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Submitted via email to OIRA_ECON_GUIDE@omb.eop.gov

May 5, 2003

Dr. John D. Graham
Administrator
Office of Information and Regulatory Affairs
Office of Management and Budget
NEOB, Room 10202
725 17th Street, NW
Washington, DC 20503

Dear Dr. Graham:

Please find enclosed the comments that we have prepared on the Office of Management and Budget's "Draft Guidelines for the Conduct of Regulatory Analysis and the Format of Accounting Statements" [Federal Register, Vol. 68, No. 22, Monday, February 3, 2003 (Notices)].

This report offers an important opportunity for government policymakers and the public to gain a better understanding of the impact of federal regulations. We appreciate the opportunity to comment on it and hope that our comments will assist the Office of Management and Budget in its efforts.

Sincerely,

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Regulatory Studies Program

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REGULATORY STUDIES PROGRAM

Public Interest Comment on

**The Office of Management and Budget's Draft Guidelines for the Conduct
of Regulatory Analysis and the Format of Accounting Statements¹**

The Regulatory Studies Program (RSP) of the Mercatus Center at George Mason University is dedicated to advancing knowledge of the impact of regulation on society. As part of its mission, RSP conducts careful and independent analyses employing contemporary economic scholarship to assess rulemaking proposals from the perspective of the public interest. Thus, this comment on the Office of Management and Budget's Draft Guidelines for the Conduct of Regulatory Analysis and the Format of Accounting Statements does not represent the views of any particular affected party or special interest group, but is designed to evaluate the effect of these proposals on overall consumer welfare.

I. Introduction

In Appendix C of its 2003 Draft Report to Congress on the Costs and Benefits of Federal Regulation, the Office of Management and Budget (OMB) presents a draft circular that will provide "guidance to federal agencies on the development of regulatory analysis as required under Executive Order No. 12866 and a variety of related authorities," as well as "guidance to agencies on the regulatory accounting statements that are required under the Regulatory Right-to-Know Act."

If finalized, these guidelines would update and replace guidelines first issued in 1988 by the Reagan Administration and later revised in 1996 and 2000 by the Clinton Administration. These comments follow the general outline of the guidelines themselves. We first address the issue of why regulatory action is needed, and then discuss the guidelines' treatment of how to evaluate alternatives and what analytical approaches to use. Section V of these comments examines in detail the circular's guidance with respect to estimating the benefits and costs of regulation, and raises serious concerns about some of the recommended techniques. Section VI briefly reviews the format for agencies'

¹ Prepared by Senior Research Fellows, Susan E. Dudley and Brian F. Mannix. This comment is one in a series of Public Interest Comments from Mercatus Center's Regulatory Studies Program and does not represent an official position of George Mason University.

annual accounting statements on the benefits and costs of regulations issued during a year, and Section VII concludes the comment with recommendations for improvement.

II. Why Regulatory Action is Needed

The circular instructs federal agencies that “before proceeding with a regulatory action, you must demonstrate that the proposed action is necessary.” (68 FR 5514) It goes on to clarify that, “this means that you should try to explain whether the action is intended to address a significant market failure or to meet some other compelling public need such as improving governmental processes or promoting distributional fairness, privacy, or personal freedom.” (68 FR 5514)

A. Market failures or other social purpose

While the draft circular is careful to say that, when correcting a significant market failure, “you should show that a government intervention is likely to do more good than harm;” it appears less demanding of “other justifications.” (68 FR 5514)

Moreover, the “other justifications” for regulation are unclear. OMB should clarify, in particular, what it means by “promoting privacy and personal freedom,” since regulation is more commonly viewed as restricting personal freedoms. If this phrase refers to specific circumstances, the guidelines should be more direct, and should also recognize explicitly that promoting freedom for one group likely restricts the freedom of another, and should provide guidance as to how to address those tradeoffs.

In the introduction to the guidance (68 FR 5513), the circular explains why analysis of proposed regulatory actions is needed. While this explanation is important, it focuses exclusively on examining benefits and costs without explicitly discussing the importance of examining whether there is any reason to believe that regulatory action will be superior to market outcomes. In the absence of a market failure—and one that is plausibly larger than the well-known and unavoidable regulatory failures—there is no reason even to undertake a benefit-cost analysis.

One reason this threshold step is important is the “Planner’s Paradox”—the tendency of planned solutions to appear superior to unplanned market solutions in any forecasting model or benefit-cost analysis. This is because both the plan (the proposed regulation) and the supporting analysis are prepared with the same set of data, assumptions, biases, and understandings of the way the world works. Indeed, the planned solution is generally designed to “fix” the problems identified in the analysis; therefore the analysis will necessarily make the plan look better than the alternative. All of the problems with the planned solution—the data, assumptions, biases, and understandings that turn out to be wrong—are invisible to the analyst.

An example of the Planner's Paradox is the analysis of appliance efficiency standards issued by the Energy Department.² DOE calculates what the "optimum" appliance looks like, and compares it to what consumers actually buy. It attributes the difference, not to errors on the part of the analyst, but to errors on the part of the consumer! Even without any market failure, the benefit-cost analysis appears to demonstrate that DOE knows what is best for the consumer. The underlying reason is that, simply by undertaking a benefit-cost analysis, the Department *assumes* that it knows what is best. In fact, however, the government is simply substituting its own preferences for consumers' preferences. We know that this should produce negative net benefits (because consumers are the best judges of their own welfare), but the analysis shows otherwise because it is so difficult for an agency to separate the analysis from its own policy choices.³

The Planner's Paradox is related to the Winner's Curse, a well-known affliction of offshore oil leases and other auctions. Given a limited data set and wide uncertainty about the value of a particular oil lease, the highest bidder is likely to be one that has been overly optimistic and has erred on the high side in estimating its value. Since oil leases are awarded to the highest bidder, the winner is likely to lose money on the lease; hence, the winner's curse. But markets correct for this problem. Sophisticated bidders learn to discount their own analysis and correct for the effect of the winner's curse (and unsophisticated bidders eventually disappear). In government regulation, however, no such correction ever takes place. Agencies continue to fall into the Planner's Paradox and make overly optimistic assumptions about their own ability to forecast the future.

For this reason OMB's guidance needs to stress the comparative analysis of market failure and regulatory failure, and not simply rely on the results of benefit-cost analysis to justify regulatory interventions. And OMB, in its general guidance and in its review of regulatory analyses, should make efforts to penetrate false assurances that are inherent in the planner's analysis of his own plan.

B. Inadequate or asymmetric information

The draft guidelines provide a careful discussion of possible "market failures" that could justify regulatory intervention in private decisions. The discussion of inadequate or asymmetric information, however, should include more caveats about the dangers of regulating based on "inadequate information." Information is never perfect or symmetrical, and the draft does recognize this.⁴ However, previous guidelines were more

² The phrase, "Planner's Paradox," was coined by one of us, Brian Mannix, at OIRA when reviewing an early analysis of DOE's appliance efficiency standards in the early 1980's.

³ Also see the Mercatus Center's Public Interest Comments on appliance efficiency standards (clothes washers and air conditioners, 2000) and CAFE standards (2003), available at www.Mercatus.org and www.RegRadar.org.

⁴ For a good discussion of the optimal level of information in product markets, see Beales, Craswell, and Salop, "The Efficient Regulation of Consumer Information," *Journal of Law and Economics*, vol. XXIV (December 1981). (In particular, see pages 503, 533-534.)

explicit in observing that “attempts to regulate information are as likely to make things worse as to make them better.”⁵ Why does this draft reduce this emphasis?

The draft circular also states:

In the case of uncertain information about low-probability high-consequence events, markets may underreact or overreact depending on the rules-of-thumb and other mental assumptions that people use to cope with difficult issues. Regulators should be aware of such mental quirks and not adopt policies based on a misunderstanding of the underlying reality.

OMB should provide support for this statement. There is academic literature that supports the notion that individuals sometimes behave in ways that an observer might call “irrational.”⁶ Surveys of stated preferences, or rankings of risk priorities, for example, often do not reflect expert evaluations of risks, and furthermore are internally inconsistent. However, it is not clear that *markets* underreact or overreact, as the draft paragraph suggests. Rather, markets tend to correct for irrational individual behavior. Indeed, what may appear to be irrational may actually reflect a difference in individual tastes and preferences or tolerance for risk. For example, if one potential home buyer is concerned about a low-probability high-consequence event like another terrorist attack in Washington, DC, she may choose not to purchase a home in the city. Other buyers may make a different choice. If enough buyers are concerned, the price of homes in Washington may decline, while the price of homes in more remote suburbs may increase. Because this market outcome is based upon the collective wisdom of all potential buyers and sellers with varying preferences, it is not realistic to assume that regulators have better information as to buyer and seller preferences and demands. In contrast to markets, regulators tend to exaggerate people’s misconceptions about risks.⁷

It is well established that markets can aggregate information and individual judgments to produce an outcome that is superior to what any individual could arrive at; in contrast, regulated solutions choose a few people to make a decision and impose their judgment on everyone else, under penalty of law. Such regulated solutions prevent people from exercise their own judgments to satisfy individual tastes. If individuals are subject to “mental quirks” and “misunderstanding of the underlying reality,” that argues strongly for rejecting a regulatory intervention in favor of a market solution. Too often, federal

⁵ Regulatory Impact Analysis Guidelines, 1988. Available in annual *Regulatory Program of the United States Government*, various years.

⁶ For example, see Kip Viscusi. “Alarmist Decisions with Divergent Risk Information,” *The Economic Journal*, 107 (November 1997) 1657-1670 and Daniel Kahneman, Ilana Ritov, and David Schkade, “Economic Preferences or Attitude Expressions?: An Analysis of Dollar Responses to Public Issues,” in *Journal of Risk and Uncertainty*, 19:1-3; 203-235 (1999).

⁷ U.S. Environmental Protection Agency. *Unfinished Business: A Comparative Assessment of Environmental Problems*. February 1987. EPA ranked its regulated activities according to the risks they posed to human health and the environment. It found that the activities that commanded the largest share of federal resources and public dollars were not the ones that posed the greatest risk. On the other hand, it turned out that the allocation of resources tracked public perception of risks very well.

regulators simply assume they know more than everyone else, and try to pass off that assumption as an “information asymmetry.”

C. Regulation at the federal level

The draft circular requires agencies to show that regulation at the federal level is the best way to solve a problem, but does not provide clear enough guidelines. The circular should make clear that regulation at the federal level is appropriate where (1) rights of national citizenship or (2) considerations of interstate commerce are involved. It should state clearly that “because demands among localities for different governmental services differ and because competition among governmental units for taxpayers and citizens may encourage efficient regulation, the smallest unit of government capable of correcting the market failure should be chosen.”⁸

Judgments about when the federal interest justifies preemption of state and local authority are generally made in Congress. Absent a clear statement by Congress, however, OMB should be very reluctant to permit a regulatory agency to use a federal administrative proceeding to preempt the prerogatives of the states.

The circular also suggests that

The role of federal regulation in facilitating U.S. participation in global markets should also be considered. Harmonization of U.S. and international rules may require a strong Federal regulatory role. Concerns that new U.S. rules could act as non-tariff barriers to imported goods should be evaluated carefully. (68 FR 5515)

The last sentence in the quote above is correct; agencies, and OMB, should evaluate carefully whether proposed rules would constitute a non-tariff trade barrier. This evaluation should not simply focus on fairness to foreign producers and the effect on U.S. trade policy, however; the primary consideration should be on the potential harm to U.S. consumers.

In both cases—proposed rules that erect potential barriers to trade, and those that claim to promote trade through “harmonization”—there is a danger that the underlying motivation for the regulation is anti-competitive. Agencies and OMB should examine such proposals in the same skeptical light that it applies to economic regulation.⁹

In general, harmonization is a weak justification for mandatory rules. If harmonization is worth achieving, it can often be done with voluntary standards. And even harmonized legal standards need not be federal; the Uniform Commercial Code is a venerable example of harmonized state laws. Furthermore, harmonization is not necessarily beneficial to the United States. Harmonizing to the wrong standards can hurt consumers.

⁸ Regulatory Impact Analysis Guidelines (1988).

⁹ See next section.

For example, would the new guidelines endorse restrictions on promising new therapeutic or agricultural products in order to “harmonize” with European Union members who resist modern biotechnology methods? U.S. foreign policy ought to stress our objective of exporting freedom, not importing government regulations—particularly regulations that lack an economic rationale apart from “everybody does it.”

D. Presumption against economic regulation

The circular correctly requires a “particularly demanding burden of proof” to support “economic regulation” – those that regulate the price, quantity or quality of a product, or entry and exit in an industry. Long experience has established that economic regulation, usually justified as a remedy for natural monopoly and as a protection for consumers, in practice does more to suppress competition and to harm consumers.

The guidelines could go further and point out that economic regulation sometimes masquerades as environmental, health, and safety regulation. Statutes that require registration or pre-market approval for products may serve a health and safety purpose, but they also can be abused to create market power. For example, the EPA’s recent announcement that manufacturers of chromated copper arsenate wood preservatives have agreed to cancel this product’s registration under FIFRA should raise questions about motivation.¹⁰ What was the status of patent protection on this product? What alternatives are available? Are they patented, and, if so, to whom do the patents belong? This kind of competitive analysis should be included in a benefit-cost analysis of regulations, even when they do not appear to be economic regulations.

III. Alternative Approaches to Consider

The guidance correctly directs agencies to evaluate alternative means of achieving regulatory goals, and it lists types of actions to be considered. This is a key element of sound rulemaking, and a genuine evaluation of practical alternatives is often lacking in agency analyses. Beyond estimating costs and benefits for different degrees of stringency, regulations are rarely supported by a thoughtful review of alternatives such as different requirements for different geographic regions, provision of information rather than mandates, or market-oriented solutions.

For example, the Forest Service in its 2000 rules aimed at conserving roadless forest areas, failed to consider alternatives that would have met conservation goals with lower environmental risks and economic costs. One such alternative would be to prohibit permanent roads but allow low-impact temporary roads needed for forest health or ecosystem restoration. Such roads could be closed when no longer needed, thus minimizing economic and environmental costs.¹¹

¹⁰ See Mercatus Center Public Interest Comment on the Consumer Product Safety Commission’s proposal at <http://www.mercatus.org/article.php/224.html> (2003).

¹¹ See Mercatus Center Public Interest Comment on Forest Service Roadless Area Proposal. Available at <http://www.mercatus.org/article.php/91.html> (2000).

The aggregate cost-effectiveness analysis supporting EPA's Tier 2 vehicle and gasoline rule issued in 1999 hid important information on the cost-effectiveness of individual components of the proposal. Our analysis of the cost-effectiveness of different components of the rule reveal that more targeted approaches to meeting the ozone NAAQS would be superior to EPA's approach.¹² The menu of alternatives for analysis should always include such unbundled options and a "marginal analysis" of the important policy parameters, so that bad decisions do not get bundled with good ones.

IV. Analytical Approaches

The draft circular directs agencies to support major rulemakings with both benefit-cost analysis (BCA) and cost-effectiveness analysis (CEA) wherever possible. For major rulemakings for which the primary benefits are improved public health and safety, it places a priority on a CEA, while encouraging a BCA as well, "to the extent that valid monetary values can be assigned to the expected health and safety outcomes." (68 FR 5516) For all other rulemakings it emphasizes a BCA.

While CEA can help sort among alternatives, it cannot be used to justify a regulation in the first place. Indeed, by admitting that the government cannot place a value on the regulation's objective (lives, wetlands, etc.), the use of CEA should be a signal that relying on the market may be superior to the various regulated alternatives. Markets do not have trouble making such tradeoffs. Instead of choosing among a list of second-best alternatives, an agency should look for ways to rely on property rights, freedom, and individual choice. When citizens can make their own decisions, the government avoids the problem of choosing what values to impose on them.

The circular recognizes that measuring incremental benefits and costs of different regulatory actions (with a BCA) can help choose the right level of regulation to maximize societal net benefits and that CEA is more suitable to comparing regulatory actions with the same primary outcome (e.g., life-years saved or acres of wetlands protected). It warns, correctly, however that CEA can be misleading when the "effectiveness" measure does not weight appropriately the consequences of each of the alternatives." (68 FR 5516) For example, as we commented on EPA's Tier 2 vehicle emissions and low-sulfur gasoline rules, the use of tons of pollutants in the denominator of EPA's cost-effectiveness calculation was inappropriate, because tons of NO_x and NMHC removed was not a good proxy for the risk of concern (health risks from human exposure to high ozone concentrations in non-attainment areas during peak ozone periods).¹³

It notes that "it is difficult for OMB to draw meaningful cost-effectiveness comparisons between rulemakings that employ different cost-effectiveness measurements," and directs agencies to "provide OMB with the underlying data, including mortality and morbidity data, the age distribution of the affected population, and the severity and duration of

¹² See The Mercatus Center's Public Interest Comments EPA's Tier 2 Standards for Vehicle Emissions and Gasoline Sulfur Content. Available at <http://www.mercatus.org/article.php/113.html> (1999).

¹³ *Ibid.*

disease conditions or trauma.” (68 FR 5517) Agencies should not only provide this information to OMB, but should make it readily available as part of the electronic rulemaking docket, so that the public can also evaluate the proposal and the analysis supporting it.

The guidelines state that “regulatory analysis should provide a separate description of distributional effects (i.e., how both benefits and costs are distributed among sub-populations of particular concern) so that decisionmakers can properly consider them along with the effects on economic efficiency.” (68 FR 5517) Basing regulatory decisions on averages can mislead policy makers. For example, the Department of Energy bases energy efficiency standards on a benefit-cost analysis of “average” consumers. Its analysis supporting its 2001 air conditioner and heat pump standards estimated that the average consumer would save \$45 over the life of the more efficient air conditioning or heat pump unit. A review of the distributional impacts of the rule reveals however, that most consumers would lose money once the standard was imposed. Low-income consumers would be harmed the most, particularly those in climates where heat pumps or air conditioners are not intensively used throughout the year.¹⁴

V. Identifying and Measuring Benefits and Costs

The guidelines discuss in detail the recommended analytical approaches for preparing benefit and costs estimates, as required by Executive Order 12866 and by statute. In general, these reflect accepted principles and analytical techniques. Agency adherence to most aspects of these guidelines would significantly improve the quality of regulation and the net benefits provided by regulatory activity. In this section, we briefly review the recommendations that are generally accepted (but not always followed in regulatory analyses) and then focus more detailed discussion on a few areas that are more controversial.

A. In most areas, the guidelines express generally accepted principles for regulatory analysis

Setting the appropriate baseline from which to examine incremental costs of alternative approaches is important. In our comments on EPA’s arsenic in drinking water regulations, we showed that an incremental approach to examining the costs and benefits of different levels of stringency suggested a very different policy approach than the one that emerged from EPA’s total cost approach. (EPA estimated the net benefit of each standard from the current baseline, but not from the next less stringent option, and thus missed the insight that intermediate level standards produced significantly greater incremental net benefits than the selected option.)¹⁵

¹⁴ See the Mercatus Center’s Public Interest Comments on energy efficiency standards for air conditioners at <http://www.mercatus.org/article.php/81.html> (2000) and <http://www.mercatus.org/article.php/68.html> (2001).

¹⁵ See The Mercatus Center’s Public Interest Comments on arsenic in drinking water standards at: <http://www.mercatus.org/article.php/87.html>.

We are encouraged by the recommendation that analyses should “include separate schedules of the monetized benefits and costs that show the type and timing of benefits and costs and express the estimates in this table in constant, undiscounted dollars.” (68 FR 5518) Without such schedules of cash flows, it is often impossible to evaluate estimates of total costs or benefits. EPA’s prospective study of the costs and benefits of clean air regulations, for example, which dominate OMB’s estimate of the costs and benefits of all federal regulation, are based on snapshots of costs and benefits in two years.¹⁶

The recommendation that agencies evaluate uncertainty with full probability distributions of potential consequences and a transparent discussion of scientific disagreement or uncertainty is also sound. Every step in a benefit-cost analysis involves uncertainty, and there is a tendency to choose a number that the agency believes is favorable to its policy choice. These biases tend to compound and amplify each other, producing an answer that may be absurdly far off in the tail of probability distribution. Every effort should be made to make the analysis transparent, including all of its uncertainties, and to use established scientific techniques to manage error distributions and to avoid biases.

The guidelines correctly recognize that “opportunity costs” are the appropriate concept for valuing both benefits and costs, and that individual willingness to pay captures this notion. Not only do “market prices provide the richest data for estimating benefits” (68 FR 5518), but also the most reliable. The Department of Transportation does careful, detailed benefit cost analysis for regulations such as passenger safety and CAFE. However, because it substitutes its own values for consumer values with respect to time preference or safety features, these analyses often support regulations that make consumers worse off. An honest benefit-cost analysis cannot just set aside individual preferences, such as the discount rate; nor can it ignore them, as DOT’s analysis does with other vehicle attributes that consumers value.¹⁷

The guidelines recognize that it is not always possible to conduct an original study to estimate non-market benefits attributable to regulatory activity. With caveats, they endorse “benefits transfer methods” that apply existing estimates to a new context. With the exception of contingent valuation studies, which we discuss in detail below, we believe these approaches, subjected to the constraints and qualifications described in the guidelines, are reasonable.

The circular discusses discusses the difficulty of valuing the benefits of measures that reduce mortality. It seems to ask the wrong question, though, when it notes “For example, the elderly may have substantial willingness to pay for reductions in their

¹⁶ U.S. Environmental Protection Agency. The Benefits and Costs of the Clean Air Act, 1990 to 2010, November 1999. See 2003 Mercatus Center working paper on the costs of the Clean Air Act by Garry Vaughn, PhD.

¹⁷ See The Mercatus Center’s Public Interest Comments on DOT air bag proposals at <http://www.mercatus.org/article.php/120.html>, and on DOT light truck CAFE standards at <http://www.mercatus.org/article.php/208.html>.

mortality risk precisely because they have relatively few life years remaining.” The more appropriate question is whether one would prefer to die at 30 or 75, and whether we as a society are indifferent between saving 50 years of life or 5.

OMB can make huge improvements in the practice of regulatory analysis by replacing the “lives saved” measure of benefits with a “life-years” metric. In addition to the technical advantages that are described in the literature, the change should make the practice of benefit-cost analysis more transparent to the general public. Most people can understand longevity as a suitable measure of health benefit, and can appreciate that longevity can be affected by regulatory costs as well as benefits, and by mechanisms both intended and unintended. Note that using life-years will also make it easier for the public to understand how discount rates apply to health and safety programs. With life-years as the measure of benefits, there is no need to discount. Instead, the costs of the program can simply be amortized over the life-years saved. Most people understand the notion of amortizing costs, and understand that it includes a provision for interest—the cost of financing long-term investments. The result is mathematically identical to discounting, but it is far easier for non-economists to understand. A similar methodology can be used to simplify the adjustment for the shadow price of capital. Two different interest rates can be used: a lower rate (the social rate of time preference or SRTP) to amortize costs that represent foregone consumption, and a higher rate (the SRTP times the shadow price of capital) to amortize costs that represent foregone capital investment. Again, this is mathematically identical to the standard method described in Lind,¹⁸ but it is far easier to explain to a lay person.

While the “life-years” metric has advantages over the “lives-saved” metric, it would be a mistake to try to use *quality adjusted* life-years (QALYs). In the context of making public decisions about regulations, it will be difficult to persuade the public that it should accept age-based or health-based “quality adjustments.” Rather, it should encourage agencies to use simple longevity as the measure of benefit through the use of the life-years metric.

B. The guidelines venture into some controversial areas and recommend procedures that are not consistent with economic principles or human behavior.

1. Contingent Valuation

When market data are unavailable, the guidelines cautiously endorse the use of the controversial benefit-valuation technique known as contingent valuation (CV). While observing that CV methods “have become increasingly common for estimating indirectly traded benefits,” the guidelines note that “the reliance of these methods on stated preferences regarding hypothetical scenarios and the complexities of the goods being valued by this technique raise issues about its accuracy in estimating willingness to pay

¹⁸ *Discounting for Time and Risk in Energy Policy*, Robert C. Lind, ed. Baltimore: Johns Hopkins University Press. 1982. A review of the Lind approach is provided in the next section.

compared to methods based on (indirect) revealed preferences.” Despite concerns about its accuracy, the guidelines conclude that CV may be the only method available to estimate “non-use” values, and do not dismiss CV as a tool. Instead, they state that “value estimates derived from contingent-valuation studies require greater analytical care than studies based on observable behavior,” and proceeds to enumerate “best practices” for conducting CV. The best practices for conducting CV surveys address sampling, survey instrument design, transparency and replicability of results.

Relying on a technique because it is the only thing available is a weak endorsement, at best. All of the best practices, and all of the care in the world, will not redeem a technique that is fundamentally flawed. Before addressing issues the CV method itself, it is worthwhile to consider the nature of “non-use” values that it is purported to quantify. What are non-use values and how do they relate to values people assign to goods through markets?

Non-use values derive from the mere existence of something, like the Grand Canyon, the Costa Rican rain forest or the Alaskan wilderness. Some economists view non-use values as a form of externality that must be addressed by government action,¹⁹ and the guidelines implicitly seems to accept this notion. The guidelines’ suggestion that CV be used, despite its flaws, because there is no other method for valuing non-use values presumes that non-use values should be included in government decisions. Though generally discussed in the context of environmental amenities, non-use values exist for innumerable things. Some individuals may gain non-use values from the knowledge that the Alaskan wilderness is untouched by oil drilling, while others may gain non-use values from the knowledge that oil wells exist to provide jobs for Alaskan workers and national security. Some individuals may assign non-use values to knowing people attend church regularly, while others may gain non-use values from knowing others engage in hedonistic behavior. On whose values should government reallocation of resources be based?

Some economists suggest that the concept of non-use or existence value is inconsistent with generally accepted economic principles.²⁰ Weikard distinguishes existence and bequest values from option values, which he considers a form of use value, and based on altruism,²¹ and attempts a theoretical proof to show that individuals would not be willing to sacrifice use values to receive non-use values.

¹⁹ University of Southern California’s “National Ocean Economics Project” provides information and links to research on non-market values of environmental amenities. <http://ahf331b.usc.edu/nonmarket.html>. Last accessed 4/4/03.

²⁰ Hans-Peter Weikard, “The Existence Value Does Not Exist and Non-use Values are Useless.” Paper prepared for the annual meeting of the European Public Choice Society, 2002. <http://polis.unipmn.it/epcs/papers/weikard.pdf>. Last accessed 4/4/03.

²¹ This classification of option values as use values is consistent with other authors, including the U.K. Department for Transport, Local Government and the Regions *Economic Valuation with Stated Preference Techniques: Summary Guide*. <http://www.dtlr.gov.uk/about/economics/05.htm>. Last accessed 4/4/03.

Boudreaux, Meiners & Zywicki raise related concerns, though they do not deny the existence of non-use values.

“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.” (p. 793)

They also question the magnitude of existence values, questioning whether, if forced to actually pay for it, people would be willing to give up a significant amount of private economic goods in exchange for pure existence value.²²

They show that the practical problems of CV cannot be resolved with better surveys because the technique itself is conceptually flawed.

The questionable results [recognized by OMB and others] 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. (p. 776)

Values emerge, not as conscious, intentional decisions, but as the unintended and undesigned results of decentralized market activity. People do not have a single value for an environmental amenity, but rather schedules of different dollar figures dependent upon a nearly infinite variety of variables. As a result, Boudreaux *et al* conclude that stated market values are not acceptable surrogates for market prices.

Kahneman, Ritov, and Schkade have also examined CV methods and results to understand what stated preferences actually express.²³ They find that willingness to pay

²² On this point, they defer to Adam Smith, who illustrated the concept two centuries ago with a hypothetical earthquake in China that killed millions. While a European would express sincere regrets about the plight of the dead, his concern would pale in comparison to a comparatively trivial misfortune of his own. Adam Smith, *The Theory of Moral Sentiments*, referenced in Boudreaux *et al.* (p. 774) This discussion is similar to that of Schelling (below) in the context of discounting deep-future benefits from reducing climate change.

²³ Daniel Kahneman, Ilana Ritov, and David Schkade, “Economic Preferences or Attitude Expressions?: An Analysis of Dollar Responses to Public Issues,” in *Journal of Risk and Uncertainty*, 19:1-3; 203-235 (1999).

estimates derived from CV studies, though denominated in dollars, “are better viewed as expressions of attitudes than as indications of economic preferences,” and that “the anomalies of CV are inevitable manifestations of known characteristics of attitudes and attitude expressions.” (p. 204) They find that stated preferences derived from CV studies are analogous to juries’ punitive damage awards, and are not consistent with economists’ rational models.

Both jury awards and CV results seem to reveal a prescriptive notion of what should be, divorced from actual behavior or revealed preferences. But how much weight should these prescriptive notions carry in designing government policy?

Boudreaux *et. al.* point out,

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. 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... Divorced from the discipline of making actual choices, the hypothetical choices presented by contingent valuation have little value. (p. 785)

Kahneman *et al* and Boudreaux *et al*, through very different paths, reach the conclusion that stated preferences divorced from any expectation of actually having to pay the stated values, are not accurate proxies for revealed economic preferences. The similarities Kahneman *et al* find between jurors and CV respondents suggests that, like jurors determining civil damage awards, CV respondents view the values they assign as imposing costs on someone other than themselves. They know they will never have to pay the values they profess to place on different amenities. Thus, these responses do not comply with the key concept of opportunity cost articulated in the guidelines – they do not “measure what individuals are willing to forgo to enjoy a particular benefit.” Indeed, it strikes us as unrealistic to think that individuals would give up more than a small amount of income or other use value in exchange for a non-use value. It is equally unrealistic to assume that it is in society’s interests to pursue government policies that would divert society’s scarce resources based on these subjective, stated preferences.

If we begin to sacrifice the values that we know are real in favor of values that may be imaginary and that have no bounds, it is difficult to know where to stop. Encouraging government regulators to protect subjective non-use values (whether they relate to the environment, religious beliefs, or individual behavior) runs a serious risk of undermining the freedoms and productivity that makes America unique.

2. What discount rate to use

The guidelines advise regulatory analysts to estimate the present value of benefit and cost streams of alternative regulatory (and non-regulatory) options using real discount rates of 3 and 7 percent. It states that a 7 percent rate “approximates the opportunity cost of

capital and is the appropriate discount rate whenever the main effect of a regulation is to displace or alter the use of capital in the private sector.” However, “when regulation primarily affects private consumption (e.g., through higher consumer prices for goods and services), a lower discount rate may be appropriate.” Thus, a “social rate of time preference” of 3 percent adjusts for economic distortions, including taxes on capital, that create a divergence between this social rate and the private rate of return to capital. It further notes that “in some instances, if there is reason to expect that the regulation will cause resources to be reallocated away from private investment in the corporate sector, then the opportunity cost may be appreciably greater than the 3 to 7 percent discount rate,” and in those cases encourages sensitivity analysis using higher rates (in the range of 10 to 25 percent).

This guidance appears to be a simplified version the discounting approach described in a 1982 book based on a conference organized by Resources for the Future (RFF) and edited by Robert Lind.²⁴ Economists have believed since the publication of the Lind book that the right way to evaluate a government investment or regulation is to account separately for time, for risk, and for the effects of taxation. A relatively low, risk-free discount rate, along the lines of OMB’s 3 percent, for example, accounts for the time value of deferred consumption. A separate calculation of expected values is the best way to account for risk and uncertainty about future benefits and costs. And benefits and costs that increase or decrease private capital should be weighted by, say, a factor of 2 or 3 (although there is room for argument here), to reflect the fact that a dollar of capital in our economy is more valuable than a dollar of consumption. (This last adjustment factor is called the “shadow price of capital,” and it is largely the result of a tax system that penalizes savings, thus making capital more scarce and ultimately more valuable than consumption.) This three-step procedure resolved the thorniest theoretical issues and helped to explain the difference between market rates of interest and the lower rates generally used in benefit-cost analysis.

While the guidelines refer to the Lind approach (which is laid out in OMB Circular A-94), they advise regulatory analysts simply to discount future benefits and costs at 3 percent and 7 percent, with sensitivity analysis using higher rates if private capital is displaced.

It also finds that

Special ethical considerations arise when comparing benefits and costs across generations. Although most people demonstrate in their own consumption behavior a preference for consumption now rather than in the future, it may not be appropriate for society to demonstrate a similar preference when deciding between the well-being of current and future generations. Future citizens who are affected by such choices cannot take part in making them, and today’s society must act in their interest. One

²⁴ *Discounting for Time and Risk in Energy Policy*, Robert C. Lind, ed. Baltimore: Johns Hopkins University Press (1982).

way to do this would be to follow the same discounting techniques described above, but to supplement the analysis with an explicit discussion of the intergenerational concerns and how they will be affected by the regulatory decision. Policymakers would be provided with additional information when the analysis covers many generations, but without changing the general approach to discounting.

Some have argued, however, that it is ethically impermissible to discount the utility of future generations. On this view, government should treat all generations equally. Even under this approach, it would still be correct to discount future costs and consumption benefits, although perhaps at a lower rate than for intragenerational analysis. There are two reasons for thinking that a nonzero discount rate is the appropriate assumption for intergenerational analysis, even when all generations are to be treated equally. First, future generations are likely to be wealthier than those currently living, so a marginal dollar of benefits or costs will be worth less to them than it would be to those alive today, at least on average. If that holds true, it is appropriate to discount future benefits and costs relative to currently consumed benefits and costs even if the welfare of future generations is not being discounted. Estimates of the discount rate appropriate in this case made in the 1990s ranged from 1 to 3 percent per annum.²⁵

A second reason for discounting the benefits and costs accruing to future generations at a lower rate is increased uncertainty about the appropriate value of the discount rate, the longer the horizon for the analysis. Aversion to uncertainty discourages any such long-term investments. Private market rates provide a reliable reference for determining how society values time within a generation, but for extremely long time periods no comparable private rates exist. Symmetric uncertainty would have the effect of lowering the discount factor applied to future costs and benefits. Again the reasonable range might be expanded to include rates as low as 1 percent per annum.

OMB does not explore all the implications of using a lower discount rate for future generations. For example, it will never make sense to adopt a regulation that incurs short-term costs for long-term benefits. The alternative of waiting a year will always be superior, because the costs will shrink more than the benefits will.

The guidelines refer to a more recent RFF conference volume as justification for annual discount rates as low as 1 percent. Yet, a careful review of the papers in this volume does

²⁵ Here, the circular refers to a recent symposium volume published by Resources for the Future. Paul R. Portney and John P. Weyant (eds.), *Discounting and Intergenerational Equity*, Washington, D.C.: Resources for the Future (1999).

not offer clear support for a low intergenerational discount rate. Indeed, as many of the papers in the volume offer evidence that a low rate would be *inappropriate*.

The economists who contributed to the volume divide roughly into two camps, which have been called “descriptive” and “prescriptive.” The descriptive camp argues for estimating the discount rate using economic theory combined with empirical data derived from behavior that reveals the value people place on the future. The prescriptive camp argues that, at least in the case of “intergenerational” time horizons (greater than 40 years), we should derive the discount rate from ethical principles. They are concerned that discounting purely for the passage of time may be morally wrong.

Among those in the prescriptive camp is Nobel Laureate, Kenneth Arrow,²⁶ who admits to taking “the problem of discounting for projects with payoffs in the far future (climate change, nuclear waste disposal) to be largely ethical.” (p. 13) He tries to resolve an “apparent conflict in our moral intuitions.”

On the one hand, moral considerations are based on universalizability, in which case we should treat future generations as we would ourselves, so that the pure rate of pure time preference should be zero. But with zero time preference and a long horizon, the savings rates become inordinately high, possibly approaching one as the horizon goes to infinity. (p. 13)

He models “agent-relative ethics” in which “each generation will maximize a weighted sum of its own utility and the sum of utilities of all future generations, with less weight on the latter. At the very least, really distant generations are treated all alike.” P.16. Despite his ethical approach to the problem, he concludes that ethical considerations do not support discounting deep future payoffs at a lower rate. (p. 20)

William Nordhaus also appears sympathetic to the ethical concerns alluded to by others in the volume, and he expresses them clearly.²⁷ “While the economic logic of using the market price for the discount rate is powerful, there are cases where the implications of that technique are questionable or unacceptable,” (p. 147) because they “violate ethical intuition.” (p. 149) To reconcile this conflict he examines different abatement strategies for climate change using a model that integrates the costs and benefits of carbon reductions with a scientific model of emissions, concentrations and climate change. He compares an “optimal” climate change approach (in which marginal costs and benefits of emissions are balanced, with approaches driven by differential discounting and concludes:

The dilemma of how much we should pay to slow global warming is in no way informed by the use of unrealistically low overall discount rates, or differential discount rates for environmental projects—both of which hide

²⁶ Kenneth J. Arrow “Discounting, Morality, and Gaming” in Portney & Weyant (1999).

²⁷ William D. Nordhaus, “Discounting and Public Policies that Affect the Distant Future” in Portney & Weyant (1999).

the underlying trade-off between the long-term objective and the economic cost. (p. 157) ... The main conclusion is that *ad hoc* manipulation of a discount rate on goods to achieve long-term goals is a very poor substitute for policies that focus directly on the ultimate objective. (p. 158)

Alan Manne attempts in a descriptive way to address the ethical dilemma of how to treat unrepresented future generations equitably by examining behavior under two different models.²⁸ He notes that future generations are likely to be wealthier in terms of labor productivity and conventional forms of capital, but poorer in terms of environmental resources. (p. 111) The infinite-lived agent (ILA) model and the overlapping generations (OG) model require different assumptions about altruism between generations (with the ILA model assuming an immortal agent who values future consumption as if it were his own, and the OG model assuming an agent with no bequest motives). Despite the “polar-opposite viewpoints on intergenerational altruism,” his two models yield almost equivalent discount rates reflecting the marginal productivity of capital. He notes that “abatement represents a specific form of capital accumulation, and that [there are] appropriate markets for realizing the distant-future benefits from this type of activity.” (p. 121)

Provided that the consumption discount rate is standardized between the two formulations, both the OLG and ILS results are driven by the same considerations with respect to economic efficiency. The global externalities are internalized as though the production side of the economy employed both present and future prices as a guide for decisions on investment and abatement expenditures so as to maximize the economic discounted value of green output that is available for consumption. The economic efficiency conditions are identical for both OLG and ILA, and equity issues may be separated from those relating to efficiency. (p. 120)

There are two papers that do conclude that very low rates are appropriate to protect intergenerational equity when evaluating long-term projects (and thus may be viewed as supporting OMB’s proposal).

Dasgupta, Maler and Barrett²⁹ develop a model with a choice set that includes not only productive capital but “natural capital.” Using this 2-choice model, they identify situations when it would be optimal for society to halt growth in productive capital stock (which depletes natural capital) to allow regeneration of natural capital. This implies a discount rate of zero or negative.

²⁸ Alan S. Manne, “Equity, Efficiency, and Discounting” in Portney & Weyant (1999).

²⁹ Partha Dasgupta, Karl-Goran Maler, and Scott Barrett, “Intergenerational Equity, Social Discount Rates, and Global Warming,” in Portney & Weyant 1999. See also positive comments on this paper by V. Kerry Smith in the same volume.

There are obvious problems with this model. First, the naïve assumption that productive capital depletes natural capital is clearly wrong. Improvements in farming techniques, fertilizer, pesticides and biotechnology have all greatly improved our ability to produce more food on less land. Without this “productive capital,” a significantly larger amount of “natural capital”—water and land—would have to have been diverted to food production. The unrealistic Malthusian simplicity of the model also does not appreciate the ability of human ingenuity to restore natural capital (or the social benefits produced by natural capital).

If OMB’s intent is that federal regulatory agencies should suppress economic growth in order to give nature more breathing room, then it ought to be explicit about that objective. Does OMB believe, for example, that tax cuts should be avoided because they might stimulate unwanted economic growth? It is difficult to take this rationale seriously.

William R. Cline combines prescriptive and descriptive approaches in his paper.³⁰ He contends there are two reasons for discounting (which are embodied in the social rate of time preference): (1) a pure rate of time preference or “impatience” and (2) the expectation that people will be better off in the future (the elasticity of marginal utility multiplied by the growth rate of per capita income). He asserts that it is “ethically indefensible to discount future consumption solely because of impatience.” (p. 132) Assuming a growth rate of consumption of 1 percent per year, and an elasticity of marginal utility of “in the range of one to two,” he advocates a discount rate of 1.5 percent. (p. 133)

All of these attempts to give an ethical interpretation to discounting are reminiscent of the literature of the early twentieth century.³¹ Early authors tended to view an individual’s discount rate as a measure of his character. What Cline calls “impatience” Fisher called a “defective telescopic faculty.” Fisher argues that family fortunes tend to rise and fall across generations because those who inherit wealth have weak characters and high discount rates, and tend to dissipate their fortunes; in the next generation hardship will build character, lower discount rates, and rebuild fortunes. Others looked for a correspondence between discount rates and social class or race.

This whole line of inquiry is misguided. Discount rates are simply prices, determined by supply and demand conditions. Prominent among these is the technology for shifting consumption forward and backward in time. Even a solitary Robinson Crusoe (for whom ethical considerations are presumably limited) may have a negative discount rate (say, if rats are eating his stock of corn at 10 percent per year) or a positive one (if he learns to plant the corn). As is the case with other market prices, people who can trade with each other at a market rate of interest will make each other better off; substituting a non-market price will necessarily make some of them worse off. How is that ethically superior?

³⁰ William R. Cline, “Discounting for the Very Long Term” in Portney & Weyant (1999).

³¹ See, for example, Irving Fisher’s *Theory of Interest* (1930).

Perhaps the most compelling paper in the volume to debunk the ethical arguments for a low intergenerational discount rate is that of Thomas C. Schelling, who interestingly (1) focuses almost exclusively on ethics, and (2) does not directly address the discounting question.³² He addresses concerns about future climate change, which is the main impetus behind intergenerational discount rate discussions. He observes first that the beneficiaries of deep future benefits (e.g., from climate change) will accrue to descendants of people in now-developing countries. He further submits that beneficiaries 50 years from now will be much better off than their current ancestors, but probably not as well off as people in currently developed countries.³³ From these observations he concludes that “any [carbon] abatement program is essentially a foreign aid program.” (p. 99)

By pointing out that by taking abatement actions to address climate change today we are transferring welfare from current generations to future wealthier generations, he turns on its head the ethical arguments of intergenerational equity. “The real significance of the diminishing marginal utility of consumption, that is, of discounting future increments to consumption, is in the choice between helping, with material assistance, the early generations in the developing countries [who are desperately poor] or the later generations [who we expect to be less poor].” (p. 101) Thus, his insights suggests that raising material welfare now (consumption, health, safety) meets a more urgent need, and may be the best defense against any possible adverse effects of climate change. “We must always consider, when investing in greenhouse gas abatement for the benefit of those future people, the opportunity cost of investing now in more rapid development for the benefit not only of those future people but of their equally worthy and more needy ancestors.” (p. 101)

As illustrated above, very few of the papers in the book OMB references support discount rates as low as 1 percent, as OMB recommends in its guidance. Most of the authors who expressed concern that the results of traditional discounting violate ethical intuition were unable to defend making decisions based on an arbitrarily low discount rate.

Looking hundreds of years into the future is difficult, especially because it is hard to divorce the analysis from ethical concern over unborn descendants, so let’s examine the circular’s proposed 1 percent discount rate approach by looking to the past. If we could go back in time, would we really ask our (relatively poorer) ancestors to set their money aside at a 1 percent return for our benefit? Indeed, would we even be better off if they

³² Thomas C. Schelling, “Intergenerational Discounting” in Portney & Weyant (1999).

³³ He bases these presumptions on three factors:

1. Four-fifths of the world population is in developing countries now and nine-tenths will be in 50 years.
2. Developing country economies are currently susceptible to climate, and in 50 years they probably still will be more susceptible to climate than the economies in now developed countries.
3. Despite more rapid economic growth over the next 50 years, they will probably still have lower per capita income than their contemporaries in developed countries. (p. 99)

had done so? They would have had to forsake many higher return investments to make this “investment in the future” and as a result, our standard of living would likely be lower today, even with the “inheritance” they left us invested at a one percent rate.

In comments on a paper in the volume, Jerome Rothenberg notes that abatement (of future problems, like climate change) takes two forms: prevention or adaptation. A subset of adaptation “is to make provision for a general subsidizing of those [future] generations in terms of overall productivity—in effect, a reimbursement to them for sustaining unmitigated climatic damages.” (p. 106) Thus, the opportunity cost of preventive abatement actions is the lost productivity of adaptation/reimbursement investments, which can be approximated by market rates of return on capital.³⁴

We believe it is a mistake to vest the discount rate with moral significance. It is simply a price, formed by the interaction of supply and demand and strongly influenced by the state of technology. It should reflect the opportunity cost of the investment, or the foregone benefits of other projects not undertaken as a result of a mandated government expenditure, which could have provided value for future as well as current generations.

Rates of return that are required for private investments are already much higher than those routinely accepted by government agencies, in part because of the burden of taxation. If government agencies are permitted to justify proposals that return benefits of only one percent, and do that only after decades or centuries pass, low-value government-mandated projects will displace ever greater amounts of private investment, raising the question of how the CEA can forecast long-term economic growth in excess of one percent annually, when it is so willing to displace the high-value private investment that drives economic growth.

On discount rates, OMB should reject proposals to derive “ethical” rates and should instead follow its own guidelines: “market prices provide the richest data for estimating benefits.” (68 FR 5518)

3. Treatment of Transfer Payments

The draft guidelines suggest that regulatory transfer payments (offsetting benefits and costs that net to zero, but effectively transfer wealth from one group to another) do not affect total resources available to society. (68 FR 5524) This is too simplistic. Often these wealth transfers are the political motivation for the regulation. Indeed, the guidelines are skeptical of economic regulations, whose effects are dominated by wealth transfers, because we know that the net effect of economic regulation generally is a substantial social loss.

³⁴ Rothenberg also notes that when investments come at the expense of investment and consumption, a social discount rate, rather than the private cost of capital, is appropriate (p. 107).

Because of rent-seeking, wealth redistribution by regulation is not a zero-sum game. There are real costs associated with regulations that effect large “transfers” from one group to another. At the very least, OMB should estimate the deadweight loss associated with the transfer (as it has done in previous years’ reports). In Circular A-94, OMB has estimated the “excess burden of taxation” at 25 percent of revenues. It would be surprising if transfers effected by regulation had a deadweight loss any less than that. In addition, regulations that transfer wealth are typically the product of lobbying and other rent-seeking behavior on the part of the beneficiaries. Such rent-seeking will dissipate the benefits, so that costs assumed to be transfers may in fact represent real resource costs.³⁵ OMB should investigate and report these costs.

VI. Accounting Statement

The guidelines direct agencies to prepare an accounting statement for major final rules to be used in OMB’s annual report to Congress on the costs and benefits of regulation. To the extent that agencies follow the suggested format and guidelines, the estimates provided in OMB’s annual reports will be much more reliable than they are today. As noted above in the discussion of transfer costs, we encourage the guidelines and the accounting statement to recognize that so-called transfer payments can include large dead-weight losses that should not be ignored.

VII. Conclusion and Recommendation

Issuing clear analytical guidelines, and holding agencies accountable for complying with them, is an important step toward regulatory reform. Many aspects of the draft guidelines are sound. However, the circular should be more demanding of agencies’ initial justifications of regulatory action. It should stress the comparative analysis of market failure and regulatory failure, and not simply rely on the results of benefit-cost analysis to justify regulatory interventions. This is necessary to avoid the “Planner’s Paradox”—the tendency of planned solutions to appear superior to unplanned market solutions in any forecasting model or benefit-cost analysis.

The circular’s guidance for estimating benefits and costs has some serious flaws, particularly its recommendation for the use of non-market “contingent valuation” benefits and non-market “ethical” discount rates. These recommendations cannot be defended and would undermine the care and detail embodied in the rest of the guidelines. Taken together, they amount to a license to: “Imagine some benefits. Imagine they go on forever. . . .” If these techniques are permitted, then economic analysis will lose its capacity to impose scientific rigor on regulatory decisions. The guidelines should also recognize that regulatory transfer payments impose real costs on society and develop recommendations to account for the associated dead-weight losses.

³⁵ Gordon Tullock. “The Welfare Costs of Tariffs, Monopolies and Theft” *Western Economic Journal*, 5, pp. 224-232 (1967).

OMB should leave the current (2000) guidelines in place while it revises the draft guidelines to address these concerns and make it clear that contingent valuation surveys and unrealistic discount rates will not be accepted.