

ARTICLE

TALK IS CHEAP: THE EXISTENCE VALUE FALLACY

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Recent developments in environmental law have heightened the importance of the concept of "existence value"—the value that individuals gain simply from the knowledge that certain environmental resources exist. These values are nonuse values; hence, they are said to be in the nature of a public good and will tend to be underprotected by the market. Because there is no market for such values, some lawyers, economists, and policy makers have proposed the use of "contingent valuation" studies to ascertain a value for these amenities. Contingent valuation studies ask respondents to state how much they would pay to preserve the environmental amenity in question. Contingent valuation studies have been criticized by both legal scholars and economists on various practical grounds. Here, the authors move beyond these practical problems and argue that the use of contingent valuation is conceptually flawed. They argue that an exploration of these conceptual problems reveals that the practical problems that have previously been identified are merely manifestations of more fundamental conceptual problems. They contend that contingent valuation studies are based on several fundamental misunderstandings about the nature of economic choice and the role of prices in a dynamic economy. Contingent valuation studies rest on the assumption that prices are absolute and static. In reality, prices are relative and dynamic. The authors argue that, because contingent valuation rests on a mistaken conceptual premise, it

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should be rejected as a policy-making guide. Because existence value, by definition, can be ascertained only through choice heuristics such as contingent valuation, the authors conclude that there is no basis in contingent valuation for political or judicial protection of existence value.

I. INTRODUCTION

Talk is cheap. We distinguish between those who merely "talk the talk" and those who actually "walk the walk." We hear admonitions to "put your money where your mouth is." Usually economists are the first ones in line to inform people that the only thing that matters is what they are actually willing to pay, not what they *say* they are willing to pay. Action, not words, is the touchstone of economics.

But this common-sense and economists' rule of using real money to back expressed opinions has been ignored by many economists who, through the notion of "contingent value," have elevated people's words above their deeds. The idea has spread like wildfire, finding adherents among lawyers, politicians, economists, and environmentalists who have advocated the use of this notion as a guide to environmental policy. Rather than recognizing these free-floating opinions as loose talk, advocates have dressed them in the garb of economic science and dubbed it to be "contingent value": what you *say* you would pay if you actually had to and knew whom to pay.¹

The most improbable version of contingent valuation that has found its way into environmental law and policy is the attempted measurement of so-called "existence value" or "nonuse value." Existence value is the value—or the subjective utility—that people experience from just *knowing* about the existence of certain environmental amenities.² Using the well-developed economic concept of externalities, environmentalists and many economists increasingly argue that command and control regulation by government is necessary to protect existence values.³ In the same way that efficiency demands that the law force upstream factories to reduce the number of pollutants they dump into rivers whose waters are used by downstream residents, existence value advocates argue that the law must force property owners to decrease the amount of change they inflict on their properties (the unsullied existence of which adds to the subjective utility of nonowners).⁴

¹ See Peter A. Diamond & Jerry A. Hausman, *On Contingent Valuation Measurement of Nonuse Values*, in *CONTINGENT VALUATION: A CRITICAL ASSESSMENT* 3, 12 (J.A. Hausman ed., 1993).

² Paul Milgrom, *Is Sympathy an Economic Value? Philosophy, Economics, and the Contingent Valuation Method*, in *CONTINGENT VALUATION: A CRITICAL ASSESSMENT*, *supra* note 1, at 417, 417.

³ See Todd J. Zywicki, *Environmental Externalities and Political Externalities: The Political Economy of Environmental Regulation and Reform*, 73 *TUL. L. REV.* 845, 874 (1999) (arguing that environmental groups are direct and indirect beneficiaries of the current command and control regime).

⁴ See Cass R. Sunstein, *Endogenous Preferences*, *Environmental Law*, 22 *J. LEGAL STUD.* 217, 252–53 (1993).

We argue that existence value measurements are unavoidably spurious. We further argue that, while existence values are real, attempts to protect them legally are wholly misguided. Government regulations that spring from existence value analyses only *appear* to be scientifically grounded. In fact, so-called "contingent value" is so riddled with conceptual problems that it simply cannot be recognized as an expression of individuals' true valuations, nor can it be used as a reliable guide to political decision making. The law had best ignore such values, relying instead on the marketplace to protect them as far as they can be protected.⁵

II. UNDERSTANDING EXISTENCE VALUE

A. What is Existence Value?

If property rights are fully specified, enforced, and freely exchangeable at zero transaction costs, economic theory is clear that available resources will be used as efficiently as possible to satisfy human wants, which are expressed as demands for goods and services.⁶ But reality is never as neat as blackboard economics.⁷ Many would-be property rights are inadequately specified or poorly enforced.⁸ And even when specification and enforcement of property rights are adequate, the costs of transacting to transfer ownership from lower-valued to higher-valued uses are often excessive.⁹ When transaction costs are excessive, property rights do not always find their way to their most highly valued uses.¹⁰

Problems engendered by inadequately specified or enforced property rights, or by high transaction costs, are the typical justifications for active government regulation.¹¹ Few people today dispute that well-functioning markets outperform government regulators. But support for such regulation is much more widespread in those settings in which utility-maximizing individual decisions impose costs involuntarily upon others. In short, showing that a particular institutional setting is marred by an externality is the quickest way to cultivate the support—even of economists—for active government regulation.¹²

As a means to address the externalities problem, the notion of existence value has recently come into play in economic and legal literature and now in the law itself. We use the term existence value to include other terms that are frequently used in reference to the "nonuse" value of natural resources (the "use value" of resources being market values based on

⁵ By the use of the term "marketplace" we refer to all voluntary exchanges, not simply profit-seeking actions by corporations.

⁶ See Ronald H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1, 2-8 (1960).

⁷ And, of course, Coase himself has bemoaned the tendency of subsequent scholars to focus on the unrealistic world represented by the "Coase Theorem," rather than the conditions that cause inevitable deviations from it. See RONALD H. COASE, *THE FIRM, THE MARKET, AND THE LAW* 13 (1988).

⁸ *Id.* at 19.

⁹ *Id.* at 12.

¹⁰ See *id.*

¹¹ RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* § 3.8, at 68-72 (5th ed. 1998).

¹² See COASE, *supra* note 7, at 24.

human value in exchange).¹³ Market prices may not include "intrinsic values." Markets might ignore the fact that "natural resources may have value independent of humans, based on their status as natural creatures or objects."¹⁴ Existence (or nonuse) value is generally agreed to mean the value of unused resources, such as their preservation for future generations.¹⁵

Existence values are a real psychological phenomenon. These values are the pleasure we take from knowing that certain things exist. Individually we have little influence over most of existence. We suffer a loss if certain things cease to exist, yet can do little to prevent the loss from occurring. Most of us obtain psychic utility from the existence of our grandmothers and suffer a real loss from their deaths. That is, each of us ascribes existence value to our grandmothers, but there is not much of a market for grandmothers that allows us to transact for grandmotherly services.

More specific to our discussion is the existence value of environmental amenities.¹⁶ We have not visited the Costa Rican rain forest, but know that it exists, get pleasure from thinking about it, and would like to visit it some day. We get a benefit—a positive externality—from something we know to exist, even though we do not pay to maintain the rain forest. We would suffer a utility loss if we learned that a developer clear-cut all the trees and left a moonscape. Wallace Stegner articulates this sentiment in his "Wilderness Letter," writing, "What I want to speak for is not so much the wilderness uses, valuable as those are, but the wilderness *idea*, which is a resource in itself."¹⁷

What should be done about existence value? Over the past several decades, some economists have asserted that existence value poses another example of an externality that must be dealt with by public interven-

¹³ Frank B. Cross, *Natural Resource Damage Valuation*, 42 VAND. L. REV. 269, 281 (1989).

¹⁴ COASE, *supra* note 7, at 281.

¹⁵ Cross explains that this includes "option value" (the value of saving resources not now being used for possible future use, such as a trip to the Costa Rican rain forest), "vicarious value" (the pleasure we get from thinking about something, such as the fact that the Costa Rican rain forest exists), and "intertemporal value" (the value we get from leaving unexploited resources to future generations, so they can enjoy the Costa Rican rain forest). Cross, *supra* note 13, at 285–86. Proponents of these values know that they are inherent in at least some natural resources, but argue that they may not be sufficiently valued in others due to market limitations. Some have argued that these three categories of "value" are not values at all, but reflect confusion about the difference between individual *motives* that may give rise to a willingness to pay to preserve environments and the actual *valuations* themselves. See Ronald G. Cummings & Glenn W. Harrison, *The Measurement and Decomposition of Nonuse Values: A Critical Review*, 5 ENVTL. & RESOURCE ECON. 225, 233 (1995).

¹⁶ The amount of utility ascribable to pure existence value is likely to be small. See *infra* notes 51–58 and accompanying text.

¹⁷ WALLACE STEGNER, *THE SOUND OF MOUNTAIN WATER* 145, 146 (1980). Having made this observation, however, it is not clear that Stegner is actually advocating pure nonuse value, as opposed to a passive, nonintrusive use value. See *id.* at 153 ("We simply need that wild country available to us, even if we never do more than drive to its edge and look in. For it can be a means of reassuring ourselves of our sanity as creatures, a part of the geography of hope.").

tion.¹⁸ For example, the existence value that many of us have for the rain forest should be measured and included in any calculation of its full value. Only if the aggregate value that people attach to goods and services produced by clear-cutting the rain forest exceeds the *full* value of the intact rain forest—including its existence value—is it economically justified to clear-cut the rain forest. But because market prices seldom account for the existence values of forest lands, private owners of these lands respond to these inaccurate market signals by destroying them when, in fact, these forests should be kept undisturbed.

B. Mimic the Market

Goods bought and sold privately and individually are properly left to markets because private goods, such as a pair of shoes, are typically only enjoyed by the person who acquired them. Because those who do not pay for private goods can easily be excluded from enjoying these goods, the market can be trusted to produce the optimal amount of private goods. As economists say, it is impossible to “free ride” on private goods. Each buyer of private goods, therefore, accurately reveals his valuation for such goods when he purchases them.

Matters are different for public goods. Public goods, when provided for an individual, bestow their benefits onto several others regardless of whether or not those others paid to enjoy these goods.¹⁹ If goods are truly public, then people want them to be provided, but the market will tend to undersupply these goods because each potential beneficiary of the goods will try to free ride off of the efforts of others.²⁰ Government may have to assume responsibility for providing public goods.

For precisely the same reason that the market will not adequately supply public goods, the government does not know how much, if any, public goods it should supply. The reason is that there is no reliable mechanism to reveal the true demand for public goods. In response to this challenging problem, economists have long worked to devise mechanisms that uncover people's true valuations of public goods not traded in the market.²¹ None of the methods of revealing such valuations are without their shortcomings.²²

While the problem of demand revelation for public goods, such as national defense, is not new, this issue has arisen anew in the guise of existence value and its supposed solution, the contingent valuation

¹⁸ The literature on this can be traced to an article by John V. Krutilla, *Conservation Reconsidered*, 57 AM. ECON. REV. 777 (1967). As of a few years ago, over 2000 contingent valuation methodology studies have been recorded. See Murray B. Rutherford et al., *Assessing Environmental Losses: Judgments of Importance and Damage Schedules*, 22 HARV. ENVTL. L. REV. 51, 66 (1998) (citing RICHARD D. CARSON ET AL., A BIBLIOGRAPHY OF CONTINGENT VALUATION STUDIES AND PAPERS (1995)).

¹⁹ Cross, *supra* note 13, at 271.

²⁰ But see COASE, *supra* note 7, at 187 (stating that the private market can provide some public goods, such as lighthouses).

²¹ See Cross, *supra* note 13, at 280.

²² *Id.* at 297.

method (CVM).²³ Contingent valuation is advertised as a way to get people to reveal their true monetary values for things such as environmental amenities.²⁴ As a proponent notes, "maintaining populations of native fish in an estuary, or protecting visibility at national parks are not themselves goods that are bought and sold in a market. Yet, placing a monetary value on them can be essential for sound policy."²⁵ Public officials can make better judgments about how much environmental protection citizens want—and, therefore, should be produced—if citizens can reveal preferences that presumably cannot be expressed through the market.²⁶

We say that we value the Costa Rican rain forest, but talk is cheap; let's find out what happens when we must put up our money. Genuine economic value requires that people expressing values must bear the monetary consequences of their expressions. A key challenge for a contingent valuation—namely, asking people *hypothetical* questions about their valuations—is getting people to be truthful.

The best contingent valuation surveys sample a sufficiently large group of people to overcome statistical accuracy problems.²⁷ The best of these surveys are done face-to-face, provide certain background information and alternatives, and use skillfully worded questions designed to eliminate answers that are systematically too low or too high.²⁸ Are problems in such surveys too serious to make it sensible to use contingent valuation as a technique for public policy determination?

Supporters say, in short, that because such surveys are the best we can do, we should go with them.²⁹ "In the presence of externalities, market transactions do not fully capture preferences. Collective choice is the more relevant paradigm."³⁰ Whether it is national defense or rain forest preservation, we should determine what citizens really want; otherwise we suffer the consequences of under-provision (the enemy gets us and

²³ See Paul R. Portney, *The Contingent Valuation Debate: Why Economists Should Care*, J. ECON. PERSP., Fall 1994, at 4, 4–5.

²⁴ W. Michael Hanemann, *Valuing the Environment Through Contingent Valuation*, J. ECON. PERSP., Fall 1994, at 19, 19–20.

²⁵ *Id.*

²⁶ *Id.* at 20.

²⁷ See Peter A. Diamond & Jerry A. Hausman, *Is Some Number Better than No Number?*, J. ECON. PERSP., Fall 1994, at 45, 45 (stating that precision can usually be increased by increasing the sample size).

²⁸ The National Oceanic and Atmospheric Administration (NOAA) has issued guidelines as to how contingent valuation surveys should be conducted. Natural Resource Damage Assessments, 61 Fed. Reg. 440 (Jan. 5, 1996); Natural Resource Damage Assessments, 59 Fed. Reg. 1062 (Jan. 7, 1994). Of course, the face-to-face nature of the surveys creates problems of its own, such as the respondent being influenced by the desire to please the questioner.

²⁹ John M. Heyde, Comment, *Is Contingent Valuation Worth the Trouble?*, 62 U. CHI. L. REV. 331, 334 (1995) (noting that advocates of contingent valuation rest their case on the absence of alternatives). *But see* Peter Bohm, *CVM Spells Responses to Hypothetical Questions*, 34 NAT. RESOURCES J. 37 (1994) (offering alternatives to CVM for determining demand for public goods).

³⁰ Hanemann, *supra* note 24, at 19.

rain forests disappear). Alternatively, we can undemocratically leave it up to the experts in government to divine some level of provision for us.

How the experts know the value that the public places on an uninjured environment, without resort to measurement involving some sort of survey, is unclear. When that public valuation is the object of measurement, a well-designed contingent valuation survey *is* one way of consulting the relevant experts—the public itself.³¹

Of course, if these surveys are unreliable and misleading, merely saying that “they are the best we can do” is an inadequate response. Indeed, it brings to mind the famous joke of the drunk looking for his car keys under the streetlight, rather than in the vicinity where he dropped them, because the light is better under the streetlight. And while the sobriety of the advocates of existence value is not in question, it is not clear that the tools they have advocated are really helping us to find the keys to a sensible environmental law and policy.

C. Previous Criticisms of Existence Value

Some scholars are not pleased with the quality of contingent valuation methods. These writers note that, because it is mandated by law in some instances, we must deal with it as best we can. “Whether the economics profession likes it or not, it seems inevitable to me that contingent valuation methods are going to play a role in public policy formulation. Both regulatory agencies and governmental offices responsible for natural resource damage assessment are making increasing use of it in their work.”³² The first major use of contingent valuation was in the suit by the State of Alaska against Exxon for the *Exxon Valdez* oil spill.³³ That valuation placed the national value of the lost existence values from that incident at \$3 billion.³⁴

Critics assert “that the evidence supports the conclusion that to date, contingent valuation surveys do not measure the preferences they attempt to measure.”³⁵ The most forceful legal critic of the use of contingent valuation studies has been Professor Richard Stewart.³⁶ Stewart argues that contingent valuation methodology studies “have yet to meet minimum standards of reliability. This failure is due to the inherent difficulty in creating a realistic but necessarily hypothetical market for nonuse values and to the fact that nonuse values are in substantial part noneconomic.”³⁷ A recent article echoed Stewart’s skepticism: “The empirical evidence sug-

³¹ *Id.* at 38.

³² Portney, *supra* note 23, at 16.

³³ See Heyde, *supra* note 29, at 331, 336 (describing use of contingent valuation studies in *Exxon Valdez* case).

³⁴ Danielle Marie Stager, *From Kepone to Exxon Valdez Oil and Beyond: An Overview of Natural Resource Damage Assessment*, 29 U. RICH. L. REV. 751, 783 (1995).

³⁵ Diamond & Hausman, *supra* note 27, at 46.

³⁶ See Richard B. Stewart, *Liability for Natural Resource Injury: Beyond Tort*, in ANALYZING SUPERFUND: ECONOMICS, SCIENCE, AND LAW 219, 234–37 (Richard L. Revesz & Richard B. Stewart eds., 1995).

³⁷ *Id.* at 234.

gests that contingent valuation method (CVM) studies are not successful at yielding even reasonably approximate or consistent estimates of environmental values, with the accuracy appearing to be worse for the kinds of resources for which such valuations are most needed."³⁸

Numerous studies indicate that people consistently overstate how much they would put on the line.³⁹ Indeed, this problem is so prevalent that a National Oceanic and Atmospheric Administration (NOAA) panel concluded "that even state-of-the-art nonuse CVM valuations tend to produce greatly overstated estimates of nonuse values."⁴⁰ As a result, NOAA recommended that judges and juries "scale" the results of contingent valuation studies by a wholly arbitrary discount figure in order to reflect "true" economic preferences.⁴¹ The conclusion that a wholly arbitrary scaling figure plucked out of the air would improve the accuracy of contingent value studies—the purpose of which is to determine individuals' true economic preferences in the first place—demonstrates the weakness of the entire enterprise. As Stewart concludes, "revision through litigation of an already arbitrary number would be tantamount to plucking a damages figure out [of] the air."⁴²

When discussing an environmental issue, asserted willingness-to-pay varies substantially with the amount of information the respondents are given, the sequence in which questions are asked,⁴³ and whether the issue at hand stands alone or is combined with other environmental projects.⁴⁴ These problems reflect serious difficulties in both eliciting individual preferences and forcing them to constrain themselves to a realistic budget.⁴⁵ Given the dubious value of the numbers generated by contingent valuation

³⁸ Rutherford et al., *supra* note 18, at 69.

³⁹ For instance, one study purported to demonstrate that people would be willing to pay \$32 billion annually to save the whooping crane. By contrast, annual giving to *all* environmental nonprofit organizations in the United States in 1991 amounted to \$2.5 billion. Stewart, *supra* note 36, at 237.

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² *Id.*

⁴³ Daniel McFadden & Gregory K. Leonard, *Issues in the Contingent Valuation of Environmental Goods: Methodologies for Data Collection and Analysis*, in *CONTINGENT VALUATION: A CRITICAL ASSESSMENT*, *supra* note 1, at 165, 189–91; D. Kahneman, *Comments on the Contingent Valuation Method*, in *VALUING ENVIRONMENTAL GOODS: AN ASSESSMENT OF THE CONTINGENT VALUATION METHOD* 185, 191–93 (R.G. Cummings et al. eds., 1986) (collecting studies). Indeed, Kahneman notes that preferences for one commodity over another can even be reversed depending on the format. *Id.* at 186–88.

⁴⁴ This is referred to as the "embedding" problem. See Michael A. Kemp & Christopher Maxwell, *Exploring a Budget Concept for Contingent Valuation Estimates*, in *CONTINGENT VALUATION: A CRITICAL ASSESSMENT*, *supra* note 1, at 217, 219; Daniel Kahneman & Jack L. Knetsch, *Valuing Public Goods: The Purchase of Moral Satisfaction*, 22 J. ENVTL. ECON. & MGMT. 57, 58 (1992); see also Cass R. Sunstein, *Experts, Economists, and Democrats*, in *FREE MARKETS AND SOCIAL JUSTICE* 128, 143 (1997) (noting that willingness to pay to protect spotted owls "drops significantly" when it is asked to be valued with and in comparison to other species, rather than in isolation).

⁴⁵ See Stewart, *supra* note 36, at 235–36.

surveys, an expert opinion about environmental matters may be more reliable than the survey numbers.⁴⁶

Indeed, the entire task of isolating nonuse existence value from other forms of value seems quite scholastic. As Stewart notes, "survey respondents often have difficulty grasping the basic concept of nonuse value, and individuals are unlikely to have well-developed monetizable preferences for nonuse resource values that are not and that cannot be traded in markets."⁴⁷ For instance, it would seem virtually impossible to distinguish between true "existence" value on one hand, and the respondent's discounted present value of her expected likelihood of actually visiting a certain environmental site, memories of having visited it previously, seeing it on television, or its contribution to science. It is almost impossible to distinguish pure nonuse value from the larger category of use value (whether actual or contingent).⁴⁸ If a respondent has learned of and is interested in a given site—say the Grand Canyon—it is only logical that the respondent also thinks that she might get to visit it someday. Maybe not today or next summer, but maybe when she has children.⁴⁹ Thus, some component of her answer may reflect the expected utility she would get from visiting it, discounted by the probability that someday she will in fact get to do so. Of course, using environmental amenities for tourism, science, or television production are all *private* uses that can be capitalized into the market value of the environmental resource. The trick, then,

⁴⁶ For example, Diamond and Hausman note that expressed willingness-to-pay to minimize the risk of oil spills off the coast of Alaska ranged from a mean of \$85 to \$0.29 depending on how the issue was raised. Diamond & Hausman, *supra* note 27, at 56–57.

⁴⁷ Stewart, *supra* note 36, at 235. This difficulty in making coherent choices in novel contexts unrelated to everyday decision appears to be rooted in evolved human psychology. See Leda Cosmides, *The Logic of Social Exchange: Has Natural Selection Shaped How Humans Reason? Studies with the Wason Selection Task*, 31 COGNITION 187 (1989); Leda Cosmides & John Tooby, *Cognitive Adaptations for Social Exchange*, in *THE ADAPTED MIND: EVOLUTIONARY PSYCHOLOGY AND THE GENERATION OF CULTURE* 163 (Jerome H. Barkow et al. eds., 1992).

⁴⁸ Cummings & Harrison, *supra* note 15, at 234–41 (noting the difficulty of distinguishing pure nonuse value motives from use value motives).

⁴⁹ Some commentators have classified this "option" value as a nonuse value. See, e.g., KEVIN M. WARD & JOHN W. DUFFIELD, *NATURAL RESOURCE DAMAGES: LAW AND ECONOMICS* § 7.7, at 139–40 (1992); Cross, *supra* note 13, at 285–86; Heyde, *supra* note 29, at 338. However, this classification is incorrect. If a person specifically wants to reserve the right to potentially visit a site sometime in the future, she is simply discounting that expected use value by the probability that she will actually get to visit the site and the time period over which she will have the potential to visit it. For the current generation, as well, the classification of "bequest" or "intertemporal" value should also be properly understood as use value rather than existence value. *Id.*; Cross, *supra* note 13, at 285–86. Bequest or intertemporal value is the benefit that people get from knowing that their children will be able to enjoy a resource; to the extent that this valuation reflects the belief that the children may want to use it, say by visiting it, then it is properly considered use value. Again this use value should be discounted by the probability that their children might use it and by an appropriate discount rate.

is to isolate the pure public good "existence" value from all of these other possible private uses. This task appears to be impossible.⁵⁰

The pure public value of most environmental entities is likely to be trivial; it is likely to be infinitesimal for lower profile environmental amenities that lack the cachet of Yellowstone or the Grand Canyon, and for which almost all value will be use value in the form of fishing, hunting, boating, swimming, and other tangible private use benefits. If forced to actually pay for it, it is simply implausible to believe that people would be willing to give up a significant amount of private economic goods for a passing thought about certain environmental entities. Indeed, Adam Smith recognized this basic insight two centuries ago.⁵¹ Smith postulated a devastating earthquake in China that killed millions of its inhabitants. Smith asked how "a man of humanity in Europe, who had no sort of connexion with that part of the world, [would react] upon receiving intelligence of this dreadful calamity."⁵² "He would," Smith predicts, "first of all, express very strongly his sorrow for the misfortune of that unhappy people," followed by philosophical ruminations.⁵³ "And when all this fine philosophy was over, when all these humane sentiments had been once fairly expressed, he would pursue his business or his pleasure, take his repose or his diversion, with the same ease and tranquillity, as if no such accident had happened."⁵⁴

But compare the man's fine words and passing thoughts on this massive calamity in China to the most trivial injury to himself. "The most frivolous disaster which could befall [sic] himself would occasion a more real disturbance."⁵⁵ Smith continues with his now famous allegory:

If he was to lose his little finger to-morrow, he would not sleep to-night; but, provided he never saw them, he will snore with the most profound security over the ruin of a hundred millions of his brethren, and the destruction of that immense multitude seems plainly an object less interesting to him, than this paltry misfortune of his own.⁵⁶

In short, where the man had no "connexion" with China and had never seen its residents, he would be likely to express many earnest thoughts about their plight, but give it little more than passing thought, quickly forgotten in his daily life. Moreover, even the suffering and deaths of millions

⁵⁰ Cummings & Harrison, *supra* note 15, at 241 ("[T]here exists no operationally meaningful way by which one might decompose total value into use value and nonuse value components, let alone further decompose nonuse value into motive-related components. We can observe values, but we cannot observe motives.").

⁵¹ See ADAM SMITH, *THE THEORY OF MORAL SENTIMENTS* 136-37 (D.D. Raphael & A.L. Macfie eds., 1976).

⁵² *Id.* at 136.

⁵³ *Id.*

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ *Id.* at 136-37. It should be added that Smith did not extol this attribute of human nature. He simply observed it as a fact of human nature and set himself to the task of figuring out how to build society given this limited beneficence.

of Chinese will pale compared to the most comparatively trivial injury to this same person.

Of course, valuing inhabitants of China where there is "no sort of connexion" is for Smith the eighteenth century parallel to modern "existence value." One suspects that human concern over inanimate objects of nature would cause an even more attenuated sense of connection and grief. While the examples have changed, one suspects that Smith's observations are as apt today as they were then.⁵⁷ While some major landmarks such as the Grand Canyon or Yellowstone Park may have some amount of existence value, pure existence value divorced from potential use value is likely to be trivial in amount in most cases. It is unrealistic to think that individuals would be willing to forgo more than a small amount of income or other use value for pure existence value.⁵⁸

Indeed, one persistent problem in CVM studies is the difficulty of accurately describing the environmental amenity in question for purposes of eliciting a response.⁵⁹ The irony of this problem should be evident: it is hard to imagine that a site that a respondent has never seen nor heard of could actually have substantial positive existence value that the respondent would lose if the site were altered.

These criticisms of contingent and existence value concepts have dealt punishing blows to the faith that actual individual preferences can be discerned from wholly hypothetical questions about people's stated preferences for a variety of objects. Nonetheless, by themselves, these criticisms are merely shadows on the cave wall, reflections of a more powerful underlying truth. By simply looking at the bizarre results spawned by existing contingent valuation studies, they seem to hold out the promise that those results can be improved through more sophisticated methodology,

⁵⁷ See Francisco S. Aguirre-Sacasa, *Mitch Is History, But We Still Need Help*, WASH. POST, Mar. 8, 1999, at A19. That article reminds readers of a recent disaster they may have already forgotten:

How quickly the world forgets. Four months ago Mitch, the worst natural disaster in this hemisphere's history, slammed into Central America, mauling Honduras and Nicaragua and doing severe damage to Guatemala and El Salvador too. Stories about Mitch made the front page and the top of television newscasts. Today, however, Mitch is a distant memory; the storm and its tragic aftermath have disappeared from the world's radar screen.

Id.

⁵⁸ See Richard L. Revesz, *The Race to the Bottom and Federal Environmental Regulation: A Response to Critics*, 82 MINN. L. REV. 535, 562-63 (1997). Revesz makes a similar point:

One could . . . be asked a question of the following sort: "How much would you be willing to pay to reduce the probability that someone in another state whom you have never met would face an increase in the probability of getting cancer from exposure to an environmental contaminant from one in a hundred thousand to one in a million." My uneducated hunch is that the value given in answer to this question would not be very high.

Id.

⁵⁹ ROBERT H. NELSON, COMPETITIVE ENTERPRISE INSTITUTE, HOW MUCH IS GOD WORTH? THE PROBLEMS—ECONOMIC AND THEOLOGICAL—OF EXISTENCE VALUE 15 (1996).

such as tinkering with the question order or providing greater factual detail.

The purpose of the remainder of this Article is to show that this promise is illusory. The questionable results are merely the manifestation of greater underlying and incurable problems that render contingent valuation studies generally—and attempts to discern existence value particularly—useless and unreliable. The problem confronting designers of contingent valuation studies is at the conceptual and theoretical level, not at the merely practical level of implementation. Contingent valuation studies are inconsistent with the fundamental principles of economic choice under conditions of scarcity and budget constraints and rest on a superficial understanding of the role played by dollar prices in a dynamic economy. Thus, the answer to the defects that have been previously identified by critics of contingent valuation should not be to attempt to refine the studies. Instead, such studies should simply be abandoned.

II. THE IMPOSSIBILITY OF USING EXISTENCE VALUE IN POLICY MAKING

While critics of contingent valuation convincingly argue that available survey methods are too imperfect to generate trustworthy numbers, our thesis is that *even if* the numbers generated by surveys did not suffer from practical survey problems they would be largely irrelevant. The application of contingency valuation to existence value is illegitimate as a method for “internalizing” alleged externalities. Although our discussion here focuses on environmental examples, the principles are the same regardless of the kind of good involved.

Contingent valuation would matter little if it never left academic journals. However, contingent valuation has in fact found its way into public policy decision making.⁶⁰ Those who have certain special interest agendas will naturally glom onto any pseudo-scientific notion that appears to lend substance to what otherwise would be recognized as naked self-interested exploitation of fellow citizens.

Contingent valuation forces allocation of resources based on a rationale that neither practical experience nor theory can justify. Even if the practical problems of contingent valuation surveys could be corrected, the concept would still be economically invalid. By reviewing some basic principles of economic valuation, we begin our case against the theoretical legitimacy of existence value.

A. *Economic Valuation Need Not Be Direct*

To value something—to act in ways that promote the construction or preservation of that something for a particular use—rarely requires direct or conscious valuation by all persons who benefit from its existence. The incentive structure of the market weaves uncountable numbers of decentralized exchange relationships into an extensive web. Explicit valuations occur only at each of the countless nodes of this web, that is, at each place

⁶⁰ See Portney, *supra* note 23, at 6–7.

where an actual voluntary exchange happens.⁶¹ The results of these myriad direct valuations are communicated throughout the market, across space and time, as signals to market participants at other bargaining nodes.⁶² Signals are inputs into the decisions made by market participants who may be far removed from the source of each signal.⁶³ Market participants receiving signals make choices—personal valuations—based in part on these signals.⁶⁴ Vast numbers of market participants are connected to each other by this web of direct and indirect interconnections.⁶⁵

Market values are the unintended and undesigned results of this decentralized market activity. Each person has preferences and wealth and confronts the market prices of items that he is potentially interested in producing and consuming. When a person “values” an item, he does not intentionally determine the market price of that item.⁶⁶ Instead, that person, as a supplier or a buyer, chooses how much of that item he will supply or purchase given the prices he reasonably expects to fetch or to pay.⁶⁷ Determination of the market price of goods is never exclusively in any single party’s hands and is typically spread over such a large number of persons that no one person has more than negligible input into determining market values.⁶⁸

So while each person at each node of exchange intentionally chooses her offer or acceptance price, in light of knowledge transmitted from elsewhere in the market,⁶⁹ it is incorrect to suggest that market values are consciously chosen. Each price results from the interaction of numerous buyers and sellers, none of whom controls market outcomes. Consumers determine the market values neither of final goods nor of the multitude of inputs whose production is necessary to the creation of final goods. Conscious, intentional market valuation by individuals does not exist.⁷⁰

Only by connecting many people in a decentralized process of valuation does useful valuation become intellectually achievable. Valuation becomes possible *because* no one person is responsible for determining the market value of any item, service, or amenity in the market. If economic efficiency required consumers consciously to value not only, for example,

⁶¹ See JAMES M. BUCHANAN, *Political Economy and Social Philosophy*, in LIBERTY, MARKET AND STATE: POLITICAL ECONOMY IN THE 1980s 261, 268 (1986).

⁶² See *id.* at 267–68.

⁶³ For example, prices representing the “experience and subjective feelings of some” convey “effective knowledge to others.” THOMAS SOWELL, KNOWLEDGE AND DECISIONS 167 (1980).

⁶⁴ See LUDWIG VON MISES, HUMAN ACTION 328–30 (1949).

⁶⁵ See JAMES M. BUCHANAN, COST AND CHOICE 59 (1969).

⁶⁶ See VON MISES, *supra* note 64, at 328 (stating that the “interplay of the valuations of all individuals participating in the operation of the market” determines market prices).

⁶⁷ See JOSEPH A. SCHUMPETER, HISTORY OF ECONOMIC ANALYSIS 308 (1954).

⁶⁸ VON MISES, *supra* note 64, at 328.

⁶⁹ FRIEDRICH A. HAYEK, *The Use of Knowledge in Society*, in INDIVIDUALISM AND ECONOMIC ORDER 77, 85–86 (1948).

⁷⁰ Even a monopolist whose franchise is vigorously protected by the government does not alone determine the price of its output, as the monopolist cannot control the price of available substitutes.

automobiles for sale at dealerships, but, in addition, each of the millions of inputs used to produce automobiles, it would be impossible for consumers to render economically appropriate values for these items. How could any consumer know enough to value a steel production facility, an extra acre of land for a test track, or a robot designed to weld various parts of a chassis?⁷¹ All each consumer knows, and reveals, is how much he values a particular automobile relative to the other things he might purchase. Fortunately, that is all he needs to know. Appropriate valuations of the inputs necessary to produce cars is performed by upstream producers' actions.

Consumers rely upon suppliers because of the great wealth-creating advantages of the division of labor.⁷² But rather than emphasize Adam Smith's point about division of labor, we focus on F.A. Hayek's point about the division of knowledge.⁷³ Each supplier at each stage of production specializes not only in performing certain physical tasks, but also in knowing unique bits of information.⁷⁴ The steel mill owner is well positioned and has strong incentives to learn all she can about the market for steel and about the various inputs available for producing steel. Upstream from the steel mill owner, the owner of a mining firm specializes in learning about the most profitable markets in which to sell ore and about the various inputs available for mining ore. Each participant is in some sense a valuation specialist in learning about opportunities downstream and upstream from his own particular node in the market. Efficient markets critically depend upon independent "valuation specialists," each of whom enjoys unique access to "knowledge of the particular circumstances of time and place."⁷⁵ The ongoing multitudinous adjustments made in light of each specialist's unique knowledge and skills are indispensable for the operation of an economy marked by a division of labor. The market prices that economists identify as propelling markets toward efficient outcomes cannot be derived by a process other than competition in decentralized and competitive markets. Values or prices arrived at by any other means are not comparable to, nor conformable with, the pattern of prices generated by market processes.

Decentralized market processes generate appropriate values only for resources that are privately owned and whose owners can exclude others from enjoying the resources' fruits.⁷⁶ Because private owners are able to appropriate sufficient revenue from the use or preservation of a resource, there is no reason to presume that a resource will be under or over used.

Consider the existence of the Mona Lisa. There can be little doubt that many people value the existence of this painting and would willingly contribute at least modest sums to save it from destruction. However,

⁷¹ See HAYEK, *supra* note 69, at 90-91.

⁷² See *id.* at 88-89.

⁷³ See *id.* at 88 ("Through [the competitive market order] not only a division of labor but also a co-ordinated utilization of resources based on an equally divided knowledge has become possible.").

⁷⁴ See *id.* at 80.

⁷⁵ *Id.* at 84.

⁷⁶ POSNER, *supra* note 11, § 3.1, at 36.

there is no need to ask everyone whether and how much they value the existence of the Mona Lisa, nor is there a need to have every person who values its existence contribute directly toward its preservation. Even if the painting happened to be owned by someone who is disgusted at the sight of it, the painting is safe because the owner can profit from its display. By this process, the values of many people from around the world regarding the Mona Lisa are transmitted through the market to the Mona Lisa's owner. The painting is exploited by the market, which means, in this case, it is preserved.

But what about goods whose values cannot be appropriated by private owners, such as the continued existence of some endangered species?⁷⁷ We contend that appropriate market value surrogates cannot be derived through contingent valuation studies. While at first blush it is laudable to search for economic values to be used as bases for directing the political allocation of resources, a more careful study shows that the effort is futile and even potentially perilous. There is no substitute for prices set through the decentralized process of voluntary exchange.

B. Contingent Prices Are Not Surrogates For Market Prices

A fundamental error committed by those who argue that survey methods can provide reasonably accurate values as surrogates for market prices is the belief that people have *a* value for each environmental amenity. However, people's economic values are not fixed singular points, but are *schedules* of different dollar figures dependent upon a nearly infinite variety of variables.⁷⁸ Even to approach accurate valuations, survey methods must discover each respondent's schedule of valuations not only for environmental amenities but for *all* potentially produced goods and services *and* allow prices calculated from these valuations to change.⁷⁹ These schedules of evaluations must each be *rich* and *marginalized*.⁸⁰ By "rich" we mean that different valuation schedules for *each* amenity must be calculated—one schedule for each of a wide variety of variables that may affect a respondent's valuation of that amenity. By "marginalized" we mean that the questions asked must take account of the fact that economic valuation is not an all-or-nothing proposition, but instead is a question of more or less in space, intensity, and time.⁸¹

There are yet other problems with attempts to calculate prices independent of market exchange. Because answering survey questions does

⁷⁷ Of course, this is an extreme assumption whose conditions will rarely apply. As Elinor Ostrom has demonstrated, even if the market does not succeed in solving collective action problems, purposive humans are quite ingenious in devising nonpolitical collective solutions to these problems. See ELINOR OSTROM, *GOVERNING THE COMMONS* 136–39 (1990). We will assume here, for the sake of argument, that there are no private means available (either market or voluntary collective action) to sufficiently internalize the gains from preserving some species.

⁷⁸ See JACK HIRSHLEIFER, *PRICE THEORY AND APPLICATIONS* 41–45 (4th ed. 1988).

⁷⁹ POSNER, *supra* note 11, § 1.1, at 6–10.

⁸⁰ *Id.*

⁸¹ See HIRSHLEIFER, *supra* note 78, at 41–45, 170–72.

not bind respondents, answers are likely to be either ill thought or excessive; either way, answers are almost surely unreliable. More importantly, even accurate answers to valuation questions will yield only maximum demand prices, not appropriate economic prices. We review each of these problems in turn.

1. *Existence Valuations Must Be Rich*

Suppose a survey respondent is asked, "How much do you value preservation of Yellowstone Park?"⁸² Assume that this respondent answers honestly by reporting, "\$100." What meaning can we legitimately attach to this answer? Not much. One reason for the almost useless information conveyed by this answer is that an implicit addendum to the question is "all other prices, outputs, and your income unchanged." Indeed, the only possible way for the respondent to answer the question honestly is for the respondent to make, and accurately assess the consequences of, such assumptions. It would be illegitimate to use the answers generated by this question to construct a surrogate market price that is then used to determine whether or not to preserve Yellowstone.

If answers to this question are used to determine whether or not to preserve Yellowstone, a bias is introduced if the existence of even one additional such amenity is economically justified. This bias is a consequence of the inevitable *seriatim* nature of contingent valuation surveys: A person is first asked how much he would pay to preserve Yellowstone. He is then asked how much he would pay to preserve the Alaskan tundra, then how much he would pay to preserve a species of endangered trout living only in central Montana, and on and on.⁸³ The nonsimultaneous nature of the surveys is fundamentally different from the market's simultaneous and continuous method of revealing values. In particular, this *seriatim* survey method yields existence value measurements that are higher than the appropriate market prices for such existence.

Suppose, for example, that a large number of truthful people are each first asked, "How much would you willingly pay to preserve Yellowstone against development?" Each respondent can answer this question honestly and sensibly only by taking as given the prices for all other goods and services on which he spends, or might spend, his money. Of course, among the myriad other prices taken as given by each survey respondent are the prices each expects to pay to preserve the existence of other envi-

⁸² We will ignore the difference between asking "How much do you value X?" and "How much would you be willing to pay for X?" Of course, the phraseology of the question is critically important for contingent valuation studies and also wholly arbitrary, so in making this assumption that respondents treat both questions the same we are making a heroic and very favorable assumption that benefits the advocates of contingent valuation studies. For instance, there are huge discrepancies between so-called "willingness to pay" and "willingness to accept" measures of economic value. Stewart, *supra* note 36, at 236.

⁸³ See Note, "Ask a Silly Question . . .": *Contingent Valuation of Natural Resource Damages*, 105 HARV. L. REV. 1981, 1985 (1992) ("Respondents have little incentive to consider their [willingness to pay] for a specific resource in the context of their income constraints and potential expenditures for all other goods they may wish to purchase.").

ronmental amenities. Other things being equal, the greater the prices that each respondent expects to pay to preserve other environmental amenities, including amenities not yet known, the lower the amount each respondent is willing to pay to preserve Yellowstone. If a respondent truthfully reports his valuation, but does so on the assumption that Yellowstone is the only environmental amenity he will be asked to help pay for, then whatever existence value he reports for Yellowstone will be higher than it would be if this respondent were to calculate simultaneously (and expect to pay) his existence values for all environmental amenities that it might be possible to preserve. Indeed, asking "How much would you pay to preserve Yellowstone?" in isolation is comparable to asking "Will you vote for Candidate *X* for president?" without offering any alternative candidates. In neither case could any answer be an accurate predictor of the respondent's behavior.

To solve the problem created by the seriatim nature of surveys, each respondent must simultaneously evaluate all potentially preserved amenities.⁸⁴ But such evaluation is practically impossible. Because no respondent would know, at the time he answers the survey, the exact set of prices that are to exist for other "existence" amenities, the best that each respondent could do is to report a *schedule* of values for each preservation option. A respondent's schedule of values for one environmental amenity would express the maximum amount he would pay to preserve that amenity given the many possible prices this respondent might conceivably have to pay to preserve umpteen other environmental amenities. A similar schedule of values would be required of this respondent for each of the other umpteen environmental amenities. And this is merely restricting the inquiry to environmental entities. To be realistic, the respondent would be required to choose among the entire universe of possibilities—paying more for baseball tickets to help their favorite team win the World Series, getting a babysitter next week rather than staying in, ordering an appetizer at dinner rather than going without. Of course, each survey respondent would have to report an equally large number of valuation schedules.

Once aware that any plausible method of discovering economically appropriate prices for existence values requires that survey respondents offer *schedules* of different contingent valuations, proponents of existence valuation must devise practicable means of determining from these reported schedules the appropriate set of prices and quantities for environmental amenities. For any one person, the system of simultaneous equations would be unimaginably vast. Practically, there is little hope that these could be solved in a timely enough fashion to yield the correct set of equilibrium prices, not only because feeding such survey responses into a

⁸⁴ As noted above, respondents' answers to contingent valuation studies vary substantially according to the order in which the questions are answered and whether the respondents are asked about the particular item in isolation or in comparison with alternatives. See *supra* notes 43–44 and accompanying text. Of course, even then the alternatives are by necessity arbitrarily and unrealistically limited only to alternative environmental amenities, rather than to all available alternatives, including nonenvironmental choices.

supercomputer would take time, but more importantly, because valuations are not static. Valuations and the technical conditions of production constantly change. Hayek was surely correct when, in criticizing the schemes of the so-called "market socialists," he pointed out that

[w]hether and how far anything approaching the desirable equilibrium is ever reached depends entirely on the speed with which the adjustments can be made. The practical problem is not whether a particular method [of calculating equilibrium prices] would eventually lead to a hypothetical equilibrium, but which method will secure the more rapid and complete adjustment to the daily changing conditions in different places and different industries.⁸⁵

The fact that subjective valuations change is vital. One of the most crucial tasks performed by markets is to encourage people "on the spot," who possess special factual knowledge, to adjust their activities in light of the constantly changing data that emerge in markets.⁸⁶ Adjustments are coordinated by changing prices communicated across the market.⁸⁷ Much more than static economic models reveal, the economic problem consists largely of ensuring adequate and prompt adjustments by millions of people, each of whom possesses unique bits of knowledge.⁸⁸ Even if the correct solution to a set of simultaneous equations is calculated, implementing economic plans based on that solution would solve the economic problem only as long as preferences, technologies, resource availabilities, and available trading opportunities remain unchanged.

The essence of a market economy is its entrepreneurial dynamism and creativity.⁸⁹ Market prices are not correct because they clear markets at any given moment, but rather because they inform market participants of trading and production opportunities.⁹⁰ Unless prices quickly change to reflect changed facts and new opportunities as they arise, and unless resource owners are permitted to vary the ways in which they employ their resources in response to these changed prices, markets no longer clear.⁹¹ And more significantly, people who would otherwise make adjustments to better conform their actions with the changed economic circumstances never do so. The economy grows further and further out of kilter. Without some means to permit existence valuations to change as fluidly and as rapidly as other prices in the market, existence valuations are not acceptable surrogates for market prices.

⁸⁵ FRIEDRICH A. HAYEK, *Socialist Calculation III: The Competitive "Solution,"* in INDIVIDUALISM AND ECONOMIC ORDER, *supra* note 69, at 181, 188.

⁸⁶ HAYEK, *supra* note 69, at 77, 83-84.

⁸⁷ *Id.* at 85.

⁸⁸ *See id.* at 90-91.

⁸⁹ *See* JOSEPH A. SCHUMPETER, CAPITALISM, SOCIALISM, AND DEMOCRACY 81-86 (1942).

⁹⁰ HAYEK, *supra* note 69, at 77, 83-89. Hayek argues that prices coordinate the actions of different people in the same way as they take advantage of opportunities in the market. *Id.* at 85.

⁹¹ POSNER, *supra* note 11, § 1.1, at 9-12.

2. Understanding the Nature of Prices

The entire notion of contingent value rests on a mistaken understanding of the nature of prices. Contingent valuation methodology necessarily treats prices as static and absolute. In essence, contingent valuation asks the respondent, "What is the price you are willing to pay (or receive) for X," thereby assuming that such a "price" exists in some absolute sense and will be constant over time.

Prices are not static and absolute: they are dynamic and relative. There is no single price for a 1995 Volvo stationwagon; there is today's price, adjusted for mileage, reliability, and available substitutes. There is no "willingness to pay" for IBM stock; there is today's price for IBM stock. The price that contingent valuation studies elicit is simply a snapshot of a dynamic enterprise. Prices are just shorthand signals, not only of today's situation, but also of expectations about future prices. As Gerald O'Driscoll notes,

[t]he price system is a means of economically transmitting information among transactors: it produces information about changing market conditions. The price system registers both the effects of changing objective conditions and the reactions of transactors to these changes. Most important, the price system is a mechanism—however imprecise—for registering the ever-changing expectations of market participants.⁹²

Assuming that contingent valuation studies actually were able to produce a realistic picture of the price that individuals would be willing to pay at any given time, it would remain unclear what a policy maker could do with this information. This is because the relative price of the good in question changes as soon as individual expectations and preferences change. Taking a survey of the price at any given time obscures the fact that the price was different yesterday and will be different again tomorrow. A picture captures Michael Jordan flying in mid-air on the way to the basket, but we all know that in a matter of seconds he will return to earth. Similarly, the price of a good at any given time is a picture of a dynamic and ever-changing process.

Prices are also relative, not absolute. The true price of a good is not its monetary price, but its "opportunity cost"—what "could have been purchased with that money and how much happiness that alternative could have produced."⁹³ James Buchanan notes, "Cost is the underside of the coin, so to speak, cost is the displaced alternative, the rejected opportunity. Cost is that which the decision-maker sacrifices or gives up when

⁹² GERALD P. O'DRISCOLL, JR., *ECONOMICS AS A COORDINATION PROBLEM: THE CONTRIBUTIONS OF FRIEDRICH A. HAYEK* 27 (1977); see also HAYEK, *supra* note 69, at 77, 87; O'DRISCOLL, JR., *supra*, at 34 n.53 (noting that price parameters change so often that, before the transactor can execute his plans, he is compelled to revise them").

⁹³ Todd J. Zywicki, *A Unanimity-Reinforcing Model of Efficiency in the Common Law: An Institutional Comparison of Common Law and Legislative Solutions to Large-Number Externality Problems*, 46 CASE W. RES. L. REV. 961, 966 (1996).

he selects one alternative rather than another."⁹⁴ Monetary prices will only loosely approximate the true (opportunity) cost to a given individual:

From this it follows that the opportunity cost involved in choice cannot be observed and objectified and, more importantly, it cannot be measured in such a way as to allow comparisons over wholly different choice settings [T]he opportunity cost relevant to choice-making must be translated [from monetary terms] into a utility dimension through a subjective and personal evaluation.⁹⁵

As a result, "the cost of a given action will differ for the same person in different settings or for different people in the same setting."⁹⁶

Writing in the 1950s, economist Murray Rothbard anticipated many of our criticisms of the theoretical foundations of contingent valuation methodology. Responding to his contemporaries, Rothbard argued that "[o]ne of the most absurd procedures based on a constancy assumption has been the attempt to arrive at a consumer's preference scale not through observed real action, but through quizzing him by questionnaires."⁹⁷ Under these proto-contingent value studies, "[i]n *vacuo*, a few consumers are questioned at length on which abstract bundle of commodities they would prefer to another abstract bundle, etc."⁹⁸ Rothbard's rejection of the 1950s survey approach is apposite to the modern rejection of ersatz-scientific contingent valuation studies:

Not only does this [questionnaire approach] suffer from the constancy error; no assurance can be attached to the mere questioning of people when they are not confronted with the choices in actual practice. Not only will a person's valuation differ when talking about them than when he is actually choosing, but there is also no guarantee that he is telling the truth.⁹⁹

This means that even if contingent valuation studies could provide respondents with a menu of all relevant alternatives on which they could hypothetically spend their money, these values would still be fundamentally flawed because they remain merely hypothetical choices, not actual choices. Merely stating how you *think* you would choose if given the opportunity is not the same as making that choice.¹⁰⁰ It is only in the act of *actually* choosing one alternative over another that an individual's preferences are revealed and can be interpreted as their actual preferences. The importance of the distinction between actual and hypothetical choice is explained by Thomas Sowell:

⁹⁴ James M. Buchanan, *Introduction: L.S.E. Cost Theory in Retrospect*, in L.S.E. ESSAYS ON COST 1, 14 (James M. Buchanan & G.F. Thirlby eds., 1981).

⁹⁵ *Id.* at 15.

⁹⁶ Zywicki, *supra* note 93, at 968.

⁹⁷ Murray N. Rothbard, *Toward a Reconstruction of Utility and Welfare Economics*, in ON FREEDOM AND FREE ENTERPRISE: ESSAYS IN HONOR OF LUDWIG VON MISES 224, 229 (Mary Sennholz ed., 1956).

⁹⁸ *Id.*

⁹⁹ *Id.*

¹⁰⁰ See JAMES M. BUCHANAN, *Order Defined in the Process of Its Emergence*, in LIBERTY, MARKET AND STATE: POLITICAL ECONOMY IN THE 1980s 73, 74 (1986).

It is not merely the enormous amount of data that exceeds the capacity of the human mind. Conceivably, this data might be sorted in a computer with sufficient capacity. The real problem is that the knowledge needed is a knowledge of *subjective patterns of trade-off that are nowhere articulated*, not even to the individual himself. I might *think* that, if faced with the stark prospect of bankruptcy, I would rather sell my automobiles than my furniture, or sacrifice the refrigerator rather than the stove, but unless and until such a moment comes, I will never *know* even my own trade-offs, much less anybody else's. There is no way for such information to be fed into a computer, when no one has such information in the first place.¹⁰¹

The value that a person actually attaches to a given preference, therefore, can be identified only through the process of *actually choosing*. Sowell is correct: we simply do not know for sure whether we would sell our furniture before our car, or our refrigerator before our stove. In market transactions, we can assume that all individual trades increase individual utility, because the occurrence of the trade itself suggests that the individual values the good received more highly than the good surrendered.¹⁰² Thus, it is only through the process of actual exchange of one good for another that we can know for sure that an individual values one option over another. Merely *saying* that one *would* choose one good over another or value one good over another in a hypothetical situation is completely different from actually *making* that choice in a real-life context.¹⁰³ Divorced from the discipline of making actual choices, the hypothetical choices presented by contingent valuation have little value.

3. Existence Valuations Must Be Marginal

To yield economically accurate prices, existence value surveys must ask about marginal increments rather than lump sum totals. It is more legitimate to ask about valuations of "more" or "less" in space, intensity, and time, than to ask about the existence value of an arbitrarily chosen lump of existence. For example, it is more appropriate to ask a survey respondent, "How much do you value protecting for one additional year the unspoiled existence of one acre of the Costa Rican rain forest?" rather than, "How much do you value protecting the existence of the Costa Rican rain forest?" The former question has a time element (one additional year), an intensity element (unspoiled), and a space element (one acre). None of these elements exist in the latter question.

¹⁰¹ SOWELL, *supra* note 63, at 217–18. Or, as economist Don Lavoie summarizes the problem, "[i]n the relevant sense of the term, *the data do not exist*." DON LAVOIE, NATIONAL ECONOMIC PLANNING: WHAT IS LEFT? 56 (1985).

¹⁰² See JAMES M. BUCHANAN, *Rights, Efficiency, and Exchange: The Irrelevance of Transaction Cost*, in ECONOMICS: BETWEEN PREDICTIVE SCIENCE AND MORAL PHILOSOPHY 153, 161 (Robert D. Tollison & Victor J. Vanberg eds., 1987) (noting that market exchanges are efficient because they reflect agreement among all parties).

¹⁰³ See BUCHANAN, *supra* note 65, at 7; JAMES M. BUCHANAN, *What Should Economists Do?*, in ECONOMICS: BETWEEN PREDICTIVE SCIENCE AND MORAL PHILOSOPHY, *supra* note 102, at 21, 26.

Multiple intensities of protection of the existence of environmental amenities are possible. The most intense form of protection of the rain forest's existence requires that *all* effects of humanity be excluded from the rain forest; airplanes would be prevented from flying at even high altitudes above the rain forest. Less intense protection would, for example, be consistent with allowing a handful of tourists into the rain forest. Allowing only a few ecologically sensitive tourists on foot would be a more intense form of protection than if many tourists were allowed in on tour buses. The range of intensities of protection of the rain forest is vast.¹⁰⁴ Uncountable degrees of human use separate an uninhabited primeval rain forest from a toxic waste dump.

To ignore marginal valuations by asking about alleged "total" valuations is to ignore the most critical advance in economic science during the past century and a half: the marginal revolution.¹⁰⁵ Ignorance of the margin is ignorance of the resolution of the diamond-water paradox. Suppose survey respondents are asked, "How much do you value the continued availability of drinkable water?" The question implies that the only alternative to the available drinking water is no drinkable water. If the choice were "water or no water," then the value of water would be immense. Economists long ago recognized "the homely fact that commodities are esteemed not in accordance with their significance in general, but with that of any small unit of the available supply."¹⁰⁶ That is, humans rarely confront choices such as "water or no water." Because water is extremely fungible and amply available in tiny marginal units, the total economic value of the world's stock of drinkable water, as calculated from the prices that consumers pay for their marginal units of water, is a minute fraction of what the value of this same stock of water would be if people were required to choose between the existence or nonexistence of water.

As with water, so too with environmental amenities. Even honestly answered survey questions about existence valuation will yield wildly different figures depending on how sensitive the questions are to marginal units. Consider again a question about preserving the Costa Rican rain forest. If a respondent believes that the only option to complete, high-intensity preservation is complete destruction of the rain forest, then she is likely to express a higher monetary value than if she understands that the question is asking only about some additional increment of protection—for example, to protect the rain forest for an extra year, to prevent

¹⁰⁴ Another problem is that unless surveys are very precise in specifying the particular marginal units of existence protection under consideration, respondents may have different understandings of what is meant by "existence." If respondents are asked how much they value the Alaskan tundra, one respondent might take the question to mean total protection in which no human is ever permitted near the tundra for eternity, while another respondent might interpret the question to mean that scientific exploration will be allowed. Aggregating answers to such questions that are not sufficiently sensitive to the marginal valuation issue can only yield sham valuation figures.

¹⁰⁵ See SCHUMPETER, *supra* note 67, at 825-29.

¹⁰⁶ Frank H. Knight, *Marginal Utility Economics*, in *THE ETHICS OF COMPETITION AND OTHER ESSAYS* 148, 151 (1935).

hiking in certain regions, or to have one additional acre protected. Alternatively, consider the preservation of lakes in Minnesota—the “land of 10,000 lakes.” Surely it is the case that a person’s valuation of a lake would be higher were it the last pristine lake left in Minnesota than if there were 9999 or 9998 other pristine lakes remaining. The marginal valuation of each of Minnesota’s lakes will fall as the respondent moves from the first and most valued lake to the last and least valued lake, say, a small, obscure, unattractive pond in the middle of nowhere.¹⁰⁷

People clearly act according to principles of marginal valuation. For instance, it is doubtful that anyone reading this Article ate more than one breakfast this morning. Why? Because while the marginal value of the first breakfast is quite high in terms of sating one’s hunger and providing energy and nutrition for the upcoming day, the marginal value of an additional breakfast falls rapidly at the same time that the marginal cost rises rapidly. The benefit of the first breakfast is high, and it justifies the cost of the food and the opportunity cost of the time taken to eat it. By contrast, the marginal benefit of the second breakfast is low, and it is outweighed by the costs in terms of weight gain, expense of the food, and the opportunity cost of the time spent eating it. As a result, we eat only one breakfast.

We all understand how marginal benefit and marginal cost apply in the context of this example drawn from our everyday life. However, it is much more difficult to attach marginal valuations to speculative and hypothetical scenarios for which we lack any real world frame of reference.¹⁰⁸ This is “reflected in the astonishing and devastating fact that people will give the same dollar number to save 2000, 20,000, and 200,000 birds—or the same number to save one, two, or three wilderness areas.”¹⁰⁹ Predictable marginal valuations are also undermined by the large number of “bimodal” answers given by respondents; “survey answers are characterized by many zeroes and many very high responses.”¹¹⁰ The upshot is that questions insensitive to marginalization generally yield valuation answers that are much higher than the total valuations that would be revealed in competitive markets were it not for the transaction costs of overcoming collective action problems.

4. Problems with Hypotheticals

The fact that surveys ask hypothetical questions unleashes the possibility of unintentionally misleading answers. If someone is asked how much she values a particular automobile, her answer will differ if she knows that she must actually pay the amount of the value declared instead

¹⁰⁷ See Zywicki, *supra* note 93, at 1019 (discussing marginal valuation and opportunity cost in the context of individual use of fresh stream water).

¹⁰⁸ Sunstein, *supra* note 44, at 142 (“In economic terms, people have a difficult time assigning hypothetical dollar values to categories and commodities they virtually never confront in everyday experience.”); see also Diamond & Hausman, *supra* note 27, at 45; Daniel Kahneman & Ilana Ritov, *Determinants of Stated Willingness to Pay for Public Goods: A Study in the Headline Method*, 9 J. RISK & UNCERTAINTY 5, 5 (1994).

¹⁰⁹ Sunstein, *supra* note 44, at 143.

¹¹⁰ Stewart, *supra* note 36, at 236.

of merely expecting to pay the value declared. A person's valuation of any good varies depending on her probability estimate that she will actually be required to pay a declared value.

Consider an ordinary demand curve. Economists normally take for granted that the prices listed along the vertical axis are one hundred percent probability prices. That is, if a buyer offers to pay \$6 per pound for ten pounds of beef, it is presumed that he will, with certainty, pay \$60 in exchange for the beef if his offer is accepted. But suppose that a buyer believes there is only a fifty percent chance that he will be required to pay the price that he offers for the beef he receives. If the buyer and the seller are risk neutral, the buyer will offer to pay \$120 for the beef, and the seller will accept. Thus, the values reported vary depending upon the probability that the respondent will be required to pay any sum. The lower the respondent's estimate of the probability of having to pay any of the monetary sums reported in his valuation schedule, the higher these sums will be.

Suppose someone is asked to express the dollar value she attaches to the continued existence of the Costa Rican rain forest. The answer depends upon her estimate of the probability that she will have to pay the amount she declares. If the respondent is certain that her answer will not affect the amount (if any) she must pay toward maintaining the existence of the Costa Rican rain forest, she will express a higher valuation than if she expects with some probability that her answer will determine the amount she is asked to pay.

Alternatively stated, the lower the probability of any expressed valuation translating dollar-for-dollar into a requirement that the person expressing the valuation must actually pay the amount expressed, the farther down that person is on her demand curve for environmental amenities (even though the monetary figure she expresses is quite high). Existence valuations derived from such "indecisive" surveys—surveys in which each respondent knows that her answer will have only imperceptible influence on how much, if anything, will be paid by taxpayers to preserve the existence of some environmental amenity—will inevitably be excessive.

Unsurprisingly, individuals act differently when required to put actual money behind their preferences rather than simply expressing them for "free" in a contingent valuation survey.¹¹¹ Swedish economist Peter Bohm provides a compelling example of how dramatically an individual's stated willingness to pay changes by the introduction of even the most minor sense that the individual may have to pay for the goods that are the subject of the survey.¹¹² In 1966 a Swedish evening newspaper surveyed a sample of the population on the general question of whether they would want the Swedish government to raise its aid to lesser-developed countries from 0.25% to 1% of Sweden's gross national product. Forty percent said "yes." Immediately afterwards, those who said "yes" were asked a second CVM question: "Would you accept this increase in government aid even if taxes would have to be raised," i.e., "if it would cost you any-

¹¹¹ Bohm, *supra* note 29, at 37.

¹¹² *Id.*

thing"?¹¹³ Bohm reports, "Half of those saying 'yes' to the first question now said 'no.'"¹¹⁴ Bohm concludes that

[this] story illustrates the fact—hardly surprising to most of us—that responses to hypothetical questions cannot be trusted to reveal the truth; more specifically, it shows how significant even part of the strategic bias of hypothetical questions can be (here, the part which is revealed when moving from the first to the second—still hypothetical—question).¹¹⁵

Of course, sometimes respondents provide untrue answers on purpose, rather than accidentally. Because individuals do not actually have to pay for their asserted preferences one way or the other, contingent valuation gives them an incentive to answer questions strategically, by significantly overstating or understating their true valuations in an attempt to encourage or discourage a certain government behavior.¹¹⁶

A related problem is that of "preference falsification," or the "act of misrepresenting one's genuine wants under perceived social pressures."¹¹⁷ An individual will not have to pay any of the costs associated with his answer and will derive no direct benefits from his answer to a contingent valuation survey, except the satisfaction of having the opportunity to express his preferences.¹¹⁸ Of course, this "expressive utility" is just as likely to be marked by strategic behavior as sincerity. Because he is likely to gain no direct utility from answering truthfully and bear no cost, the respondent will have a large incentive to maximize his "reputational utility" by responding in a manner designed to please the questioner or to appear to conform to perceived majority preferences, rather than according to his sincere beliefs.¹¹⁹ Given the strong social pressures to conform to environmentalist views in modern-day America, it is likely that respondents will feel an intangible pressure to overestimate their valuations of environmental amenities so as to conform to social pressures. Of course, the mere fact that the questioner is asking about a particular environmental amenity will inevitably lead the respondent to the conclusion that the questioner is interested in the topic, which will lead the respondent to inflate his answers.¹²⁰ Finally, much of the value ascribed to an individual's stated willingness to pay appears to be an expression of the respondent's good feeling about contributing to a public good rather than as a measure of true economic value.¹²¹

¹¹³ *Id.*

¹¹⁴ *Id.*

¹¹⁵ *Id.* at 38.

¹¹⁶ See Sunstein, *supra* note 44, at 142.

¹¹⁷ TIMUR KURAN, PRIVATE TRUTHS, PUBLIC LIES: THE SOCIAL CONSEQUENCES OF PREFERENCE FALSIFICATION 3 (1995).

¹¹⁸ *Id.* at 30–35.

¹¹⁹ *Id.* at 26–30.

¹²⁰ The error here is reminiscent of the problem of "conditioning" experiments in humans. See Ronald J. Rychlak & Joseph F. Rychlak, *Mental Health Experts on Trial: Free Will and Determinism in the Courtroom*, 100 W. VA. L. REV. 193, 220–22 (1991).

¹²¹ Rutherford et al., *supra* note 18, at 69.

Conformity to the perceived preference of the questioner or to public opinion typically imposes few costs, while nonconformity may impose, at a minimum, the costs of embarrassment and social disapproval. If conformity is cheap, then the individual opinions expressed will not be an accurate representation of an individual's true preferences. For instance, pre-election polls routinely underestimate electoral support for David Duke, the former grand wizard of the Ku Klux Klan and perennial Louisiana political candidate.¹²² When Duke ran for the United States Senate in 1990, pre-election polls predicted that Duke would capture less than twenty-five percent of the vote. In actuality, he captured forty-four percent of the vote, including sixty percent of the white vote.¹²³ The obvious conclusion is that voters were lying about whom they would vote for in order to conform to public sentiment. Because these were only polls, and the real activity would be actually voting, lying had no costs to the respondents. Telling the truth, however, might open the individual up to accusations of bigotry. As Kuran notes, this desire to appear conformist is strong even where the reputational effects of nonconformity are small: "Many voters would not even admit their support of Duke to a nameless pollster."¹²⁴ Similar disparities between publicly expressed preferences and actual preferences were exhibited in the 1989 New York City mayoral race between David Dinkins and Rudolph Giuliani.¹²⁵ Problems between publicly expressed preferences and true preferences are likely to bedevil contingent valuation studies regarding environmental amenities.

The problem with hypotheticals does not end with the individual indecisiveness of each survey response. Answering hypothetical questions about consumer valuations is inherently different and more difficult than expressing genuine and decisive evaluative actions in the market. Survey respondents face "no cost to being wrong, and therefore [have] no incentive to undertake the mental effort to be accurate."¹²⁶ Thus, one survey reports a median thirty dollar average hypothetical willingness to pay for an antique map for which the median value people would actually pay was only five dollars.¹²⁷ This fact is especially important, given that the complexity of problems increases with the hypothetical nature of the issues relevant to solving the problem.

If asked to pay two dollars for a McDonalds hamburger, consumers can reliably calculate whether buying that hamburger is a good deal for them at that moment. It is much more difficult for people to write down

¹²² KURAN, *supra* note 117, at 142. As we write this Article, Duke has recently declared his candidacy for the seat recently resigned by Bob Livingston.

¹²³ *Id.*

¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ Myrick A. Freeman, *Approaches to Measuring Public Goods Demands*, 61 *AM. J. AGRIC. ECON.* 915, 916 (1979); see also Bryan Caplan, *Rational Ignorance Versus Rational Irrationality* (unpublished manuscript on file with authors) (arguing that as the private cost of holding erroneous views of the world decreases, the propensity to hold erroneous views rises).

¹²⁷ Rutherford et al., *supra* note 18, at 67.

their demand functions, even for a dozen ordinary grocery items. How many of us can say with any confidence how much more ice cream we will purchase over the course of a year if the price of ice cream falls by twenty percent, while the prices of all other goods and services in our consumption bundle remain unchanged? The fact that economists for heuristic reasons assume well-ordered and detailed consumer demand functions does not mean that these demand functions actually exist at any moment in well-ordered and detailed form over a wide range of prices, quantities, and qualities. Further, it certainly does not mean that consumers can accurately report their own detailed demand function for even a single good. If asked how much more ice cream one will buy if ice cream prices fall by twenty percent, one could guess, but it is likely that this guess, no matter how well-considered, will prove inaccurate when actually confronting a twenty percent lower relative price of ice cream. Asking people to reckon their demand curves for *all* goods, services, and amenities under a welter of different conditions is to ask the impossible, even though, as we argued above, proper calculation of existence values cannot occur unless the calculating authority is given a full array of such valuation schedules from all citizens.

The impossibility of mapping a full schedule of preferences for every given survey respondent means that, by necessity, a certain number of alternatives must be excluded from the menu of options over which a person can hypothetically spend his or her money. This is necessary, of course, because moving from the complexity and messiness of the real world of actual choice and trade-offs to the artificially constructed world of a scientific experiment necessitates a simplified hypothetical. But this means that somebody has to decide what constraints to impose on the respondent and how much information to give that person in this newly constructed hypothetical world. The questioner must arbitrarily decide how much information to give the survey respondent and how many options to give him. As a result, the respondents' answers will be highly dependent on the information offered by the questioner.¹²⁸ "To say that only 'the facts' will be provided is untenable. There will almost always be more facts than can ever be provided, requiring a ruthless selection. Why would a geologic description be a more appropriate set of facts than a historic or theological description?"¹²⁹ These definitional problems will be most severe in dealing with something as intangible and ill defined as "existence value." By definition, the good is valued because of its symbolic, cultural, religious, historical, or other similar value, not its use value. However, because the value attached to the good is so intangible, it is unclear what facts need to be provided in order to elicit the respondent's true preferences.¹³⁰ For instance, is the Arctic refuge an ecological preserve for protecting caribou or is it simply an Arctic wasteland? The decision of which

¹²⁸ See NELSON, *supra* note 59, at 15.

¹²⁹ *Id.* at 16.

¹³⁰ See *id.* at 15-16 (stating that although background information may bias survey results, it is necessary to elicit an informed response).

facts to include and which to exclude will bias the sample in significant ways.

Nor does it improve matters by trying to make the hypothetical situations as specific as possible. "The more context sensitive the method attempts to become, the more its hypothetical nature becomes problematic, bordering on the fantastic."¹³¹ One study purports to show that people are willing to pay \$90 to have a day of relief from angina if they have had it for only one day, but \$288 for ten days of relief if they have had angina for twenty days.¹³² Cass Sunstein observes of this peculiar data, "It is hard to take these figures seriously. (Ask yourself how much you would be willing to pay to avoid a day of angina, two days of coughing spells, or a week of nausea.)"¹³³ But not only do these numbers seem to be simply bizarre, it is difficult to determine what they are supposed to imply or even prove.

Consumers and producers in markets react to actual prices, and market prices are determined by actual, nonhypothetical choices. The market is a forum for making real, nonhypothetical exchanges at real, nonhypothetical prices.¹³⁴ This is the only workable way for humans to make reliable economic decisions. A key virtue of competitive decentralized markets is that no one is required to perform herculean intellectual feats. Market prices at any moment inform producers and consumers of relative resource and product availabilities. People make choices based upon their preferences that are relevant only within the range of the existing array of market prices. In turn, private property owners whose wealth is affected by market decisions respond to the changes in prices brought about by consumer choices.¹³⁵ The resulting array of prices reflect genuine, nonhypothetical valuations. The fact that economists can write down a system of simultaneous equations to be used for calculating different general equilibrium prices for different assumed preferences and production techniques does not mean that individuals in real markets know at any time what they would do at different prices. And the further hypothetical prices are from actual prevailing prices, the more speculative and hazardous become any such guesses ventured by consumers or producers.

¹³¹ Sunstein, *supra* note 44, at 142.

¹³² *Id.*

¹³³ *Id.*

¹³⁴ Indeed, through market speculation, future prices are even converted into real present prices. Where appropriate, current market prices reflect both current exchange values as well as expectations about whether those values are likely to change, and how they are likely to change, in the future. For instance, an investor who today buys 100 shares of Microsoft stock is betting that the real value of this stock will rise in the future. But this bet is about a single market offering in the context of an immense array of other relevant market information. Given the prices of other stocks, of computer hardware, of wages paid to computer programmers in India, and uncountable other market facts that this investor takes as given, he speculates on the future of Microsoft stock. Investors and entrepreneurs speculate only about a small part of the market—indeed, need speculate only about a small part of the market—because other speculators are creating market prices in all other relevant markets that the individual entrepreneur can take as given.

¹³⁵ HAYEK, *supra* note 69, at 85–86.

C. The Relevance of Existence Value

People receive pleasure merely from knowing that certain things exist. This fact does not in and of itself justify government rearrangement of property rights in an attempt to divine exchange values for existence amenities. Just because something gives pleasure to someone is insufficient reason to recognize a legal right in that something. Likewise, just because something gives displeasure to someone does not justify government efforts to halt that something.

Consider an obvious example: the real distress suffered by a business owner when a new rival enters his market. Should the government attempt to calculate this business owner's distress and weigh it against the subjective delight enjoyed by consumers and the new rival before deciding whether or not to permit the rival to operate? Clearly not. While it cannot be denied in principle that the agony suffered by businesspeople who lose their livelihoods often, or even generally, exceeds the pleasure consumers enjoy as a consequence of more intense competition, it would clearly be foolish for government to police against competition on such grounds.¹³⁶

Most economists would agree with the above conclusion and would justify their agreement by relying upon the Kaldor-Hicks welfare criterion.¹³⁷ However, we offer a slightly different justification for preventing government from policing against competition on such utility grounds: there is no hope that government could do so correctly. Sound government policy cannot be grounded upon allegations of subjective utility and disutility divorced from the obligation to support those policies with action.

Although everyone experiences subjective utility gains and losses that do not correspond to market money values, the fact that subjective utility exists in humans does not justify government policy geared to that dimension. Of course, government policy and the law, if they are to serve useful social functions, must be geared to measures of human welfare. But because subjective utility is unmeasurable, government cannot be charged with the task of maximizing utility.¹³⁸ "The conceptual test is consensus

¹³⁶ This is not to suggest that such interventions are unwise *politically* for rational politicians who are seeking to maximize political support for themselves. This is just to say that it lacks economic sense.

¹³⁷ For a change to satisfy the Kaldor-Hicks criterion, there must be net increases in efficiency such that it would be *hypothetically* possible for those who gain from the change to compensate those harmed by the change. If the winners could hypothetically identify all of those made worse off by the change and negotiate compensatory transactions with them while still remaining better off themselves, then the change would be justified according to the Kaldor-Hicks criterion. POSNER, *supra* note 11, § 1.12, at 14-17.

¹³⁸ See James M. Buchanan, *Positive Economics, Welfare Economics, and Political Economy*, 2 J. L. & ECON. 124, 126 (1959). Buchanan writes that [u]tility is measurable, ordinally or cardinally, only to the individual decision-maker. It is a *subjectively* quantifiable magnitude. While the economist may be able to make certain presumptions about "utility" on the basis of observed facts about behavior, he must remain fundamentally ignorant concerning the actual ranking of alternatives until and unless that ranking is revealed by the overt action of the individual in choosing.

among members of the choosing group, not objective improvement in some measurable social aggregate."¹³⁹ Maximizing utility is an unavoidably personal chore. The appropriate role of the law is to foster rules and rights that maximize individuals' abilities to boost their own utilities as best as they can.¹⁴⁰ Reasonable people disagree over the precise contents of the appropriate set of rules and rights, but no one can reasonably assert that government can be trusted to act directly in the utility dimension. It is impossible for government officials to gauge subjective utilities and, hence, to weigh changes in one party's utility against changes in the utilities of other parties. A government empowered to maximize utility *directly* could not avoid acting chaotically. Such a government, even if operated by saints, by its nature could not govern according to rules; in practice, it would be a ghastly tyrant.¹⁴¹

To keep government away from the business of directly maximizing utilities requires recognition and respect for private spheres of action, and private spheres of action require at least *some* quantum of private property rights.¹⁴² Hayek expressed this truth as follows:

The understanding that "good fences make good neighbours," that is, that men can use their own knowledge in the pursuit of their own ends without colliding with each other only if clear boundaries can be drawn between their respective domains of free action, is the basis on which all known civilization has grown. Property, in the wide sense in which it is used to include not only material things, but (as John Locke defined it) the "life, liberty and estates" of every individual, is the only solution men have yet discovered to the problem of reconciling individual freedom with an absence of conflict. Law, liberty, and property are an inseparable trinity. There can be no law in the sense of universal rules of conduct which does not determine boundaries of the domains of freedom by laying down rules that enable each to ascertain where he is free to act.¹⁴³

Thus, private property rights in this Lockean sense protect not only rights to use properties for commercial and industrial purposes, but the rights of every person to decide for himself on a wide variety of personal and aesthetic questions.¹⁴⁴

Id.; see also Zywicki, *supra* note 93, at 977-78.

¹³⁹ Buchanan, *supra* note 138, at 127.

¹⁴⁰ Zywicki, *supra* note 93, at 978; see also FRIEDRICH A. HAYEK, *THE ROAD TO SERFDOM* 72-73 (1944) (describing the role of legal rules in helping individuals to coordinate their individual plans).

¹⁴¹ See HAYEK, *supra* note 140, at 91-92 (noting that giving a government power to maximize a collective social welfare function would require it to choose whose ends should be satisfied and whose should not).

¹⁴² F.A. HAYEK, *1 LAW, LEGISLATION, AND LIBERTY: RULES AND ORDER* 107 (1973).

¹⁴³ *Id.*

¹⁴⁴ See generally MILTON FRIEDMAN, *CAPITALISM AND FREEDOM* (1962) (arguing that restrictions on economic freedom leads to restrictions on political and personal freedoms).

D. Race to Leviathan: Existence Value's Slippery Slope

Proponents of existence valuation for environmental amenities should reflect upon the full implications of their policy proposal. If government is to, say, prohibit commercial development based on the existence value of Oregon forests and of quaint New England villages, there is no reason this power should not be used to protect existence values of other sorts. Nothing more objective than the balance of raw political might would determine which particular "existence values" are protected at any moment by government.

There is no principled difference between an environmentalist who claims to suffer great utility loss with every acre of land commercially developed and, say, a fundamentalist Christian who claims to suffer great utility loss at the very *thought* that women are permitted to wear pants instead of skirts or to abort their fetuses. There is no principled difference between an environmentalist who claims that just *knowing* of the existence of a species of trout raises substantially his utility and a bishop who claims that just *knowing* that people are forced to attend church on Sunday substantially raises his utility.

Talk is cheap. With government ready to regulate whenever a politically influential party vocally asserts a potential utility loss, law is supplanted by politics. Under such a system of "governance" there can be no predictability or principled policies. There can be no objective standard—beyond simply the vote count in the most recent election—for judging the propriety of government policy. Every person's action or nonaction, no matter how seemingly innocuous, is potentially an object of government regulation. Property owners might well fear for their legal right to use their lands as they choose. But so, too, would *all* citizens in *all* capacities fear for their legal right to live as they deem best. For every developer prevented from paving over forest land there will be an artist prevented from painting a picture or singing a song.¹⁴⁵

This aspect of allowing governmental actors to protect subjective environmental preferences is especially problematic given the nature of the political process, which tends to over-represent the views of those who prefer a heavy hand in environmental regulation. First, environmental interest groups have a disproportionate degree of control over the political process and, in particular, over the writing and enforcement of environmental laws and regulations.¹⁴⁶ Second, environmental issues appear to be one of the political areas where legislators themselves routinely indulge their personal ideological preferences, regardless of the views of a majority of their constituents.¹⁴⁷ Third, environmental regulators are often called to their positions by an environmentalist "sense of mission" that compels them to seek the maximum degree of environmental regulation—

¹⁴⁵ See Antonin Scalia, *Economic Affairs as Human Affairs*, in *ECONOMIC LIBERTIES AND THE JUDICIARY* 31, 31–32 (James A. Dorn & Henry G. Manne eds., 1987) (criticizing arguments for preferring "civil" rights over "economic" rights).

¹⁴⁶ See Zywicki, *supra* note 3, at 874–86.

¹⁴⁷ *Id.* at 893.

a quest that is complemented by their desire to increase their personal power as well as the power of their bureaucracies.¹⁴⁸ As James Buchanan has written, "[i]f I can resort to politics to impose my own preferences on the behavior of others . . . then it would seem that other persons, in working democratic processes can do the same to me. I may find that the political process is double-edged."¹⁴⁹

Those who are confident that government power to protect existence values will be used exclusively to promote their preferred environmental goals should notice Robert Bork's justification of legislative efforts to outlaw homosexual sodomy:

[P]hysical danger does not exhaust the categories of harms society may seek to prevent by legislation, and no activity that society thinks immoral is victimless. Knowledge that an activity is taking place is a harm to those who find it profoundly immoral.

....

Moral outrage is a sufficient ground for prohibitory legislation.¹⁵⁰

Although he does not use the term "existence value," the rationale behind Bork's remarks is identical to that which motivates existence value advocates. And indeed, Bork's invitation for a conservative version of existence value has been accepted by Eric Rasmusen, who uses an identical analysis to justify legal restraints on flag burning.¹⁵¹ The motivation reduces to the following: if enough voters feel offended by the behavior of others, even if they merely *think* such behavior occurs, such feelings are *sufficient* to justify government coercion to outlaw the offending behavior.

If it is appropriate for government to directly attempt to maximize utilities, and *if* a sufficient number of people persuade the government that they suffer monumental utility losses just from knowing that some people are engaging in homosexual conduct, then on what principle can government refuse to outlaw homosexual sodomy? None that we can see. Of course, advocates of the right to engage in homosexual conduct might

¹⁴⁸ *Id.*

¹⁴⁹ James M. Buchanan, *Politics and Meddlesome Preferences*, in *SMOKING AND SOCIETY* 335, 339 (Robert D. Tollison ed., 1986).

¹⁵⁰ ROBERT H. BORK, *THE TEMPTING OF AMERICA* 123-24 (1990).

¹⁵¹ Eric Rasmusen, *The Economics of Desecration: Flag Burning and Related Activities*, 27 *J. LEGAL STUD.* 245, 248 (1998). Rasmusen argues that

[d]esecration should be regulated for the same reason as pollution: one person is inflicting a cost on another without compensation, and bargaining is impractical. A factory emits sulfur dioxide, harming the neighbors' trees. A desecrator burns a flag, hurting its venerator's feelings. From the economic point of view, the situations are identical. In each case, one party inflicts a negative externality on another party.

Id. Rasmusen continues by making a distinction between mental and physical externalities: Air pollution and flag burning both create externalities. The difference is that the desecration externality is a direct effect on the mind of the venerator on hearing of the event, rather than a physical effect on some material object that then affects his mind. Let us distinguish between the two effects by calling them "mental externalities" and "physical externalities"

Id. at 249.

successfully persuade the government that the utility they would lose from such conduct being outlawed exceeds the utility that others stand to gain if homosexual conduct is made illegal. However, there is no objective means of distinguishing these conflicting claims. Furthermore, lack of any objective measure unleashes government by raw political power.

In the environmental context, it is evident that contingent valuation studies will almost always be biased toward expanding governmental power.¹⁵² Any contingent valuation study will necessarily be forced to exclude some options from the menu of options available to the respondent. Americans value many different and mutually contradictory things. For instance, they value both spotted owls and reasonably priced lumber. Some people undoubtedly draw value from the mere knowledge that hearty lumberjacks exist and are hard at work taming the frontier rather than sitting around in some office building, even though they have never met or personally seen a lumberjack, except for the lumberjack competitions on ESPN.¹⁵³ As one commentator observes, "personally, I like strip mines"¹⁵⁴—presumably, because the "failure to develop surface reserves can impose psychic costs on individuals who have tastes for the existence of a developed, industrial environment."¹⁵⁵ Similarly, contingent valuation surveys that seek to establish how much people would pay to prevent global warming will almost certainly fail to consider how much people would be willing to pay to *encourage* global warming, despite the large health, longevity, and amenity benefits that global warming would generate.¹⁵⁶ Stewart concludes that

[r]ecent psychological research has concluded that responses to nonuse CVM surveys do not reflect economic valuation of the particular resource under study, but rather generalized attitudes and feelings about the environment, ethical values about injury, moral satisfaction obtained by supporting a "good cause," symbolic statements of the importance of the environment, perceptions of civic duties, or an informal, untutored social cost-benefit analysis.¹⁵⁷

¹⁵² Using contingent valuation in the context of abortion, flag burning, and homosexual conduct also would tend to have a predictable consequence of increasing government power. In each case, it will be said that there is an "externality" for which government intervention is required to correct.

¹⁵³ See Zywicki, *supra* note 3, at 130 n.99.

¹⁵⁴ P.J. O'Rourke, ALL THE TROUBLE IN THE WORLD: THE LIGHTER SIDE OF OVERPOPULATION, FAMINE, ECOLOGICAL DISASTER, ETHNIC HATRED, PLAGUE, AND POVERTY 182 (1994).

¹⁵⁵ Joseph P. Kalt, *The Costs and Benefits of Federal Regulation of Coal Strip Mining*, 23 NAT. RESOURCES J. 893, 895 (1983).

¹⁵⁶ See Thomas Gale Moore, *Health and Amenity Effects of Global Warming*, 36 ECON. INQUIRY 471 (1998) (concluding that measuring willingness to pay by wage rates shows that people prefer warm climates and would be willing to give up between \$30 billion and \$100 billion annually for a 4.5 degree increase in temperature); see also Brent Sohngen & Robert Mendelsohn, *Valuing the Impact of Large-Scale Ecological Change in a Market: The Effect of Climate Change on U.S. Timber*, 88 AM. ECON. REV. 686 (1998) (noting that global warming will expand U.S. timber supplies and predicting a benefit to the timber industry of approximately \$20 billion from such climate change).

¹⁵⁷ Stewart, *supra* note 36, at 237.

Of course, almost all of these factors point in the direction of inflating the stated values to a level well above what people actually would be willing to pay, thereby overestimating the support for state action.

It is grossly imprudent to endorse government activity driven by raw political power; such power easily devours the hands, and heads, of its feeders.¹⁵⁸ To advocate "existence valuation" protection at the expense of private property and contract rights is to advocate government by raw political power. If the notion becomes widely accepted that government's appropriate task is to maximize utility based upon the economic divining of contingency valuation survey based on the value a person supposedly attaches to stopping some disfavored activity, then no principled grounds remain upon which government can be restrained from the worst excesses.

Use of existence value will also create a bias in favor of expanding federal power at the expense of state and local governments.¹⁵⁹ Indeed, several legal scholars have relied on the presence of existence value as the linchpin of their argument for retaining a national thrust for environmental regulation rather than delegating this responsibility to state and local authorities.¹⁶⁰ This is the case even though most environmental problems are actually local in cause and impact¹⁶¹ (leaving aside existence value). Also, surveys show a strong preference on the part of the American public that state and local governments should have the primary responsibility for environmental regulation.¹⁶² Sweeping claims of existence value that are said to be national in scope provide a rationale for overriding these preferences, which are expressed by those who are actually subject to the regulations. Elevating the locus of regulation from local to national regulators will have the predictable consequence of favoring some interest groups at the expense of others and will result in an increase in the overall

¹⁵⁸ See Buchanan, *supra* note 149, at 339.

¹⁵⁹ See Joshua D. Sarnoff, *A Reply to Professor Revesz's Response in "The Race to the Bottom and Federal Environmental Regulation,"* 8 DUKE ENVTL. L. & POL'Y F. 295, 300-01 (1998).

¹⁶⁰ See *id.* at 298-99 (referring to "national evaluative norms"); see also Daniel C. Esty, *Revitalizing Environmental Federalism*, 95 MICH. L. REV. 570, 640 (1996); Joshua D. Sarnoff, *The Continuing Imperative (But Only from a National Perspective) for Federal Environmental Protection*, 7 DUKE ENVTL. L. & POL'Y F. 225, 266-78 (1997). Even Professor Richard Revesz, usually an advocate of federalism in environmental matters, concludes that national parks have "existence value" that "provide[s] a powerful justification for federal control over exceptional national resources such as national parks." Revesz, *supra* note 58, at 543. Of course, even if Revesz is correct that there is such existence value for national parks, it still remains questionable whether federal governmental control is the most effective way of preserving those parks. Given the political incentives of politicians and park managers, it appears that federal control over national parks is more likely to result in the destruction of those resources, rather than their preservation. See Zywicki, *supra* note 3, at 900-01 (discussing federal government's mismanagement of national parks and other environmental amenities).

¹⁶¹ Zywicki, *supra* note 3, at 867-70.

¹⁶² See JONATHAN ADLER & KELLYANNE FITZPATRICK, COMPETITIVE ENTERPRISE INSTITUTE, NATIONAL ENVIRONMENTAL SURVEY 2 (1999).

amount of special interest rent-seeking activity in the economy.¹⁶³ By making it more difficult to escape the reach of regulations, national regulation will reduce the ability of individuals to escape oppressive or distasteful regulation—whether regulation of abortion or the environment—by moving to a more congenial locale.¹⁶⁴

Government cannot maximize people's utilities directly. More importantly, a government that directly attempts to maximize people's utilities necessarily abandons the role of protecting spheres of individual domain within which each person freely chooses how best to maximize his utility. People that are given some domain in which they are protected from political interference are much better able to enhance their utilities than people whose most trifling actions are subject to override by government command.

III. THE IMPLICATIONS OF EXISTENCE VALUE FOR LAW

A. *Property Rights in Existence Value?*

Many who support active government protection of existence values argue that property rights in existence values are just as legitimate as more traditional property rights over physical objects.¹⁶⁵ The argument, in brief, is that all property rights arrangements are human artifacts.¹⁶⁶ There is nothing naturally good or bad about one arrangement compared to any other arrangement. For example, the right to develop land is not naturally or universally a superior form of property right than is all citizens' rights to unlimited access to land, or government's right to prevent development to protect existence values. Having chosen in the past to enforce what we today recognize as the traditional set of common-law private property rights, humans can today choose, if they wish, to alter these rights in order to recognize other interests.¹⁶⁷

¹⁶³ See Zywicki, *supra* note 3, at 869–70; Todd J. Zywicki, *Beyond the Shell and Husk of History: The History of the Seventeenth Amendment and its Implications for Current Reform Proposals*, 45 CLEV. ST. L. REV. 165 (1997) [hereinafter Zywicki, *Shell and Husk*]; Todd J. Zywicki, *Senators and Special Interests: A Public Choice Analysis of the Seventeenth Amendment*, 73 OR. L. REV. 1007 (1994); Todd J. Zywicki, Book Review, 1 INDEPENDENT REV. 439 (1997). But see Sarnoff, *supra* note 160, at 298 (arguing that federal processes “aggregate” preferences better than local governments). Sarnoff provides no explanation why raising the locus of regulation to the federal level would tend to “aggregate” interests rather than simply increase the influence of some interests as opposed to others. Nor does Sarnoff state whether he would be willing to apply this principle in all situations where “existence value” is present, which might include such things as flag burning regulations, sodomy laws, and a whole host of other situations. See discussion accompanying notes 151–52 *supra*.

¹⁶⁴ Zywicki, *Shell and Husk*, *supra* note 163, at 210.

¹⁶⁵ See, e.g., Sunstein, *supra* note 4. For a critique of Sunstein's views on the purported arbitrariness of property rights arrangements under the common law, see Todd J. Zywicki, Book Review, 8 CONST. POL. ECON. 355, 356 (1997) (reviewing CASS R. SUNSTEIN, *LEGAL REASONING AND POLITICAL CONFLICT* (1996)).

¹⁶⁶ See Sunstein, *supra* note 4, at 224 & n.19.

¹⁶⁷ But cf. *id.* at 224 (noting that the initial allocation of rights will create, legitimate, and reinforce social understandings about rights of ownership, thereby affecting choices people make regarding those rights).

Numerous misconceptions undermine this legal-positivist view of law. Law, of course, is ultimately justified by how well it serves citizens' interests. No rule should be maintained just because it is centuries old. Nevertheless, because law serves citizens' interests by allowing them to form trustworthy expectations about the behavior of others—as well as of public authorities—and to act on these expectations in ways that conform with the expectations of others, sound law generally is not “chosen” in any conscious way through collective choice procedures, but rather, grows up organically from the everyday actions and conflicts of people.¹⁶⁸ Sound law, to steal a favorite phrase from Hayek, is “the result of human action but not of human design.”¹⁶⁹

Under the common law, property owners enjoy legal protections of a set of expectations about how they can use their properties.¹⁷⁰ For example, traditional common law protects each landowner's expectation that she can develop her land as she chooses, as long as she does not physically damage adjoining lands.¹⁷¹ Therefore, what is protected under traditional common law are a certain set of expectations. Other expectations are not necessarily protected by common law. For example, a citizen's expectation that a landowner will not develop her land is not protected.

Because no legal system can protect all expectations, the practical question then becomes which set of expectations should the law protect. This is a difficult question to answer precisely. Following Hayek, we insist that law cannot succeed if it protects as a legal right any expectation of “a

¹⁶⁸ See BRUNO LEONI, *FREEDOM AND THE LAW* (1961); Robert D. Cooter, *Structural Adjudication and the New Law Merchant: A Model of Decentralized Law*, 14 INT'L REV. L. & ECON. 215 (1994); Andrew P. Morris, *Private Actors and Structural Balance: Militia and the Free Rider Problem in Private Provision of Law*, 58 MONT. L. REV. 115 (1997); A.C. Pritchard & Todd J. Zywicki, *Constitutions and Spontaneous Orders: A Response to Professor McGinnis*, 77 N.C. L. REV. 537 (1999) [hereinafter Pritchard & Zywicki, *Constitutions and Spontaneous Orders*]; A.C. Pritchard & Todd J. Zywicki, *Finding the Constitution: An Economic Analysis of Tradition's Role in Constitutional Interpretation*, 77 N.C. L. REV. 409, 460–68 (1999) [hereinafter Pritchard & Zywicki, *Finding the Constitution*]; Zywicki, *supra* note 93.

¹⁶⁹ F.A. HAYEK, *The Results of Human Action But Not of Human Design*, in STUDIES IN PHILOSOPHY, POLITICS AND ECONOMICS 96 (1967). Sunstein, by contrast, assumes that because human institutions such as law are the result of human action, these institutions are also the result of human design or choice and thus infinitely malleable. Even if not the result of human design, he argues that they are necessarily inferior to institutions consciously crafted and implemented to achieve certain purposes. In reality, only the smallest and most trivial of human institutions have been consciously created. Most important elements—including language, markets, the worldwide division of labor, the customs that govern our everyday interactions, trust of one another, indeed, western civilization itself and the body of knowledge it represents—have arisen from the accretions of individual, independent actors, not conscious design by one or a few minds. See Pritchard & Zywicki, *Constitutions and Spontaneous Orders*, *supra* note 168, at 542–43 (arguing that throughout the western world, individual rights and limitations on government power resulted from struggles unique to time and place); Pritchard & Zywicki, *Finding the Constitutions*, *supra* note 168, at 458 & n.198 (describing a spontaneous order legal system in which the legal principles produced by that process embody the wisdom and experiences of many decentralized actors and judges); Zywicki, *supra* note 165, at 357–58.

¹⁷⁰ See 58 AM. JUR. 2D *Nuisances* § 154 (1997).

¹⁷¹ See *id.*

particular concrete state of things," such as the expectation to a certain dollar amount of income, or the expectation that land and resources will be used only in certain particular ways.¹⁷² Consider Hayek's comment:

[The best the law can do is to determine] only an abstract order which enables its members to derive from the particulars known to them expectations that have a good chance of being correct. This is all that can be achieved in a world where some of the facts change in an unpredictable manner and where order is achieved by the individuals adjusting themselves to new facts whenever they become aware of them. *What can remain constant in such an overall order which continually adjusts itself to external changes, and provides the basis of predictions, can only be a system of abstract relationships and not its particular elements.* This means that every change must disappoint some expectations, but that this very change which disappoints some expectations creates a situation in which again the chance to form concrete expectations is as great as possible.

Such a condition can evidently be achieved only by protecting some and not all expectations, and the central problem is which expectations must be assured in order to maximize the possibility of expectations in general being fulfilled. This implies a distinction between such "legitimate" expectations which the law must protect and others which it must allow to be disappointed. And the only method yet discovered of defining a range of expectations which will be thus protected, and thereby reducing the mutual interference of people's actions with each other's intentions, is to demarcate for every individual a range of permitted actions by designating . . . ranges of objects over which only particular individuals are allowed to dispose and from the control of which all others are excluded.¹⁷³

Traditional common-law property rights demarcate for every individual a range of permitted actions¹⁷⁴ and, hence, protect owners' legitimate expectations regarding this range of permitted actions. Humans thus interact in complex ways to promote their own and others' well-being. Experience has proven not only the workability of traditional common-law rules of property, contract, and tort, but their general superiority to centrally designed law.¹⁷⁵

Again, it cannot be denied that a landowner who turns a forest into a shopping mall might disappoint the expectations of some people who hoped to see the land remain undeveloped. But because it is impossible for the law to prevent all expectations from being disappointed, the mere fact of disappointed expectations proves nothing. Attempts to legally recognize and protect existence values are justified only if those attempts will promote greater coordination of mutually advantageous human activities. As we argued above, however, the theoretical and practical problems that unavoidably mar any attempt to turn existence values into legally protected property rights are insurmountable. The immensity of these

¹⁷² HAYEK, *supra* note 142, at 106.

¹⁷³ *Id.* at 106-07 (emphasis added).

¹⁷⁴ See 63 AM. JUR. 2D *Property* § 31 (1997).

¹⁷⁵ See HAYEK, *supra* note 142, at 21-23; Francesco Parisi, *Toward a Theory of Spontaneous Law*, 6 CONST. POL. ECON. 211, 212 (1995); Pritchard & Zywicki, *Finding the Constitution*, *supra* note 168, at 457-60.

problems surely argues against the unsettling of centuries-old rules of property that have proven their ability to promote peaceful cooperation and prosperity. Legal protection of existence value as some sort of generalized property right cannot work.¹⁷⁶

After all, there is no logical stopping point that allows protection of environmental existence value but not other forms. As noted above, similar arguments have been made to support legal restrictions on homosexual behavior—and certainly could be extended to apply to the mere act of *being* homosexual—and to prohibit flag desecration. But why stop there? The knowledge that there are those who cheer for the Harvard football team causes significant anguish for at least one of the authors. Perhaps more pressing, we all are psychically injured when acts of rape, murder, and assault are committed. Should we all be entitled to have a property right to recover damages when some stranger in Omaha gets pummeled in a barroom brawl? Once the notion that certain types of psychic and unprovable harms should be compensable is accepted, there is simply no way to draw a line as to which harms count and which ones do not. These sorts of externalities are ubiquitous—in theory every action (or even every inaction) could be thought of as an externality.¹⁷⁷ Even assuming that such inconveniences constitute verifiable externalities, it is far from clear that the government could competently do anything about them or that the benefits of trying to correct them through collective proceedings would exceed the costs.¹⁷⁸ As the supposed grandfather of “externalities” theory¹⁷⁹ Ronald Coase observes, “As we have seen, it is easy to show that the mere existence of ‘externalities’ does not, of itself, provide any reason for governmental intervention.”¹⁸⁰ Once it is recognized that political externalities are as ubiquitous as other forms of externalities,¹⁸¹ the case against governmental action to “correct” these externalities becomes even more compelling. As Coase concludes, “[t]he ubiquitous nature of ‘externalities’ suggests to me that there is a *prima facie* case against intervention, and the studies on the effects of regulation which have been made in recent years in the United States, ranging from agriculture to zoning, which indicate that regulation has commonly made matters worse, lend

¹⁷⁶ This should not be read to deny the propriety of using traditional contract law to enforce voluntary agreements binding landowners to refrain from developing their lands. Groups such as the Nature Conservancy purchase lands for the purpose of removing them from development. Common-law land trusts also were a mechanism for removing land from development. Many major environmental groups have used such voluntary land trusts, but the rise of political approaches to land controls have preempted these voluntary approaches.

¹⁷⁷ See COASE, *supra* note 7, at 26.

¹⁷⁸ *Id.* at 26–27.

¹⁷⁹ Although often thought of in this way, Coase himself has rejected the term “externality,” stating with pride that he specifically eschewed the use of the term in “The Problem of Social Cost” in favor of the phrase “harmful effects.” *Id.* at 27. Nonetheless, he admits that despite his efforts “even those sympathetic to [his] point of view” describe his argument as “a study in the problem of ‘externality.’” *Id.*

¹⁸⁰ *Id.* at 26.

¹⁸¹ Zywicki, *supra* note 3, at 912.

support to this view.”¹⁸² Given the difficulties that governments have had in dealing with these more tangible forms of “externalities,” it is difficult to imagine that they could competently deal with the more intangible forms of externalities represented by slippery concepts such as existence value.

Existence value proponents claim that the ability of people who value existence to free ride on the financial contributions of others prevents appropriate amounts from being bid in competition with commercial buyers.¹⁸³ Commercial buyers will thus not have internalized the full existence values of the lands they develop. Thus, much development occurs.

Free riding is common, despite the billions of dollars spent on private environmental protection. But collectivizing land use decisions creates a slew of free-rider problems that do not exist under common-law property and contract rules. Free-rider problems plague any system in which people are asked to express their existence values for various environmental amenities. As we argued above, because decisions in a survey are without cost, surveys permit respondents to express values without any need to consider costs to themselves or to others. There is no reason to suppose that free-rider problems that render imperfect traditional common-law property and contract rules are any worse than those that infect collective decision-making procedures.

B. Bad Economics Makes Bad Law

When property rights are insecure, “gains that would otherwise be available from exchange instead will be dissipated by searches for and defenses of takeable assets, and resources available for investment will be diverted toward less takeable uses.”¹⁸⁴ That is, in practice, if existence value becomes legally recognized, new incentives are unleashed for parties to attempt to grab resources. Resources will be devoted to litigation and other legal processes that would not have been so allocated.¹⁸⁵ In the face of such a scramble for property, there is no assurance, even for those who think the world will be better if existence value were a legally protected right, that it will turn out the way they hoped.

Commentators have discussed the use of economic tools and concepts, such as contingent valuation, that can be used to enhance the valuation of environmental amenities, and articles in various law reviews make use of the notion.¹⁸⁶ An idea first discussed in the economics literature in

¹⁸² COASE, *supra* note 7, at 26.

¹⁸³ HIRSHLEIFER, *supra* note 78, at 478–82.

¹⁸⁴ David D. Haddock et al., *An Ordinary Economic Rationale for Extraordinary Legal Sanctions*, 78 CAL. L. REV. 1, 17 (1990).

¹⁸⁵ Terry L. Anderson & Peter J. Hill, *The Race for Property Rights*, 33 J. L. & ECON. 177, 177 (1990); David D. Haddock, *First Possession Versus Optimal Timing: Limiting the Dissipation of Economic Value*, 64 WASH. U. L.Q. 775, 776–78 (1986).

¹⁸⁶ See Daniel A. Farber, *Stretching the Margins: The Geographical Nexus in Environmental Law*, 48 STAN. L. REV. 1247 (1996); Richard L. Revesz, *Federalism and Interstate Environmental Externalities*, 144 U. PA. L. REV. 2341 (1996); Judith Robinson, *The Role of*

1967 by John Krutilla¹⁸⁷ eventually spawned more formal analysis that gives economic credence to legal commentators seeking to expand the legal status of environmental amenities. Far better to cite economic reasoning as a justification than just to assert that such protections should exist because the author likes the idea.

While economists may be flattered to think that economic analysis drives legal rules, in fact the notion of existence value has only scant support in sound economic theory. Nevertheless, the concept of existence value is now being embedded in statutes.¹⁸⁸ Some environmental statutes contain vague statements that may have political appeal, but may not have been intended by most members of Congress to have substantive consequences at law—or at least the consequences that later emerged.¹⁸⁹

C. Legal Standing for Existence Value

Those who wish to achieve particular objectives, such as nonexploitation of certain resources, can achieve that goal by adoption of a rule that allows them to intercede to prohibit resource use. A problem they face is that the law does not presume their right to intercede in matters that happen to have existence value to them.¹⁹⁰ One case on standing in environmental matters, *Sierra Club v. Morton*, outlined the issues well. The Forest Service approved plans for commercial exploitation of resources on land the agency controlled.¹⁹¹ The Sierra Club sued to block the development, claiming standing to intervene based on its “special interest in the conservation and the sound maintenance of the national parks, game refuges and forests of the country.”¹⁹² The Supreme Court rejected the claim that “a mere ‘interest in a problem’”¹⁹³ was sufficient to establish legal standing.¹⁹⁴ Standing requires a more immediate interest, such as would be had by neighboring property owners affected by the proposed development.¹⁹⁵

Nonuse Values in Natural Resource Damages: Past, Present, and Future, 75 TEX. L. REV. 189 (1996); Cass R. Sunstein, *Social Norms and Social Roles*, 96 COLUM. L. REV. 903 (1996).

¹⁸⁷ Krutilla, *supra* note 18.

¹⁸⁸ See, e.g., Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9601–9675 (1994 & Supp. III 1997); Oil Pollution Act of 1990, 33 U.S.C. §§ 2701–2761 (1994 & Supp. III 1997).

¹⁸⁹ This does not mean that Congress did not intend or foresee these consequences. By creating these vague and open-ended statements, political entrepreneurs surely must have been able to foresee that this would create future opportunities for interest groups to come back to politicians for clarification or to urge their preferred interpretation of these vague terms as applied in a particular situation. See Zywicki, *supra* note 3, at 888–93; see also Fred S. McChesney, *Rent Extraction and Rent Creation in the Economic Theory of Regulation*, 16 J. LEGAL STUD. 101 (1987).

¹⁹⁰ See *Sierra Club v. Morton*, 405 U.S. 727 (1972).

¹⁹¹ *Id.* at 729.

¹⁹² *Id.* at 730.

¹⁹³ *Id.* at 739.

¹⁹⁴ *Id.*

¹⁹⁵ See *id.* at 738 & n.13.

Dissenters in *Morton* argued for broad notions of legal standing.¹⁹⁶ Justice Douglas wanted to ensure that “the voice of the existing beneficiaries of these environmental wonders . . . be heard,”¹⁹⁷ and he felt that “those people who . . . know its values and wonders [should] be able to speak for the entire ecological community.”¹⁹⁸ Similarly, Justice Blackmun’s dissent argued for an “imaginative expansion of our traditional concepts of standing” so as to allow a group such as the Sierra Club that has “pertinent, bona fide, and well recognized attributes and purposes in the area of the environment” to be able to litigate such matters.¹⁹⁹ This issue has arisen in Supreme Court cases since then, and the Court continues to have members who find merit in an expansive standing notion.²⁰⁰

The importance of standing is that, without it, the Sierra Club or any other “distant” party cannot get into court to reveal the existence value it places on certain environmental amenities. Even parties with standing must demonstrate market (use) value affected by the activities in question.²⁰¹ Assertions about existence value matter little in most cases.²⁰² Contingent valuation provides a tool for parties to put “market values” on claims that are given legal standing. The Supreme Court has not commented on the possible role of contingent valuation, but recognizes a right in existence value created by the Endangered Species Act.²⁰³

While it took almost two decades for the implications to emerge with full force in the spotted owl case,²⁰⁴ in 1978 the Supreme Court recognized something close to the notion of existence value in the snail darter case.²⁰⁵ The Court found that completion of the Tellico Dam by the Tennessee Valley Authority threatened the existence of the endangered snail darter fish in violation of the Endangered Species Act of 1973.²⁰⁶ The Court noted that the Act did not attempt to balance costs and benefits; that tens of million of dollars had already been devoted to the project was irrelevant.²⁰⁷ As the Report of the House Committee on Merchant Marine and Fisheries had stated prior to passage of the Act, “[t]he value of . . . genetic heritage is, quite literally, incalculable.”²⁰⁸ The majority opinion also cited a commentator’s finding that

¹⁹⁶ *Id.* at 741–60 (Douglas, J., Blackmun, J., & Brennan, J., dissenting).

¹⁹⁷ *Id.* at 750 (Douglas, J., dissenting).

¹⁹⁸ *Id.* at 752. Douglas did not express concern about the rights of future beneficiaries of these environmental “wonders,” but they can be clearly inferred from his statement.

¹⁹⁹ *Id.* at 757 (Blackmun, J., dissenting).

²⁰⁰ See Farber, *supra* note 186, at 1275–76.

²⁰¹ *Sierra Club v. Morton*, 405 U.S. at 731.

²⁰² *Id.* at 738.

²⁰³ See *Bennett v. Spear*, 520 U.S. 154 (1997); Endangered Species Act of 1973, 16 U.S.C. §§ 1531–1544 (1994).

²⁰⁴ *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*, 515 U.S. 687, 704 n.18 (1995).

²⁰⁵ *Tennessee Valley Authority v. Hill*, 437 U.S. 153 (1978).

²⁰⁶ *Id.* at 173–74.

²⁰⁷ *Id.* at 188–89.

²⁰⁸ *Id.* at 178 (quoting H.R. REP. NO. 93-412, at 4 (1973)).

the dominant theme pervading all Congressional discussion of the proposed [Act] was the overriding need to devote whatever effort and resources were necessary to avoid further diminution of national and worldwide wildlife resources Senators and Congressmen uniformly deplored the irreplaceable loss to aesthetics, science, ecology, and the national heritage should more species disappear.²⁰⁹

Apparently individual species or their habitat have nearly unlimited existence right or value at law, as the amounts spent exceed any reasonable estimate that even contingent valuation studies of human beings have been able to identify.²¹⁰

D. Existence Value Codified

Existence value, as revealed by contingent valuation, is gradually being codified in parts of environmental law.²¹¹ The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) and the Oil Pollution Act of 1990 authorize federal and state officials to seek natural resource damages that may include existence value.²¹² Under both statutes, the relevant federal agency has issued rules for natural resource damage assessments (NRDAs) that go beyond traditional concepts of damage remediation and compensation.²¹³

CERCLA allows the government to act as trustee to jointly and severally sue a wide host of responsible parties for injury to natural resources from releases of hazardous substances.²¹⁴ Natural resources includes all aspects of the environment.²¹⁵ The Department of the Interior (DOI) is required to issue NRDA rules that "take into consideration factors includ-

²⁰⁹ *Id.* at 177 (quoting George Cameron Coggins, *Conserving Wildlife Resources: An Overview of the Endangered Species Act of 1973*, 51 N.D. L. REV. 315, 321 (1975)).

²¹⁰ While it was never clear that the Tellico Dam, snail darter aside, had greater benefits than costs, it is clear that providing protection for a portion of the spotted owls' habitat, as required by the Endangered Species Act, has cost at least \$10 billion. See Robert H. Nelson, *How Much Is Enough? An Overview of the Benefits and Costs of Environmental Protection*, in *TAKING THE ENVIRONMENT SERIOUSLY* 1, 3 (Roger Meiners & Bruce Yandle eds., 1993). Increases in lumber costs have raised the average cost of housing about \$300 for a \$100,000 house. Zywicki, *supra* note 3, at 874. There is no reason to believe that the public places a value of \$10 billion on the preservation of the spotted owl habitat, although there have been significant benefits to lumber companies who use spotted owl sightings to reduce the supply of lumber going to the market. See BRUCE YANDLE, *COMMON SENSE AND COMMON LAW FOR THE ENVIRONMENT: CREATING WEALTH IN HUMMINGBIRD ECONOMIES* 73-75 (1997); Todd J. Zywicki, Book Review, 9 CONST. POL. ECON. 349 (1998) (Reviewing YANDLE, *supra*).

²¹¹ Jerry A. Hausman, *Preface to CONTINGENT VALUATION, A CRITICAL ASSESSMENT*, *supra* note 1, at vi, vii.

²¹² 42 U.S.C. § 8607(f) (1994); 33 U.S.C. § 2706(a) (1994); see also Hausman, *supra* note 211, at vii. A comprehensive discussion of these issues is provided in Douglas R. Williams, *Valuing Natural Environments: Compensation, Market Norms, and the Idea of Public Goods*, 27 CONN. L. REV. 365 (1995).

²¹³ Steven Shavell, *Contingent Valuation of the Nonuse Value of Natural Resources: Implications for Public Policy and the Liability System*, in *CONTINGENT VALUATION, A CRITICAL ASSESSMENT*, *supra* note 1, at 371, 373.

²¹⁴ See 42 U.S.C. § 9607 (1994).

²¹⁵ See *id.* § 9601(16).

ing, but not limited to, replacement value, use value, and ability of the ecosystem or resource to recover.”²¹⁶ Recovered damages must be “retained by the trustee[s], without further appropriation, for use only to restore, replace, or acquire the equivalent of” damaged resources.²¹⁷ This definition of damages is much broader than a traditional common-law damage measure, the lost use value.²¹⁸

If pollution has ruined a parcel of land so that no one would want to live on it, or has polluted a well so that it can no longer be used, what is the lost economic value of the polluted land or water supply? In most cases, lost use value, the traditional damage measure, is much less than the cost of restoration or replacement.²¹⁹ The CERCLA damage rule may be applied to mean, in effect, that future generations have a right to the slice of the environment in question as it was in its natural state; we are not just to compensate the current generation for the use value of the slice of the environment in question. Of course, a high damage measure discourages future violations of CERCLA more than would a lost use measure of damages, but since most Superfund sites came under the auspices of CERCLA after the fact, the effect has been to force society to devote significantly more resources to environmental restoration than may have been the case under traditional rules.²²⁰ The damage regulations published by DOI in 1986 were held to be too lenient; the agency was required to favor restoration over lost use value.²²¹

Restoration need not be remotely the same as contingent valuation, but both are likely to be much higher than lost use values. The restoration option, enacted three years before CERCLA as part of the Clean Water Act,²²² may mean little in case of extinction of a species that has no particular market value. The concern of environmentalists is that property owners may destroy species that have no clear market value, even though its nonuse value, as determined by contingent valuation, may be high to people concerned about such matters.²²³ Without contingent valuation there will be more environmental degradation than with it in place as a deterrent mechanism.²²⁴

²¹⁶ *Id.* § 9651(c)(2)(B).

²¹⁷ *Id.* § 9607(f)(1).

²¹⁸ See RESTATEMENT (SECOND) OF TORTS § 929 cmt. b (1977) (commenting that restoration damages are not recoverable if the “cost of replacing the land in its original condition is disproportionate to the diminution in the value of the land . . . unless there is a reason personal to the owner for restoring the original condition”).

²¹⁹ See *Kennecott Utah Copper Corp. v. Department of Interior*, 88 F.3d 1191, 1214 (D.C. Cir. 1996) (noting that “the market value of a natural resource is almost always less than the cost of restoring it”).

²²⁰ See RESTATEMENT (SECOND) OF TORTS § 929 cmt. b (1977).

²²¹ *Ohio v. United States Dep’t of Interior*, 880 F.2d 432, 459 (D.C. Cir. 1989) (concluding that a Department of the Interior regulation limiting CERCLA recovery to the lesser of restoration or lost use value violated Congress’s “distinct preference for restoration cost as the measure of recovery in natural resource damage cases”).

²²² 33 U.S.C. § 1321(f)(4)–(5) (1994).

²²³ Cross, *supra* note 13, at 307.

²²⁴ See Portney, *supra* note 23, at 11.

Contingent valuation is expressly built into National Oceanic and Atmospheric Administration regulations for the Oil Pollution Act.²²⁵ NOAA hired Nobel laureates Kenneth Arrow and Robert Solow to chair a panel of economic experts to determine if contingent valuation was a reliable enough method to be used in NRDA's.²²⁶ The panel concluded "that CV [contingent valuation] can produce estimates reliable enough to be the starting point of a judicial process of damage assessment, including lost passive-use values."²²⁷

The NOAA regulations allow every imaginable economic value to be added to damage measures.²²⁸ "A valuation approach may be implemented with separate calculations of losses and gains. A variety of valuation procedures is available for this purpose, including the travel cost method, factor income approach, hedonic price models, models of market supply and demand, contingent valuation, and conjoint analysis."²²⁹ In 1997 the Court of Appeals for the D.C. Circuit upheld an industry challenge to NOAA contingency valuation rules.²³⁰

At this writing, DOI regulations are less formal than NOAA's; however, there is good reason to presume they may be headed toward the NOAA standards. DOI rules state that "at the discretion of the authorized official" damages will include lost "compensable value," which includes the use of contingent valuation for nonuse values when "no use values can be determined."²³¹ Some commentators have criticized the DOI standard as too lenient and are pushing for a standard more like, or stricter than, NOAA's, so that contingent valuation could become standard procedure.²³²

IV. CONCLUSION

Scholars concerned with environmental quality are coming to understand that the environment is unlikely to receive much protection when it is in the commons. If legal standing is given to "rights" such as existence value, it is easy to predict an increase in resources devoted to wrangling for the right to control of property subjected to existence value claims. When market-revealed values are rejected in favor of less meaningful measures, the results of the legal process must grow increasingly uncertain as

²²⁵ See Natural Resource Damage Assessments, 61 Fed. Reg. 440, 499 (Jan. 5, 1996).

²²⁶ Portney, *supra* note 23, at 8.

²²⁷ *Id.* Portney notes that this result pleased academic researchers because it created a new cottage industry for economic consultants.

²²⁸ See 61 Fed. Reg. at 498-99 (describing procedures that are potential approaches to scaling restoration actions).

²²⁹ *Id.*

²³⁰ General Elec. Co. v. United States Dep't of Commerce, 128 F.3d 767, 773 (D.C. Cir. 1997) ("Industry petitioner's argument [that NOAA improperly allows the use of contingent valuation] fails, however. NOAA . . . simply gave trustees discretion to use contingent valuation, so long as the technique produces, as required by section 990.27(a)(3), valid and reliable results for the particular incident.").

²³¹ 43 C.F.R. §§11.80(b), 11.83(c)(1)-(2) (1999).

²³² Robinson, *supra* note 186, at 204-13.

agencies and courts attempt to resolve conflicting claims under a hodgepodge of assertions. Incentives to invest in environmental quality are reduced, not enhanced, by such uncertainty.

Under Congressional supervision, and to help enforce various statutes, agencies are adopting tools, such as contingency valuation, that change the method of damage valuation away from the common-law standard of market value. While such moves are lauded and abetted by environmentalists who presume that such measures will enhance the quality of the environment, there is no reason to think that that will be the result. The common law and the market process give strong incentives to individuals to maximize the value of property over time, taking into account the current or future values of other parties. Vague concepts like existence value—manifested only in contingent valuation studies—treat hopes and aspirations as tangible economic values. Taking contingent valuation seriously, however, elevates the locus of decision making from consensual market transactions to the vagaries of political decision-making processes. If generally applied, this combination of aspirations divorced from obligations and of raw power politics may prove devastating to economic and personal liberty.

