trust fund to cover cleanup costs which might accrue from future oil spills.²¹¹

On December 8, 2014, the U.S. Supreme Court declined to hear an appeal made by BP to the multi-billion-dollar settlement reached in 2012 upon a claim that it covers “business economic losses” which were unrelated to the actual Gulf disaster.²¹² BP has estimated that this part of the settlement is costing 7.8 billion dollars and may well reach 10 billion.²¹³

In sum, these two cases illustrate vividly, both the disruption—as well as destruction—of evolved ecological communities.²¹⁴ Indeed, as a consequence of these environmental tragedies, the “existence value” of

²⁰⁵ Daniel Gilbert & Justin Scheck, *Judge Hammers BP for Gulf Disaster*, WALL ST. J., Sept. 5, 2014, at B1.

²⁰⁶ *Id.*

²⁰⁷ *Id.* In order to settle five years of litigation over federal and state claims arising from the 2010 Deepwater Horizon spill, BP agreed to pay \$18.7 billion over the next 18 years at a rate of \$1.1 billion per year. This settlement does not, however, settle some 3,000 civil cases in both foreign and U.S. domestic courts. If approved by the federal court judge hearing the case, this settlement would cost BP approximately \$10 billion, in addition to \$44 billion incurred previously for legal and clean up costs. Daniel Gilbert & Sarah Kent, *BP to Pay Out \$18.7 Billion to Settle Spill*, WALL ST. J., July 3, 2015 at A1.

²⁰⁸ *Id.*

²⁰⁹ *Id.*

²¹⁰ *Id.* Under the Clean Water Act, the maximum fine could have been assessed at \$13.7 billion. Instead, BP will pay \$5.5 billion, which would still be the largest fine levied under this law. Gilbert & Kent, *supra* note 207.

²¹¹ *Id.*

²¹² Robert Barnes, *Justices refuse to hear BP's settlement challenge*, WASH. POST, Dec. 9, 2014, at A3. *See also* BP Exploration v. Lake Eugenie Land & Dev., Inc., *cert. denied*, 574 U.S. Order List 14-123, Dec. 8, 2014. For a comparative analysis of how costs in environmental litigation are assessed in English Law, *see generally* Gaytari Sarathy, *Costs in Environmental Litigation: Venn v. Secretary of the State for Communities and Local Government*, 27 J. ENVTL. L. 313 (2015).

²¹³ Barnes, *supra* note 212.

²¹⁴ ENVIRONMENTAL LAW AND POLICY, *supra* note 8, at 135.

“wildlife and their ecological pyramid is [simply] gone.”²¹⁵ Rather than utilize *ex post* analysis, *ex ante* management action—as will be seen, by specific use of the Doctrine of Anticipatory Nuisance and the Public Trust—is the most environmentally sound approach to pursue.

III. *PARENS PATRIAE* AND THE PUBLIC TRUST

The doctrine of *parens patriae*, or “parent of the country,” originated in the common law and was rooted in the king’s guardianship of his people.²¹⁶ In American common law, the doctrine of *parens patriae* gives a state standing to seek injunctive relief or resource damages when it can demonstrate a direct interest in the resource.²¹⁷ This doctrine is based both on the state’s guardianship of common resources and its sovereign interest in the welfare of its citizens.²¹⁸

Traditionally, states were required to meet the same standing requirements as individuals when exercising their *parens patriae* powers. However, in the wake of the Supreme Court’s 2007 decision in *Massachusetts v. E.P.A.*,²¹⁹ these standing requirements for states have been significantly diminished.

The doctrine of standing places limits on the cases that can come before the courts and there are three requirements: (1) the plaintiff must have suffered an injury-in-fact; (2) there must be a causal connection between the injury and the conduct complained of and (3) it must be likely that injury will be redressed by a favorable decision.²²⁰

In its landmark decision in *Sierra Club v. Morton*, the Supreme Court addressed the difficult question of standing in environmental lawsuits.²²¹ The case arose when the United States National Forest Service

²¹⁵ *Id.*

²¹⁶ George B. Curtis, *The Checkered Career of Parens Patriae: The State as Parent or Tyrant?*, 25 DEPAUL L. REV. 895, 896 (1976).

²¹⁷ *Id.* Inasmuch as the state is not solely advancing the rights of injured citizens by exercising its *parens patriae* powers, but additionally expressing a sovereign or quasi-sovereign interest, standing is deemed appropriate. A further justification for following *parens patriae* standing is found when there is a widespread injury to a significant number of citizens which cannot be computed monetarily. CHARLES ALAN WRIGHT, ARTHUR R. MILLER, EDWARD H. COOPER & VIKRAAM DAVID AMAR, 17 FED. PRAC. & PROC. JURIS. § 4047 (3d ed. 2007). Interestingly, in the past, there has been difficulty distinguishing “true” *parens patriae* suits from ordinary class actions. A. DAN TARLOCK, LAW AND WATER RIGHTS & RESOURCES § 10.12 (2007).

²¹⁸ Curtis, *supra* note 216, at 907.

²¹⁹ 549 U.S. 497 (2007).

²²⁰ *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560 (1992).

²²¹ 405 U.S. 727, 734 (1972).

permitted the development of a ski resort and summer recreation area in the Mineral King Valley in the Sequoia National Forest.²²² The environmental advocacy group Sierra Club sought a permanent injunction to prevent the National Forest Service from permitting the development project and the question on appeal to the United States Supreme Court was whether the Sierra Club had standing to sue.²²³

In its complaint, the Sierra Club alleged that the development of the Mineral King Valley “would destroy or otherwise adversely affect the scenery, natural and historic objects and wildlife of the park and would impair the enjoyment of the park for future generations.”²²⁴ The Court agreed with Sierra Club that the harm resulting from the development of Mineral King Valley constituted an injury-in-fact sufficient to demonstrate standing and noted that “the fact that particular environmental interests are shared by the many rather than the few does not make them less deserving of legal protection through the judicial process.”²²⁵ However, the Court noted that an organization seeking to represent these public interests must demonstrate that its members are among the injured.²²⁶ Because the Sierra Club had not asserted in its complaint that any of its members had visited Mineral King Valley and therefore articulated no individualized harm to itself or its members, the Court held it lacked standing to maintain its action and affirmed the Court of Appeals dismissal of the District Court’s preliminary injunction.²²⁷

Sierra Club v. Morton is perhaps best known for Justice Douglas’ dissenting opinion in which he argued that natural resources ought to have standing to sue for their own protection.²²⁸ Drawing on Christopher Stone’s eponymous landmark article, *Should Trees Have Standing?—Toward Legal Rights for Natural Objects*,²²⁹ Douglas argued that legal standing

²²² *Id.* at 734–35.

²²³ *Id.* at 730–33.

²²⁴ *Id.* at 734.

²²⁵ *Id.*

²²⁶ *Id.*

²²⁷ *Sierra Club*, 405 U.S. at 741.

²²⁸ *Id.* at 741–44.

²²⁹ Christopher D. Stone, *Should Trees Have Standing?—Toward Legal Rights for Natural Objects*, 45 S. CAL. L. REV. 450, 450 (1972). Stone proposed conferring legal rights not only to “natural objects” within the environment (e.g., forests, oceans, rivers, etc.), but to the natural environment as a whole. Accordingly, when perceived by a friend of a natural object, that the environment was endangered, an application could be made to court to create a guardianship for the threatened environmental object. *Id.* Recovering for natural resource damages “is conceptually similar to the tort law doctrine of providing a sum of money ‘to make the victim whole again’ although here the victim is the environment

for the environment was necessary for its own preservation. The problem, Douglas argued, is that although the natural resources that are “the core of America’s beauty” are, for the most part, under the protection of federal and state agencies, there is enormous pressure from industry to not safeguard these resources for the common good.

The federal agencies of which I speak are not venal or corrupt. But they are notoriously under the control of powerful interests who manipulate them through advisory committees, or friendly working relations, or who have that natural affinity with the agency which in time develops between the regulator and the regulated.²³⁰

Despite questioning the agencies’ ability to exercise their regulatory authority on behalf of the public interest and not the industries they regulate, Douglas insisted that he was not calling for the judiciary to replace the federal agencies’ management of natural resources.²³¹ The judiciary’s role, he wrote, is simply to let the voice of these environmental wonders be heard.²³²

Although the Sierra Club lost its appeal, it was ultimately successful in preventing the commercial development of the Mineral King Valley. In 1978, Congress passed the National Parks and Recreation Act, which made the Mineral King Valley a part of the Sequoia National Park and thereby thwarted private plans for its commercial development.²³³

The legacy of *Sierra Club v. Morton* has grown stronger over the years. More recently, in 2007 in *Massachusetts v. E.P.A.*, the Supreme Court took a decisive step in widening heretofore heavy standing requirements for the states, under their *parens patriae* powers, to litigate climate-related injuries.²³⁴ The case arose when states, local governments, and environmental organizations petitioned for a review of an order of the

rather than a private party.” Jason J. Czarnezki & Adrienne K. Zahner, *The Utility of Non-Use Values in Natural Resource Damage Assessments*, 32 B.C. ENVTL. AFF. L. REV. 509, 509–10 (2005) (quoting Barry Breen, *Citizen Suits for Natural Resource Damages: Closing the Gap in Federal Environmental Law*, 24 WAKE FOREST L. REV. 851, 875 (1989)).

²³⁰ *Sierra Club v. Morton*, 405 U.S. 727, 746 (1972).

²³¹ *Id.* at 749–50.

²³² *Id.* at 750.

²³³ National Parks and Recreation Act of 1978, Pub. L. No. 95-625, § 314, 92 Stat. 3467, 3479 (codified at 16 U.S.C. § 451 (1994)).

²³⁴ 549 U.S. 497 (2007).

Environmental Protection Agency ("EPA") denying a petition for rulemaking to regulate greenhouse gas emissions from new motor vehicles under the Clean Air Act.²³⁵ The United States Court of Appeals for the District of Columbia Circuit denied the petition and upheld the EPA's decision, although the courts' judges differed significantly over their reasoning in reaching their decision, and the question of whether the petitioners had standing was contested.²³⁶

The group of states,²³⁷ local governments,²³⁸ and private organizations²³⁹ filed a Writ of Certiorari to the Supreme Court and it was granted.²⁴⁰ The principal disagreement among the justices was whether establishing a general harm and a quasi-sovereign injury under the doctrine of *parens patriae* raises or lowers a state's standing requirements.²⁴¹ Writing for the majority in its decision finding that Massachusetts had met the standing requirement, Justice Stevens concluded that the standing requirements for states were lessened.²⁴² First, Justice Stevens noted that Congress enjoined the EPA to protect the states' citizens from environmental harms and created a remedy for a party whose petition to the EPA is denied. This procedural right, he argued, coupled with "Massachusetts' stake in protecting its quasi-sovereign interests" entitles the Commonwealth to a "special solicitude in our standing analysis."²⁴³

In his opinion, Justice Breyer relied heavily on the Court's 1907 decision in *Georgia v. Tennessee Cooper*,²⁴⁴ a case in which Georgia sought to protect its citizens from out-of-state pollution and in which the Court held its interest in the land and air of the state qualified as a quasi-sovereign interest, and quoted from it at length:

²³⁵ *Id.* at 498.

²³⁶ *Mass. v. EPA*, 415 F.3d 50, 58 (D.C. Cir. 2005), *rev'd*, 549 U.S. 497 (2007).

²³⁷ *Mass. v. EPA*, 549 U.S. at 505 n.2 (listing state plaintiffs: California, Connecticut, Illinois, Maine, Massachusetts, New Jersey, New Mexico, New York, Oregon, Rhode Island, Vermont, and Washington).

²³⁸ *Id.* at 505 n.3 (listing local government plaintiffs: District of Columbia, American Samoa, New York City, and Baltimore).

²³⁹ *Id.* at 505 n.3 (listing private organization plaintiffs: Center for Biological Diversity, Center for Food Safety, Conservation Law Foundation, Environmental Advocates, Environmental Defense, Friends of the Earth, Greenpeace, International Center for Technology Assessment, National Environmental Trust, Natural Resources Defense Council, Sierra Club, Union of Concerned Scientists, and U.S. Public Interest Research Group).

²⁴⁰ *Id.* at 506.

²⁴¹ *Id.* at 519–38.

²⁴² *Id.* at 498.

²⁴³ *Mass. v. EPA*, 549 U.S. at 498.

²⁴⁴ 206 U.S. 230 (1907).

The case has been argued largely as if it were one between two private parties; but it is not. The very elements that would be relied upon in a suit between fellow-citizens as a ground for equitable relief are wanting here. The State owns very little of the territory alleged to be affected, and the damage to it capable of estimate in money, possibly, at least, is small. This is a suit by a State for an injury to it in its capacity of *quasi*-sovereign. In that capacity the State has an 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 mounts shall be stripped of their forests and its inhabitants shall breathe the pure air.²⁴⁵

If Georgia had a quasi-sovereign interest in its air, Stevens reasoned, Massachusetts also had a quasi-sovereign interest in its territory and therefore the right as *parens patriae* to challenge the EPA's refusal to regulate greenhouses gas emissions from new cars.²⁴⁶

Notably, Stevens failed to distinguish between the standing rights granted to Massachusetts through the doctrine of *parens patriae* and the specific procedural rights conferred in the Clean Air Act to challenge the EPA's decision to reject the plaintiff's rulemaking request.²⁴⁷ Because the Court did not clarify to what extent Massachusetts' special standing rested on the doctrine of *parens patriae* as opposed to procedural rights granted by the Clean Air Act, it is difficult for lower courts to determine precisely what standing requirements states must meet when initiating a claim as *parens patriae*.

A. Chief Justice Robert's Dissenting Opinion

In his dissenting opinion, Chief Justice Roberts made two principal criticisms of the majority's opinion. First, he argued that the doctrine of *parens patriae* does not provide states with greater standing rights.²⁴⁸ Second, he argued that the plaintiffs' claim was a nonjusticiable issue that would be better resolved by the political branches.

²⁴⁵ Mass. v. EPA, 549 U.S. at 519 (quoting Georgia v. Tennessee Copper Co., 206 U.S. 230, 237 (1907)).

²⁴⁶ *Id.*

²⁴⁷ See 42 U.S.C. §§ 7401–7671(q) (2012); Mass. v. EPA, 549 U.S. at 519–20.

²⁴⁸ Mass. v. EPA, 549 U.S. at 537–38.

B. *Parens Patriae Does Not Provide States with Greater Standing Rights*

Chief Justice Roberts argued that the majority sidestepped the traditional three-part test of standing by simply declaring that states are entitled to “special solicitude,” even though neither the Court’s jurisprudence nor the Clean Air Act made a distinction between public and private litigants, let alone permitted relaxed standing requirements for states.²⁴⁹ Although Roberts conceded that *Tennessee Copper* did draw a distinction between a state and private litigants, it was “solely with respect to available remedies. The case had nothing to do with Article III standing.”²⁵⁰ Moreover, rather than being a substitute for Article III injury, “*parens patriae* actions raise an additional hurdle for a state litigant: the articulation of a ‘quasi-sovereign interest’ *apart* from the interests of particular private parties.”²⁵¹ According to Chief Justice Roberts, “focusing on Massachusetts’ interests as quasi-sovereign makes the required showing harder, not easier” because “a State asserting quasi-sovereign interests as *parens patriae* must still show that its citizens satisfy Article III.”²⁵² Thus Chief Justice Roberts asserted that “the status of Massachusetts as a State cannot compensate for [its] failure to demonstrate injury in fact, causation, and redressability” and, therefore, under traditional standing requirement analysis, the case should be dismissed.²⁵³

Chief Justice Roberts began his dissent by noting that the petitioners were “apparently dissatisfied with the pace of progress” by Congress and the President in addressing global climate change and therefore ‘came to the courts’ to address their injury.²⁵⁴ By recognizing Massachusetts’ standing in a case replete with such significant and competing policy interests affecting not only the nation but the entire world, the majority, Roberts argued, led the court into policy decisions that are only appropriate for the political branches, i.e., Congress and the Executive.²⁵⁵ “The

²⁴⁹ *Id.* at 535–38.

²⁵⁰ *Id.* at 537 (Roberts, C.J., dissenting). Roberts is technically correct because the Court did not develop the modern standing doctrine until the 1940s, several decades after the *Tennessee Cooper* decision. See Bradford C. Mank, *No Article III Standing for Private Plaintiffs Challenging State Greenhouse Gas Regulations: The Ninth Circuit’s Decision in Washington Environmental Council v. Bellon*, 63 AM. U. L. REV. 1525, 1543 (2014).

²⁵¹ *Mass. v. EPA*, 549 U.S. at 537 (Roberts, C.J., dissenting) (quoting *Alfred L. Snapp & Son, Inc. v. Puerto Rico ex rel. Barez*, 458 U.S. 592, 607 (1982)).

²⁵² *Id.* at 537 (Roberts, C.J., dissenting).

²⁵³ *Id.* at 540 (Roberts, C.J., dissenting).

²⁵⁴ *Id.* at 535 (Roberts, C.J., dissenting).

²⁵⁵ *Id.* at 548–49 (Roberts, C.J., dissenting).

Constitutional role of the courts,” Roberts writes, “[] is to decide concrete cases—not to serve as a convenient forum for policy debates.” Moreover, this lax application of the standing doctrine causes the Court to violate the separation of powers, which “is crucial in maintaining the tripartite allocation of power set forth in the Constitution.”²⁵⁶

C. *Public Trust*

The public trust doctrine has its origins in Roman law and has roots in American jurisprudence since at least 1810.²⁵⁷ The doctrine originally developed around the rights of the public with respect to tidelands and navigable waters.²⁵⁸ In 1970, Professor Joseph Sax authored a landmark law review article calling for the public trust doctrine to be utilized as an effective tool for environmental protection.²⁵⁹ In his seminal article, Professor Sax proposed that some natural resources—oceans, other bodies of water, shorelines, the air, and portions of land—be treated by courts as a “public trust” and that citizens have a right to sue to protect them against government, business, and private individuals who might threaten them.²⁶⁰ Sax’s article was enormously influential and transformed the public trust from a doctrine of public rights in waterways and tidal lands to a doctrine protecting natural resources.

Today, the public trust doctrine is rooted in state law and states have variously enshrined the doctrine in constitutions, statutes, and common law.²⁶¹ Thus, responsibility for some of the country’s most important natural resources resides in state legislatures, state courts, and state coastal and land commissions,²⁶² and state public trust doctrines vary considerably in terms of their “robustness and breadth.”²⁶³ The Supreme

²⁵⁶ *Id.* at 547 (Roberts, C.J., dissenting) (citing *Daimler Chrysler Corp. v. Cuno*, 547 U.S. 332, 340–41 (2006)).

²⁵⁷ Michael C. Blumm & Aurora Paulsen, *The Public Trust in Wildlife*, 2013 UTAH L. REV. 1437, 1438 (2013).

²⁵⁸ *Id.* at 1438–39.

²⁵⁹ See Joseph Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471, 471 (1970).

²⁶⁰ *Id.* But see Hope Babcock, *Is Protecting the Public Parkland from Visual Pollution Justifiable Doctrinal Creep?*, 42 ECOLOGY L.Q. 1 (2015) (analyzing the over-reach of the Public Trust Doctrine).

²⁶¹ Blumm & Paulsen, *supra* note 257, at 1439. See Joseph L. Sax, *Liberating the Public Trust from Its Historical Shackles*, 14 U.C. DAVIS L. REV. 185 (1980).

²⁶² Julia B. Wyman, *In States We Trust: The Importance of the Preservation of the Public Trust Doctrine in the Wake of Climate Change*, 35 VT. L. REV. 507 (2010).

²⁶³ Blumm & Paulsen, *supra* note 257, at 1439. See *Puerto Rico v. SS Zoe Colocotroni*, 456 F. Supp. 1327 (D.P.R. 1978), *aff’d in part*, 628 F. 2d 652 (1st Cir. 1980), where the

Court itself has recognized the need for states to have considerable latitude in applying this doctrine “according to [their] own view of justice and policy,” noting that “great caution . . . is necessary in applying precedents in one State to cases arising in another.”²⁶⁴

In 1892, the Supreme Court explicitly adopted the public trust doctrine in *Illinois Central Railroad v. Illinois*, and declared that states have a duty to protect their natural resources for the benefit of their people and the promotion of the common good.²⁶⁵ The case involved whether the Illinois legislature could repeal an earlier law conveying ownership of a significant portion of the bed of the Chicago harbor to Illinois Central Railroad, a private company.²⁶⁶ The Circuit Court of the Northern District of Illinois upheld the legislature’s revocation of the conveyance and the railroad appealed. The Supreme Court affirmed the lower court’s decision and held that because the state owned the bed of the Chicago harbor in trust for the people, it could not transfer the lands to a private corporation if the conveyance violated the public trust and was not in the best interests of the people.²⁶⁷

Thus *Illinois Central Railroad v. Illinois* established two important principles governing states’ stewardship of natural resources: (1) states must regulate the use of some natural resources, such as rivers and other navigable waterways, “in a sovereign capacity” and (2) states must exercise this power only for the benefit of the public and the common good.²⁶⁸ To this day, the case remains “[t]he most celebrated public trust case in American law.”²⁶⁹

In its modern form, the public trust doctrine imposes three restrictions on governmental activity: (1) the property subject to the trust must not only be used for a public purpose, but it must be held for use by the general public, (2) the property may not be sold, even for fair-market value, and (3) the property must be maintained for particular types of uses.²⁷⁰

government acted within its *parens patriae* powers as trustee of the public trust in assessing restorative damages for a peninsula in Puerto Rico equal to the value of the resources within the particular ecosystem that was damaged by an oil spill. *See also* Grady, *supra* note 196, at 398 nn.25–28.

²⁶⁴ *Shively v. Bowlby*, 152 U.S. 1, 26 (1894).

²⁶⁵ *Illinois Central Railroad v. Illinois*, 146 U.S. 387, 455 (1892).

²⁶⁶ *Id.* at 452.

²⁶⁷ *Id.*; *see* Babcock, *supra* note 260.

²⁶⁸ Blumm & Paulsen, *supra* note 257, at 1450.

²⁶⁹ Sax, *supra* note 259, at 489.

²⁷⁰ *See* Smith & Sweeney, *supra* note 36.

D. *State Ownership of Wildlife*

The public trust doctrine coupled with the state's sovereign ownership of wildlife and recognition of the wildlife as a public trust resource is an effective means to address environmental harms and degradations.²⁷¹ In light of changing social and legal circumstances, the scope of the public trust doctrine has been expanded to many other natural resources, including wildlife. The state sovereign ownership of wildlife also has its origins in Roman civil law and has roots in American jurisprudence from the early nineteenth century.²⁷²

In 1896, the Supreme Court affirmed states' sovereign ownership of wildlife in *Geer v. State of Connecticut*.²⁷³ In this case, the State of Connecticut charged Edward Geer with possessing wild birds with the intent to transport them across state lines.²⁷⁴ Although Geer had lawfully killed the birds during hunting season, a state statute forbade transporting the game across state lines.²⁷⁵ Geer was found guilty of violating the statute and was fined.²⁷⁶ On appeal to the Supreme Court, the question was whether the state statute forbidding the transport of lawfully killed game to another state was permissible.²⁷⁷ In its decision upholding the state statute, the Court traced the history of states' sovereign ownership of wildlife and found that judicial recognition of this authority was widespread.²⁷⁸ The Court also noted the purpose of this ownership, writing that:

This common ownership, is to be exercised, like all other powers of government, as a trust for the benefit of the people, and not as a prerogative for the advantage of the government as distinct from the people, or for the benefit of private individuals as distinguished from public good.²⁷⁹

The court noted that the state's ownership of the wildlife is "that of the people in their united sovereignty" and therefore the state must take responsibility of this natural resource and exercise its sovereign ownership

²⁷¹ Blumm & Paulsen, *supra* note 257, at 1451.

²⁷² *Id.* at 1450.

²⁷³ *Geer v. Connecticut*, 161 U.S. 519, 529 (1896).

²⁷⁴ *Id.* at 519–20.

²⁷⁵ *Id.* at 519, 521.

²⁷⁶ *Id.* at 520.

²⁷⁷ *Id.* at 522.

²⁷⁸ *Id.* at 528.

²⁷⁹ *Geer*, 161 U.S. at 529.

of the wildlife for the benefit of the people.²⁸⁰ Thus the Supreme Court affirmed states' sovereign ownership of wildlife and "indicated that the authority to ensure conservation of wildlife is inherent in state ownership."²⁸¹

State sovereign ownership of wildlife is now widely recognized and at least forty-eight states claim ownership of wildlife.²⁸² Moreover, it is now firmly established that the federal government also has a significant role in protecting wildlife as a natural resource. The Court first established the federal government's right to regulate wildlife in its 1920 decision in *Missouri v. Holland*.²⁸³ In this case, the Supreme Court considered whether the Migratory Bird Treaty Act was a valid exercise of federal power.²⁸⁴ The State of Missouri argued that it violated the Tenth Amendment, but Justice Oliver Wendell Holmes, writing for the majority, wrote that the State "may regulate the killing and sale of such bird, but it does not follow that its authority is exclusive of paramount powers."²⁸⁵ Thus, *Missouri v. Holland* affirmed the state sovereign ownership of wildlife while also establishing the federal government's right to regulate wildlife.

Although subsequent cases have limited states' power over wildlife *vis-a-vis* the federal government, state sovereign ownership of wildlife has not diminished in importance.²⁸⁶ And indeed many commentators over the past two decades have called for states' sovereign ownership of wildlife to play a larger role in conservation efforts by way of recognizing wildlife as a public trust resource.²⁸⁷

Changing public "needs" have been the reason or, as the case may be, the excuse, for capacious overreach and enforcement of the Public Trust Doctrine.²⁸⁸ Judicial enforcement and implementation of this Doctrine must be temporal and measured—at all times—by the common good.²⁸⁹

²⁸⁰ *Id.*

²⁸¹ Blumm & Paulsen, *supra* note 257, at 1460. Interestingly, some forty-eight states have already effected a merger of the English Common Law notion of sovereign ownership of wildlife with the Public Trust Doctrine. *Id.* at 1487.

²⁸² *Id.* at 1462 n.204. For a complete chart of state sovereign ownership of wildlife and state wildlife trusts, see *id.* at 1488–1504.

²⁸³ 252 U.S. 416 (1920).

²⁸⁴ *Id.*

²⁸⁵ *Id.* at 434.

²⁸⁶ Blumm & Paulsen, *supra* note 257, at 1461.

²⁸⁷ See, e.g., Mary Christina Wood, *The Tribal Property Right to Wildlife Capital (Part I): Applying Principles of Sovereignty to Protect Imperiled Wildlife Populations*, 37 IDAHO L. REV. 1, 63–64 (2000).

²⁸⁸ Smith & Sweeney, *supra* note 36, at 308. See Babcock, *supra* note 260.

²⁸⁹ Often the courts have used the public trust powers under the Doctrine to overturn legislative actions viewed as inconsistent with it. Baton H. Thompson, *The Public Trust Doctrine: A Conservative Reconstruction and Defense*, 15 SOUTHEASTERN ENVTL. L. J. 47, 55 (2006).

Accordingly, the use of public trust preservation powers should be balanced by an understanding of “the legitimate expectations and real interests of individual property owners with the need for enhanced public resource presentation.”²⁹⁰ Normally, “the legitimate economic interests of the property owner” should prevail over the felt needs to widen the scope of environmental protection.²⁹¹

IV. COOPERATIVE ENVIRONMENTAL FEDERALISM IN ACTION

The federal government owns lands in the United States constituting roughly one-third of the Nation.²⁹² This, in turn, translates into ownership of approximately 740 million acres of land of which some 440 million are “disposable” administratively, without prior congressional approval.²⁹³

In May 2014, President Obama exercised his unilateral power under the Antiquities Act of 1906²⁹⁴ to set aside some 500,000 acres in New Mexico along the border to Mexico to be preserved as a national monument.²⁹⁵ Boasting that during his administration he has preserved over three million acres of public lands for the future, the President acknowledged that he planned to act to protect even more land.²⁹⁶

A. *Land Trusts and Conservation Easements*

Since 1891, in America, land trusts—also termed land conservancies and conservation land trusts—have been in existence.²⁹⁷ Often partnered with local governments, these trusts, which are nonprofit, identify with important, and often fragile, ecosystems and seek—as such—to ensure

²⁹⁰ Smith & Sweeney, *supra* note 36, at 309.

²⁹¹ *Id.*

²⁹² DAVID L. CALLIES, ROBERT H. FREILICH & THOMAS E. ROBERTS, *CASES AND MATERIALS ON LAND USE* 1051 (6th ed. 2012).

²⁹³ *Id.* The major exceptions to this right of disposition are the lands in national parks, the national forests and the national wildlife refuges. *Id.* Of this total acreage of 740 million, one authority asserts 662 million acres are under actual control by the federal government with their management delegated to the Bureaus of Land Management and Indian Affairs, as well as the National Park Service in the Department of Interior. THOMAS W. MERRILL & HENRY E. SMITH, *PROPERTY: PRINCIPLES AND POLICIES* 129 (2d ed. 2012).

²⁹⁴ 16 U.S.C. §§ 431–433.

²⁹⁵ Erika Johnsen, *Obama administration designates another half million acres in New Mexico as a national monument*, HOTAIR.COM (May 22, 2015), <http://hotair.com/archives/2014/05/22/obama-administration-designates-another-half-a-million-acres-in-new-mexico-as-a-national-monument/> [http://perma.cc/JDK3-8P23].

²⁹⁶ *Id.*

²⁹⁷ *See generally* R. BREWER, *CONSERVANCY: THE LAND TRUST MOVEMENT IN AMERICA* (2003).

that permanent protections are in place to allow municipalities to preserve critical environmental areas as comprehensive plans,²⁹⁸ together with land use approvals laid out by local governmental units and the acquisition of conservation easements.²⁹⁹ Nationwide, thirty-seven million acres of land have been conserved by land trusts.³⁰⁰

Designed to preserve the natural resources of land or, alternatively, the public values inherent in land, conservation easements are seen as legal agreements entered into by a property owner and either a municipal government, a land trust, or other qualified organizations.³⁰¹ Enforced by local governments, land trusts, or other organizations, this easement operates essentially as a restrictive covenant which has the effect of burdening an owner's use of land.³⁰² The effect of this type of easement is to limit those land activities which compromise either conservation or environmental values and management.³⁰³ Conservation easements vary widely depending upon not only the nature of the property but, as well, the desires of the owner or the interest of the organization holding the easement.³⁰⁴ In Texas, interestingly, more than thirteen million private acres have conservation easements managed by the State Parks and Wildlife Department.³⁰⁵

Commendable as these combined efforts at safeguarding the environment are, the glaring weakness with the present national land use and environmental "legal system" is that its continued adherence to "its dated standards and many disconnections fall far short of a cogent framework of laws."³⁰⁶ Lacking consistency in policymaking at the municipal, state, and federal levels of government underscores the strength and vitality of the common law as the framework for principled environmental decision-making.

²⁹⁸ NOLON, *supra* note 20.

²⁹⁹ *Id.* See generally ELIZABETH & KARIN M. PONTE, *THE CONSERVATION EASEMENT HANDBOOK* (2005).

³⁰⁰ See Landtrust Alliance, *Landtrust Alliance Annual Report 2014*, <http://www.landtrustalliance.org/about/annual-report> [<http://perma.cc/XSQ7-GY7K>] (last visited Nov. 12, 2015). Interestingly, in Wisconsin alone, over 100,000 acres of land are protected by some fifty land trusts. NOLON, *supra* note 20, at 202.

³⁰¹ NOLON, *supra* note 20, at 202. See generally Roger Colinvaux, *Conservation Easements: Designer Flaws, Enforcement Challenges and Reform*, 33 UTAH ENVTL. L. REV. 69 (2013) (discussing the strengths and weaknesses of conservation easements).

³⁰² NOLON, *supra* note 20.

³⁰³ *Id.*

³⁰⁴ *Id.* See generally Roger Colinvaux, *The Conservation Easement Tax Expenditures: In Search of Conservation Value*, 37 COLUM. J. ENVTL. L. 1 (2012) (analyzing the tax values of conservation easements).

³⁰⁵ TEX. NATURAL RES. CODE ANN. §§ 183.001–183.006 (West 2014).

³⁰⁶ NOLON, *supra* note 20, at 255.

V. THE LAW OF NUISANCE AND THE *RESTATEMENT OF TORTS*

The *Restatement (Second) of Torts*, Nuisance, Sections 822, 827, and 828 (1979) present a workable construct for assessing the extent to which unreasonable conduct gives rise to liability.

Section 822 provides:

One is subject to liability for a private nuisance if, but only if, his conduct is a legal cause of an invasion of another's interest in the private use and enjoyment of land, and the invasion is either

- (a) intention and unreasonable, or
- (b) unintentional and otherwise actionable under the rules controlling liability for negligent or reckless conduct, or for abnormally dangerous conditions or activities.³⁰⁷

In determining the gravity of the harm and the social value of activity allegedly causing injury, Sections 827 and 828 of the *Restatement* list a number of factors to be considered as:

- (a) the extent of the harm involved;
- (b) the character of the harm involved;
- (c) the social value that the law attaches to the type of use or enjoyment involved;
- (d) the suitability of the particular use or enjoyment invaded to the character of the locality; and
- (e) the burden on the person harmed of avoiding the harm.³⁰⁸

The "utility of conduct" balancing factors are listed in Section 828 as:

- (a) the social value that the law attaches to the primary purpose of the conduct;
- (b) the suitability of the conduct to the character of the locality; and preventing or avoiding the invasion.³⁰⁹

Typically, three alternatives to the *Restatement of Torts* template for testing the bounds of reasonable conduct are listed as being:

³⁰⁷ RESTATEMENT (SECOND) OF TORTS § 822 (1979).

³⁰⁸ *Id.* § 827.

³⁰⁹ *Id.* § 828.

1. Determining whether—consistent with the English Common Law—a defendant's conduct has either caused or threatened to cause an invasion of plaintiff's land (e.g., released particles polluting the air or sewage into a stream).³¹⁰
2. Application of a relevant community's general understanding of what "normal land uses" include.³¹¹
3. Determining whether the actions of parties—plaintiff and/or defendant—are consistent with the norms of "neighborliness" within a particular community.³¹²

Obviously, all three of these alternatives are exceedingly broad and rather open-ended. Testing the bounds of normative conduct using these "standards" is, indeed, problematic. The decided advantage that the *Restatement of Torts* enjoys over these alternatives is that specific behavioral and economic factors are enumerated and thereby provide a framework for the judiciary to test the parameters of legally acceptable (e.g., reasonable) conduct.

The strength of the *Restatement's* position on nuisance is both fortified and sustained by the body of the Common Law and its established historical capacity to adapt to the changing conditions of differences. Indeed, the Common Law system affords more flexibility to integrate "public civic values into new and significant settings" than inflexible statutory directives.³¹³

A. *Anticipatory Nuisance*

One of the most significant legal tools to manage the environment before an actual injury to it occurs is through the equitable injunctive remedy of anticipatory nuisance.³¹⁴ Obviously, it is better to address

³¹⁰ Richard A. Epstein, *Nuisance Law: Corrective Justice and Its Utilitarian Constraints*, 8 J. LEGAL STUD. 49, 49 (1979).

³¹¹ Robert C. Ellickson, *Alternatives to Zoning Covenants, Nuisance Rules, and Fines as Land Use Controls*, 40 U. CHI. L. REV. 681, 729–30 (1973).

³¹² THOMAS W. MERRILL & HENRY E. SMITH, PROPERTY: PRINCIPLES AND POLICIES 28–29 (University Casebook Series ed., 2d ed. 2012).

³¹³ ENVIRONMENTAL LAW AND POLICY, *supra* note 8, at 57, 90.

³¹⁴ WILLIAM Q. DE FUNIAK, HANDBOOK ON MODERN EQUITY 63 (Little, Brown & Co. ed., 2d ed. 1956). See Serena M. Williams, *The Anticipatory Nuisance Doctrine: One Common Law Theory for Use in Environmental Justice Cases*, 19 WM. & MARY ENVTL. L. & POL'Y REV. 223, 224, 239 (1995) (analyzing the practicality of the doctrine of anticipatory nuisance).

environmental issues *Ex Ante* or, before conflicts arrive over resource use and allocations, rather than follow *Ex Post* analysis which is undertaken subsequent to the when improper or unreasonable use of the environment occurs.³¹⁵ Inasmuch as most legal controversies are presented to the judiciary for *ex post* analysis, the courts—of necessity—are drawn naturally to this analytical method.³¹⁶ Regardless of which analytical construct is used to remediate environmental injuries, the courts always seek a “solution that makes the most sense and is both efficient and fair.”³¹⁷

When a moving party seeks to prevent threatening conduct which *will* subsequently become a nuisance, an action in equity for prohibitory injunction will lie for an anticipatory nuisance.³¹⁸ Long recognized in both state³¹⁹ and federal common law,³²⁰ an action for anticipatory nuisance is largely under-utilized³²¹—this, because of a high burden of proof (usually reasonable certainty or a high probability of injury) being required legislatively³²² or through practice and interpretation judicially.³²³ Seen as despotic³²⁴ because it conflicts with the founding principle of Common

as a deterrent to the siting of waste facilities in local communities); Thomas W. Merrill, *Anticipatory Remedies for Takings*, 128 HARV. L. REV. 1630, 1675–76 (2015) (acknowledging anticipatory relief—either in the form of declaratory judgment or otherwise—should not be used extensively, but concluding such relief may have real value in those cases where requiring property owners to seek compensation results in “incomplete, impractical, or inefficient outcomes”).

³¹⁵ MERRILL & SMITH, *supra* note 312, at 60.

³¹⁶ *Id.* at 64.

³¹⁷ *Id.* Interestingly, it has been posited that the Second Amendment to the Constitution is best studied through the law of nuisance because the central concern of both is tied to one common question: “whether the gain from preventing the harm is greater than the loss which would be suffered as a result of stopping the action which produces the harm.” Josh Blackman, *The Constitutionality of Social Cost*, 34 HARV. J.L. & PUB. POL’Y 951, 959 (2011) (quoting Ronald H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1, 27 (1960)).

³¹⁸ Smith, *supra* note 34, at 688.

³¹⁹ See generally Andrew H. Sharp, Comment, *An Ounce of Prevention: Rehabilitating the Anticipatory Nuisance Doctrine*, 15 B.C. ENVTL. AFF. L. REV. 627 (1988) (presenting a historical consideration of the doctrine’s use in state and federal courts).

³²⁰ See Smith, *supra* note 34, at 722–23 n.257 (citing *Cal. Tahoe Reg’l Planning Agency v. Jennings*, 594 F.2d 181, 181 (9th Cir. 1979); *U.S. v. Dist. of Columbia*, 654 F.2d 802 (D.C. Cir. 1981)).

³²¹ Smith, *supra* note 34, at 696.

³²² Alabama and Georgia are the only states that have legislated recognition of the legal action of anticipated nuisance. See ALA. CODE § 6-5-125 (1978); GA. CODE ANN. § 41-2-14 (1991).

³²³ See e.g., *Fisk v. Bd. of Trs.*, 218 N.E. 2d 240, 244 (Ill. App. Ct. 1966), quoted in *Vill. of Wilsonville v. SCA Servs., Inc.*, 426 N.E. 2d 824, 836 (Ill. 1981).

³²⁴ Charles J. Doane, Comment, *Beyond Fear: Articulating a Modern Doctrine in Anticipatory Nuisance for Enjoining Improbable Threats of Harm*, 17 B.C. ENVTL. AFF. L. REV. 441, 452 (1990).

Law nuisance, *Sic utere tuo ut alienum non laedas*³²⁵ and thus prevents landowners from utilizing their real property as they deem reasonable,³²⁶ the action for anticipatory nuisance is not only efficacious but a valuable tool for preventing *ex post* despoliation of the environment.

B. Aesthetic Nuisance

While traditionally, equity protected only actual property rights “or rights of substance in the nature of property rights,” thereby excluding personal or individual rights from protection, the continuing modern trend extends equitable relief to protect existing personal rights which are judicially cognizable.³²⁷ One such personal “right” which is indeed becoming more recognized as a right rather than an interest, is that of aesthetics. Accordingly, injury to aesthetic interests is defined, simply, as an injury suffered due to a compromise to the visual environment.³²⁸ No distinction is made between either “obstruction of view” and “unreasonable appearance.”³²⁹

Within the context of land use and zoning, all of the state courts have begun to address the pressing issue of when and whether aesthetic considerations may be recognized as legitimate bases for exercising regulatory police powers.³³⁰ Some twenty-three states permit regulatory actions based purely on aesthetics.³³¹ Others allow for aesthetic regulation when they are combined with additional factors such as historic preservation, community character, tourism, and traffic safety.³³² The totality

³²⁵ Coquillette, *supra* note 39, at 772.

³²⁶ See Smith, *supra* note 34, at 680.

³²⁷ DE FUNIAK, *supra* note 314, at 10.

³²⁸ Smith & Fernandez, *supra* note 35, at 54 n.10. See also DE FUNIAK, *supra* note 314, at 124–25.

³²⁹ *But cf.* Frank Michaelman, *Toward a Practical Standard for Aesthetic Regulation*, 15 PRAC. LAW. 36, 37 (1969).

³³⁰ CALLIES ET AL., *supra* note 292, at 70. See generally Meg Stevenson, *Aesthetic Regulations: A History*, 35 REAL EST. L.J. 519 (2007) (tracing the development of aesthetic land use controls). See also Babcock, *supra* note 260.

³³¹ CALLIES ET AL., *supra* note 292, at 74.

³³² *Id.* Other issues of aesthetic control are directed toward billboards and other signs, house size and McMansions. *Id.* at 76, 576–77. For a state by state analysis of legal aesthetics, see generally Kenneth Pearlman, Elizabeth Linville, Andrea Phillips & Erin Prosser, *Beyond the Eye of the Beholder Once Again: A New Review of Aesthetic Regulation*, 38 URB. LAW. 119 (2006). See generally Anika Singh Lemar, *Zoning as Taxidermy: Neighborhood Conservation Districts and the Regulation of Aesthetics*, 90 IND. L.J. 1525 (2015) (analyzing how conservation districts serve negatively as sources for regulating aesthetics).

of response to aesthetic zoning shows, beyond doubt, the value which society is now placing upon aesthetic balance and preservation.³³³

In evaluating cases of aesthetic nuisance, courts employ—of necessity—“the very same analysis that they have been doing for many years in aural and olfactory nuisance cases.”³³⁴ Accordingly, the controlling issue is whether “normal persons living in the area or community would regard the defendant’s land use as a substantial interference with their use and enjoyment of land . . . ?”³³⁵ Of precedential necessity, the objective standard for determining this question is what the average, ordinary, reasonable person would hold under the given facts.³³⁶

By using an economic metric for evaluating the aesthetic injury caused, a court can rather easily determine whether the questioned conduct constitutes a substantial and unreasonable interference.³³⁷ Accordingly, if the presence of an unsightly activity devalues the fair market value of a landowner’s property, the conduct is a nuisance—this, simply because a substantial and unreasonable interference has occurred. If the activity cannot be enjoined, the landowner should be entitled to damages which reflect the devaluation of his property.³³⁸ In order to determine whether a land use is unsightly, and thus unreasonable, the courts will consider initially, the visual environment as a whole³³⁹ including the “socio-cultural identity of the particular neighborhood.”³⁴⁰ Accordingly, what one community finds pleasing aesthetically, another community with differing standards may find unsightly.³⁴¹

C. *Assessing Panoramic Views*

A 270-degree panoramic view of the New England high county—including the peaks of Mt. Ascutney—“the reddening leaves and white-painted

³³³ Smith & Fernandez, *supra* note 35, at 83. See Raymond Coletta, *The Case for Aesthetic Nuisance: Rethinking Traditional Attitudes*, 48 OHIO ST. L.J. 141 (1987) (proposing reasons for wider acceptance of aesthetic nuisance law); see also Note, *Aesthetic Nuisance: An Emerging Cause of Action*, 45 N.Y.U. L. REV. 1075 (1970) (discussing the emergence of actions for aesthetic nuisance). See generally Lemar, *supra* note 332.

³³⁴ George P. Smith, II, *Aesthetic Nuisance: Re-educating the Judiciary*, 24 REAL EST. L. J. 26, 31 (1995) [hereinafter *Aesthetic Nuisance*].

³³⁵ Coletta, *supra* note 333, at 161.

³³⁶ *Id.*

³³⁷ *Id.*

³³⁸ DOBBS, *supra* note 157, § 5.7(3). See Smith & Fernandez, *supra* note 35, at 75 (discussing how market forces serve as an objective factor of aesthetic value).

³³⁹ Coletta, *supra* note 333, at 157.

³⁴⁰ *Id.* “Unsightliness is, in essence a conclusion that the visual form is incongruous with the existing, sociocultural matrix.” *Id.*

³⁴¹ *Id.* See also *State ex rel. Stoyanoff v. Berkeley*, 458 S.W.2d 305 (Mo. 1970).

houses of the Connecticut River valley” and sometimes “migratory geese cruising by at eye level” has, in Plainfield, New Hampshire, been valued, for purposes of real estate taxation, as worth \$237,265.00. This valuation resulted in an assessment of actual property taxes of approximately \$4,700.00.³⁴²

“View factors” are, for tax assessors, very subjective. But, in a state like New Hampshire where there are no sales taxes nor a personal income tax, vistas are a crucial source of revenue.³⁴³ One assessor observed that from 1995 to 2005, the maximum assessed value of properties with scenic view “jumped from a maximum of around \$20,000 to \$200,000.00 or more. . . .”³⁴⁴

Even with the benefit of a VIEW MANUAL, which, as such, illustrates a range of vistas ranging from average to grand, substantive evidentiary proofs to validate real assessments are lacking.³⁴⁵ Indeed, the tax assessor for the town of Conway, New Hampshire, acknowledged his standard for assessing vistas was more or less intuitive.³⁴⁶

A property view rated as “300” whose view was of a barn and a mountain which yielded “a little bit of the horizon” tripled the property valuation by \$96,000.00. Similarly, a ninety-degree view of a river and hills are normally assessed at a higher value than only hills.³⁴⁷

It is thus seen that contemporary real estate appraisal techniques routinely place economic valuations to aesthetic considerations.³⁴⁸ And, this practice furthermore—seen as rather “subjective” at least in New Hampshire—even with the benefit of a VIEW MANUAL—is properly rooted in the Common Law; for, historically, aural and olfactory offenses were recognized as nuisances even though unequivocal legal standards for their assessment were lacking.³⁴⁹ Rather than being constrained by an

³⁴² David A. Fahrenthold, *N.H. Puts a Price on Panoramas: Property Taxes Soar*, WASH. POST, Nov. 14, 2005, at A1.

³⁴³ *Id.*

³⁴⁴ STATE OF NEW HAMPSHIRE, RESOURCES FOR NEW HAMPSHIRE RESIDENTS—TAXES (2012), <http://www.nh.gov/residents/taxes.html> [<http://perma.cc/NG35-Y5M3>].

³⁴⁵ *Id.*

³⁴⁶ *Id.* The Assessor related that he knows an evaluation/assessment “when I see it.” *Id.*

³⁴⁷ See generally Stephen Sussna, *Is The View Worth It?*, APPRAISAL DIG., Winter 1964, at 22–24 (stressing the need for zoning to serve the present-day goal of visual beauty).

³⁴⁸ *Aesthetic Nuisance*, *supra* note 334, at 32. The sales comparison approach is best suited for aesthetic evaluations. Under it, a “valuation is based on the economic principle that a prudent purchaser will not pay more for a property than the price of an equally desirable substitute property would bring in the open market at that approximate point in time.” Smith & Fernandez, *supra* note 35, at 75–76. The “income approach” and the “cost approach” are the two other real estate appraisals for aesthetic evaluations. *Id.*

³⁴⁹ *Aesthetic Nuisance*, *supra* note 334, at 31.

absence of strict standards of objectivity in calculating aesthetic harms, then, through aesthetic zoning³⁵⁰ and use of the sensibilities of the average ordinary person and/or community in testing the extent of unreasonable conduct by a defendant, judicial determinations are undertaken.³⁵¹

D. *Of Birds and Trees*

A unique case where aesthetic anticipatory nuisances occurred *in tandem* in Loudon, Virginia, occurred in 1999.³⁵² There, in order to prevent 224,000 black birds and their work “products” from creating nuisance in a new housing development, a land developer cut down twenty-eight acres of trees which were inhabited by the birds.³⁵³ It was determined that no rules had been violated by the developer when the tree acreage was decimated, even though the birds went by several hundred yards into yet another subdivision.³⁵⁴ Inasmuch as the birds would migrate North in March, it was determined that, at most, their presence was temporary.³⁵⁵

In *Cline v. Dunlora South, LLC*, the Virginia Supreme Court affirmed its long-standing position regarding encroaching vegetation and the imposition of liability on landowners when trees harm others because of an encroachment.³⁵⁶ This position is that when trees constitute a nuisance or pose a threat of imminent harm, they may be seen as unreasonable. Specifically, guided by the common law maxim, *Sic utere tuo ut alienum non laedas*, in cases of encroaching vegetation (when, as here, a tree fell from private land and injured a vehicle traveling on a public highway), it was held that “a plaintiff is limited to self-help unless the offending plan is ‘noxious’ and caused damage to the plaintiff’s land.”³⁵⁷

What is intriguing when considering the breadth of aesthetic nuisances is the socio-cultural context in which they are presented.³⁵⁸ In

³⁵⁰ Smith & Fernandez, *supra* note 35, at 73–76.

³⁵¹ See generally Coquillet, *supra* note 39.

³⁵² Justin Blum & Jennifer Lenhart, *Enormous Flock Creates Flap in Loudon*, WASH. POST, Jan. 29, 1999, at 3.

³⁵³ *Id.*

³⁵⁴ *Id.*

³⁵⁵ *Id.*

³⁵⁶ 726 S.E. 2d 14 (Va. 2012).

³⁵⁷ Daniel Bidwell, *Of Trees, Vegetation, and Torts: Re-Conceptualizing Reasonable Land Use*, 62 CATH. U. L. REV. 1035, 1045 (2013). Iterations of the Virginia Rule in determining liability regimes are found in the courts of Hawaii and Massachusetts. *Id.* at 1041. It is asserted that the dissent in *Cline* by Justice Lemons is the preferred position which seeks to “impose a general negligence standard on landowners and subjects liability when they knew, or should have known, of an unsafe condition posed by a tree.” *Id.* at 1059.

³⁵⁸ *Supra* notes 339–41.

New Hampshire, for example, trees enhance property valuations and add to the assessed value of panoramic views.³⁵⁹ In Loudoun County, Virginia, trees can—by virtue of their shelter and inhabitation by black birds—be seen as an aesthetic nuisance.³⁶⁰ And, encroaching vegetation as well as dead trees may well also qualify as aesthetic nuisances.³⁶¹ The standard of reasonable use and conduct is shaped by local customs, uses and cultural values within each community.³⁶² Consequently, no codified standard of reasonableness may be set. Rather, by placing reliance on the cost/benefit template put forward by The *Restatement (Second) of Torts*, the extent to which conduct—within a particular set of facts—is unreasonable may be determined judicially.³⁶³

CONCLUSIONS

The Common Law serves as the foundation for a considerable number of environmental statutes and the regulatory schemes for implementing these statutes at all levels of governance—local, state, and federal.³⁶⁴ As such, a full range of ecological issues are tackled by the Common Law, and especially those involving the law of nuisance.³⁶⁵ Because of the flexibility and the power of adaptability,³⁶⁶ the Common Law thus “plays a critical role in shaping private litigation in United States environmental law.”³⁶⁷ Inflexible environmental statutory directives are both moderated, interpreted, and adjoined by the Common Law.³⁶⁸

Conflicts emanating from unaesthetic uses of land should be resolved through “a balancing test which incorporates the same ‘objective’ standard courts use” involving sounds and smells alleged to be unreasonable: namely, by evaluating what the community holds to be reasonable.³⁶⁹

³⁵⁹ *Supra* notes 342–47.

³⁶⁰ *Supra* notes 352–54.

³⁶¹ Bidwell, *supra* note 357, at 1043 n.53, 1053 n.119.

³⁶² Smith & Fernandez, *supra* note 35, at 55.

³⁶³ RESTATEMENT (SECOND) OF TORTS § 929 (1979).

³⁶⁴ ENVIRONMENTAL LAW AND POLICY, *supra* note 8, at 69.

³⁶⁵ *Id.*

³⁶⁶ *Id.* at 90.

³⁶⁷ *Id.* at 69.

³⁶⁸ *See id.* at 57.

³⁶⁹ Smith & Fernandez, *supra* note 35, at 55. *See also* Coletta, *supra* note 333, at 157. On balance, the “best way we have of accounting for the consequences of [environmental] regulation” remains the cost-benefit analytical approach. The biggest challenge here is to “humanize” this approach and to take into consideration intangible environmental values which are often very difficult to quantify such as human dignity. *See* CASS R. SUNSTEIN, VALUING LIFE: HUMANIZING THE REGULATORY STATE 47–64 (2014).

Combining analysis of any consequences of the injured interest, together with the relief sought, provides a sound objective standard of adjudicating cases under a theory of aesthetic nuisance.³⁷⁰

Beyond compensating a landowner for the economic damages associated with aesthetic nuisances,³⁷¹ that individual should be compensated, ideally, for the loss of enjoyment of life that the aesthetic nuisance has created even though computational hurdles exist presently which prevent achievement of this goal. “Aesthetic and environmental well-being like economic well-being are important ingredients of the quality of life in our society.”³⁷² When an aesthetic nuisance impacts negatively on an individual’s quality of life, it is only equitable that the injured party be compensated for the harms caused.

Rather than evaluating and controlling taste or beauty, legal aesthetics should be concerned with protecting matters of economic and social stability³⁷³ which form part of the specter of in-rem expectations which result from the ownership of property.³⁷⁴ These expectations mean simply that “all actors in the relevant community must recognize that they are subject to a duty to abstain from interfering with such rights insofar as they are held by another member of the community.”³⁷⁵

A rich component of the Common Law is, as observed, the Public Trust Doctrine.³⁷⁶ When coupled with acceptance of the state’s sovereign ownership of wildlife³⁷⁷ and the co-ordinate recognition of wildlife as a vital public trust resource, the Doctrine becomes a significant vector of force in preserving environmental equilibrium so long as it not used capaciously.³⁷⁸

Another coupling which strengthens the environmental arsenal of the Common Law is that of restorative awards³⁷⁹—especially when aligned with application of equitable trust principles which would seek to ensure that these awards are used for restoration and not personal

³⁷⁰ Smith & Fernandez, *supra* note 35, at 55.

³⁷¹ *See id.* at 75.

³⁷² *Sierra Club v. Morton*, 405 U.S. 727, 734 (1972) (per Stewart, J.).

³⁷³ *See generally* JOHN COSTONIS, *ICONS AND ALIENS, LAW, AESTHETICS, AND ENVIRONMENTAL CHANGE* (1989).

³⁷⁴ Thomas W. Merrill & Henry E. Smith, *The Morality of Property*, 48 WM. & MARY L. REV. 1849, 1853 (2007).

³⁷⁵ *Id.* at 1853.

³⁷⁶ *See supra* notes 257–91 and text; *see also* Smith & Sweeney, *supra* note 36. *But see* Thompson, *supra* note 289.

³⁷⁷ Blumm & Paulsen, *supra* note 257.

³⁷⁸ *See* Smith & Sweeney, *supra* note 36, at 308; *see also* Thompson, *supra* note 289, at 55.

³⁷⁹ *See* Verdicchio, *supra* note 156.

enrichment by successful party-plaintiffs.³⁸⁰ Although a judicial order for restoration can create a tangible, objective remedy for harm, the remedy is *post ante*.³⁸¹ As well, the computational bases for making awards of this type are exceedingly problematic.³⁸²

The extent to which individual preferences should be subordinated to collective decisions aimed at maximizing *macro* land use value should not, nor can it fully, be resolved by *a priori* rules set out in law and in regulatory schemes.³⁸³ Political discourse must be widened to include the politics of environmentalism which, in turn, is placed within a structure of concrete legal issues.³⁸⁴ Nonetheless, there should be a realization that accommodating ecological values in environmental protection is quite contentious.³⁸⁵ Even with this effort of inclusion and accommodation, dysfunctionality pervades the whole of environmental management when it is realized—for example—that national land use controls are fractured “into tens of thousands of small uncoordinated jurisdictions”³⁸⁶ and lack any “cogent framework.”³⁸⁷ Yet, almost paradoxically, local governments are the primary forum for shaping environmental policy and enforcing environmental laws.³⁸⁸ It nevertheless remains for the Common Law to be the catalyst for testing the boundaries of unreasonable conduct which impairs the environment, as well as being the strongest mechanism for effecting sound environmental management and for preventing the establishment of a dystopian society.³⁸⁹

³⁸⁰ See Brown, *supra* note 179.

³⁸¹ ENVIRONMENTAL LAW AND POLICY, *supra* note 8, at 117.

³⁸² Cox, *supra* note 161.

³⁸³ Hornstein, *supra* note 13, at 633. See Alyson C. Flournoy, *In Search of an Environmental Ethic*, 28 COLUM. J. ENVTL. L. 63, 66 (2003) (suggesting that environmental laws do not reflect clearly articulated ethic that should be termed environmental).

³⁸⁴ Hornstein, *supra* note 13. See Christopher Stone, *Do Morals Matter? The Influence on Courts and Congress in Shaping U.S. Environmental Policies*, 37 U.C. DAVIS L. REV. 13 (2003) (finding the moral status of Nature remains problematic in large part because judges and legislators seldom acknowledge the relevance of any sort of moral philosophy or environmental ethic).

³⁸⁵ ENVIRONMENTAL LAW AND POLICY, *supra* note 8, at 117.

³⁸⁶ *Id.* at 368.

³⁸⁷ NOLON, *supra* note 20, at 255.

³⁸⁸ *Id.* at 367–68.

³⁸⁹ The fundamental principle of law found in the Common Law of both England and of the United States “is to correct injustices and thereby vindicate the moral sense”—with the conclusion being drawn that morality and efficiency are not inconsistent and that “on balance adherence to generally accepted moral principles increases the wealth of society more than reduces it.” RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* § 8.9 at 342 (8th ed. 2011). See Stone, *supra* note 384.