
Cost-Benefit Analysis

An Ethical Critique

Steven Kelman

AT THE BROADEST and vaguest level, cost-benefit analysis may be regarded simply as systematic thinking about decision-making. Who can oppose, economists sometimes ask, efforts to think in a systematic way about the consequences of different courses of action? The alternative, it would appear, is unexamined decision-making. But defining cost-benefit analysis so simply leaves it with few implications for actual regulatory decision-making. Presumably, therefore, those who urge regulators to make greater use of the technique have a more extensive prescription in mind. I assume here that their prescription includes the following views:

(1) There exists a strong presumption that an act should not be undertaken unless its benefits outweigh its costs.

(2) In order to determine whether benefits outweigh costs, it is desirable to attempt to express all benefits and costs in a common scale or denominator, so that they can be compared with each other, even when some benefits and costs are not traded on markets and hence have no established dollar values.

(3) Getting decision-makers to make more use of cost-benefit techniques is important enough to warrant both the expense required to gather the data for improved cost-benefit esti-

mation and the political efforts needed to give the activity higher priority compared to other activities, also valuable in and of themselves.

My focus is on cost-benefit analysis as applied to environmental, safety, and health regulation. In that context, I examine each of the above propositions from the perspective of formal ethical theory, that is, the study of what actions it is morally right to undertake. My conclusions are:

(1) In areas of environmental, safety, and health regulation, there may be many instances where a certain decision might be right even though its benefits do not outweigh its costs.

(2) There are good reasons to oppose efforts to put dollar values on non-marketed benefits and costs.

(3) Given the relative frequency of occasions in the areas of environmental, safety, and health regulation where one would not wish to use a benefits-outweigh-costs test as a decision rule, and given the reasons to oppose the monetizing of non-marketed benefits or costs that is a prerequisite for cost-benefit analysis, it is not justifiable to devote major resources to the generation of data for cost-benefit calculations or to undertake efforts to "spread the gospel" of cost-benefit analysis further.

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I

How do we decide whether a given action is morally right or wrong and hence, assuming the desire to act morally, why it should be undertaken or refrained from? Like the Molière char-

acter who spoke prose without knowing it, economists who advocate use of cost-benefit analysis for public decisions are philosophers without knowing it: the answer given by cost-benefit analysis, that actions should be undertaken so as to maximize net benefits, represents one of the classic answers given by moral philosophers—that given by utilitarians. To determine whether an action is right or wrong, utilitarians tote up all the positive consequences of the action in terms of human satisfaction. The act that maximizes attainment of satisfaction under the circumstances is the right act. That the economists' answer is also the answer of one school of philosophers should not be surprising. Early on, economics was a branch of moral philosophy, and only later did it become an independent discipline.

Before proceeding further, the subtlety of the utilitarian position should be noted. The positive and negative consequences of an act for satisfaction may go beyond the act's immediate consequences. A facile version of utilitarianism would give moral sanction to a lie, for instance, if the satisfaction of an individual attained by telling the lie was greater than the suffering imposed on the lie's victim. Few utilitarians would agree. Most of them would add to the list of negative consequences the effect of the one lie on the tendency of the person who lies to tell other lies, even in instances when the lying produced less satisfaction for him than dissatisfaction for others. They would also add the negative effects of the lie on the general level of social regard for truth-telling, which has many consequences for future utility. A further consequence may be added as well. It is sometimes said that we should include in a utilitarian calculation the feeling of dissatisfaction produced in the liar (and perhaps in others) because, by telling a lie, one has "done the wrong thing." Correspondingly, in this view, among the positive consequences to be weighed into a utilitarian calculation of truth-telling is satisfaction arising from "doing the right thing." This view rests on an error, however, because it *assumes* what it is the purpose of the calculation to *determine*—that telling the truth in the instance in question is indeed the right thing to do. Economists are likely to object to this point, arguing that no feeling ought "arbitrarily" to be excluded from a complete cost-benefit calculation, including a feeling of dis-

satisfaction at doing the wrong thing. Indeed, the economists' cost-benefit calculations would, at least ideally, include such feelings. Note the difference between the economist's and the philosopher's cost-benefit calculations, however. The economist may choose to include feelings of dissatisfaction in his cost-benefit calculation, but what happens if somebody asks the economist, "Why is it right to evaluate an action on the basis of a cost-benefit test?" If an answer is to be given to that question (which does not normally preoccupy economists but which does concern both philosophers and the rest of us who need to be persuaded that cost-benefit analysis is right), then the circularity problem reemerges. And there is also another difficulty with counting feelings of dissatisfaction at doing the wrong thing in a cost-benefit calculation. It leads to the perverse result that under certain circumstances a lie, for example, might be morally right if the individual contemplating the lie felt no compunction about lying and morally wrong only if the individual felt such a compunction!

This error is revealing, however, because it begins to suggest a critique of utilitarianism. Utilitarianism is an important and powerful moral doctrine. But it is probably a minority position among contemporary moral philosophers. It is amazing that economists can proceed in unanimous endorsement of cost-benefit analysis as if unaware that their conceptual framework is highly controversial in the discipline from which it arose—moral philosophy.

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Let us explore the critique of utilitarianism. The logical error discussed before appears to suggest that we have a notion of certain things being right or wrong that *predates* our calculation of costs and benefits. Imagine the case of an old man in Nazi Germany who is hostile to the regime. He is wondering whether he should speak out against Hitler. If he speaks out, he

will lose his pension. And his action will have done nothing to increase the chances that the Nazi regime will be overthrown: he is regarded as somewhat eccentric by those around him, and nobody has ever consulted his views on political questions. Recall that one cannot add to the benefits of speaking out any satisfaction from doing "the right thing," because the purpose of the exercise is to determine whether speaking out *is* the right thing. How would the utilitarian calculation go? The benefits of the old man's speaking out would, as the example is presented, be nil, while the costs would be his loss of his pension. So the costs of the action would outweigh the benefits. By the utilitarians' cost-benefit calculation, it would be *morally wrong* for the man to speak out.

Another example: two very close friends are on an Arctic expedition together. One of them falls very sick in the snow and bitter cold, and sinks quickly before anything can be done to help him. As he is dying, he asks his friend one thing, "Please, make me a solemn promise that ten years from today you will come back to this spot and place a lighted candle here to remember me." The friend solemnly promises to do so, but does not tell a soul. Now, ten years later, the friend must decide whether to keep his promise. It would be inconvenient for him to make the long trip. Since he told nobody, his failure to go will not affect the general social faith in promise-keeping. And the incident was unique enough so that it is safe to assume that his failure to go will not encourage him to break other promises. Again, the costs of the act outweigh the benefits. A utilitarian would need to believe that it would be *morally wrong* to travel to the Arctic to light the candle.

A third example: a wave of thefts has hit a city and the police are having trouble finding any of the thieves. But they believe, correctly, that punishing someone for theft will have some deterrent effect and will decrease the number of crimes. Unable to arrest any actual perpetrator, the police chief and the prosecutor arrest a person whom they know to be innocent and, in cahoots with each other, fabricate a convincing case against him. The police chief and the prosecutor are about to retire, so the act has no effect on any future actions of theirs. The fabrication is perfectly executed, so nobody finds out about it. Is the *only* question involved in judging the act of framing the innocent man that of

whether his suffering from conviction and imprisonment will be greater than the suffering avoided among potential crime victims when some crimes are deterred? A utilitarian would need to believe that it is *morally right to punish the innocent man* as long as it can be demonstrated that the suffering prevented outweighs his suffering.

And a final example: imagine two worlds, each containing the same sum total of happiness. In the first world, this total of happiness came about from a series of acts that included a number of lies and injustices (that is, the total consisted of the immediate gross sum of happiness created by certain acts, minus any long-term unhappiness occasioned by the lies and injustices). In the second world the same amount of happiness was produced by a different series of acts, none of which involved lies or injustices. Do we have any reason to prefer the one world to the other? A utilitarian would need to believe that the choice between the two worlds is a *matter of indifference*.

To those who believe that it would not be morally wrong for the old man to speak out in Nazi Germany or for the explorer to return to the Arctic to light a candle for his deceased friend, that it would not be morally right to convict the innocent man, or that the choice between the two worlds is not a matter of indifference—to those of us who believe these things, utilitarianism is insufficient as a moral view. We believe that some acts whose costs are greater than their benefits may be morally right and, contrariwise, some acts whose benefits are greater than their costs may be morally wrong.

This does not mean that the question whether benefits are greater than costs is morally irrelevant. Few would claim such. Indeed, for a broad range of individual and social decisions, whether an act's benefits outweigh its costs is a sufficient question to ask. But not for all such decisions. These may involve situations where certain duties—duties not to lie, break promises, or kill, for example—make an act wrong, even if it would result in an excess of benefits over costs. Or they may involve instances where people's rights are at stake. We would not permit rape even if it could be demonstrated that the rapist derived enormous happiness from his act, while the victim experienced only minor displeasure. We do not do cost-benefit analyses of freedom of speech or

trial by jury. The Bill of Rights was not RARGed. As the United Steelworkers noted in a comment on the Occupational Safety and Health Administration's economic analysis of its proposed rule to reduce worker exposure

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to carcinogenic coke-oven emissions, the Emancipation Proclamation was not subjected to an inflationary impact statement. The notion of human rights involves the idea that people may make certain claims to be allowed to act in certain ways or to be treated in certain ways, even if the sum of benefits achieved thereby does not outweigh the sum of costs. It is this view that underlies the statement that "workers have a right to a safe and healthy work place" and the expectation that OSHA's decisions will reflect that judgment.

In the most convincing versions of non-utilitarian ethics, various duties or rights are not absolute. But each has a *prima facie* moral validity so that, if duties or rights do not conflict, the morally right act is the act that reflects a duty or respects a right. If duties or rights do conflict, a moral judgment, based on conscious deliberation, must be made. Since one of the duties non-utilitarian philosophers enumerate is the duty of beneficence (the duty to maximize happiness), which in effect incorporates all of utilitarianism by reference, a non-utilitarian who is faced with conflicts between the results of cost-benefit analysis and non-utility-based considerations will need to undertake such deliberation. But in that deliberation, additional elements, which cannot be reduced to a question of whether benefits outweigh costs, have been introduced. Indeed, depending on the moral importance we attach to the right or duty involved, cost-benefit questions may, within wide ranges, become irrelevant to the outcome of the moral judgment.

In addition to questions involving duties and rights, there is a final sort of question where, in my view, the issue of whether benefits outweigh costs should not govern moral

judgment. I noted earlier that, for the common run of questions facing individuals and societies, it is possible to begin and end our judgment simply by finding out if the benefits of the contemplated act outweigh the costs. This very fact means that one way to show the great importance, or value, attached to an area is to say that decisions involving the area should not be determined by cost-benefit calculations. This applies, I think, to the view many environmentalists have of decisions involving our natural environment. When officials are deciding what level of pollution will harm certain vulnerable people—such as asthmatics or the elderly—while not harming others, one issue involved may be the right of those people not to be sacrificed on the altar of somewhat higher living standards for the rest of us. But more broadly than this, many environmentalists fear that subjecting decisions about clean air or water to the cost-benefit tests that determine the general run of decisions removes those matters from the realm of specially valued things.

II

In order for cost-benefit calculations to be performed the way they are supposed to be, all costs and benefits must be expressed in a common measure, typically dollars, including things not normally bought and sold on markets, and to which dollar prices are therefore not attached. The most dramatic example of such things is human life itself; but many of the other benefits achieved or preserved by environmental policy—such as peace and quiet, fresh-smelling air, swimmable rivers, spectacular vistas—are not traded on markets either.

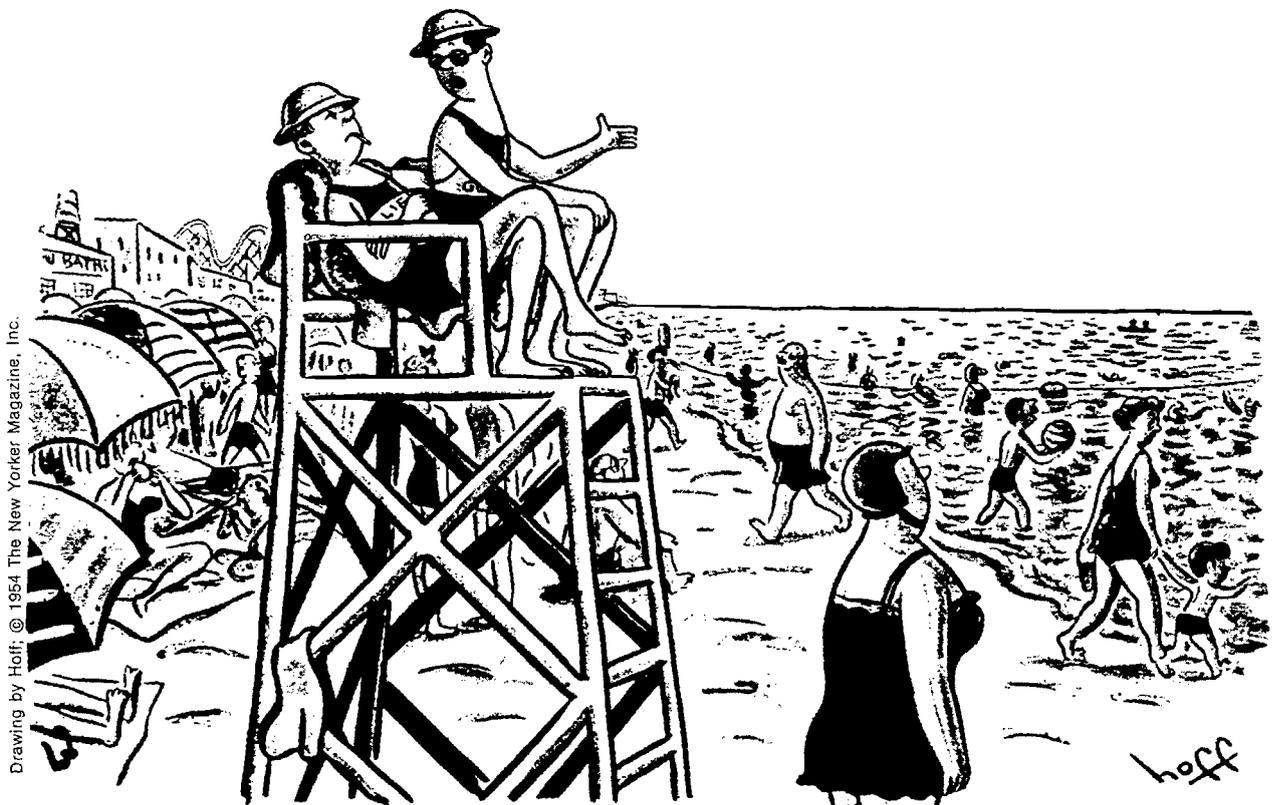
Economists who do cost-benefit analysis regard the quest after dollar values for non-market things as a difficult challenge—but one to be met with relish. They have tried to develop methods for imputing a person's "willingness to pay" for such things, their approach generally involving a search for bundled goods that *are* traded on markets and that vary as to whether they include a feature that is, *by itself*, not marketed. Thus, fresh air is not marketed, but houses in different parts of Los Angeles that are similar except for the degree of smog are. Peace and quiet is not marketed, but similar houses inside and outside airport flight paths

are. The risk of death is not marketed, but similar jobs that have different levels of risk are. Economists have produced many often ingenious efforts to impute dollar prices to non-marketed things by observing the premiums accorded homes in clean air areas over similar homes in dirty areas or the premiums paid for risky jobs over similar nonrisky jobs.

These ingenious efforts are subject to criticism on a number of technical grounds. It may be difficult to control for all the dimensions of quality other than the presence or absence of the non-marketed thing. More important, in a world where people have different preferences and are subject to different constraints as they make their choices, the dollar value imputed to the non-market things that most people would wish to avoid will be lower than otherwise, because people with unusually weak aversion to those things or unusually strong constraints on their choices will be willing to take the bundled good in question at less of a discount than the average person. Thus, to use the property value discount of homes near airports as a measure of people's willingness to pay for quiet means to accept as a proxy for the rest of

us the behavior of those least sensitive to noise, of airport employees (who value the convenience of a near-airport location) or of others who are susceptible to an agent's assurances that "it's not so bad." To use the wage premiums accorded hazardous work as a measure of the value of life means to accept as proxies for the rest of us the choices of people who do not have many choices or who are exceptional risk-seekers.

A second problem is that the attempts of economists to measure people's willingness to pay for non-marketed things assume that there is no difference between the price a person would require for *giving up* something to which he has a preexisting right and the price he would pay to *gain* something to which he enjoys no right. Thus, the analysis assumes no difference between how much a homeowner would need to be paid in order to give up an unobstructed mountain view that he already enjoys and how much he would be willing to pay to get an obstruction moved once it is already in place. Available evidence suggests that most people would insist on being paid far more to assent to a worsening of their situation than



"Good Lord, Gilroy, it's not for us to determine whether they're worth saving."

they would be willing to pay to improve their situation. The difference arises from such factors as being accustomed to and psychologically attached to that which one believes one enjoys by right. But this creates a circularity problem for any attempt to use cost-benefit analysis to determine *whether* to assign to, say, the homeowner the right to an unobstructed mountain view. For willingness to pay will be different depending on whether the right is assigned initially or not. The value judgment about whether to assign the right must thus be made first. (In order to set an upper bound on the value of the benefit, one might hypothetically assign the right to the person and determine how much he would need to be paid to give it up.)

Third, the efforts of economists to impute willingness to pay invariably involve bundled goods exchanged in *private* transactions. Those who use figures garnered from such analysis to provide guidance for *public* decisions assume no difference between how people value certain things in private individual transactions and how they would wish those same things to be valued in public collective decisions. In making such assumptions, economists insidiously slip into their analysis an important and controversial value judgment, growing naturally out of the highly individualistic microeconomic tradition—namely, the view that there should be no difference between private behavior and the behavior we display in public social life. An alternative view—one that enjoys, I would suggest, wide resonance among citizens—would be that public, social decisions provide an opportunity to give certain things a higher valuation than we choose, for one reason or another, to give them in our private activities.

Thus, opponents of stricter regulation of health risks often argue that we show by our daily risk-taking behavior that we do not value life infinitely, and therefore our public decisions should not reflect the high value of life that proponents of strict regulation propose. However, an alternative view is equally plausible. Precisely because we fail, for whatever reasons, to give life-saving the value in everyday personal decisions that we in some general terms believe we should give it, we may wish our social decisions to provide us the occasion to display the reverence for life that we espouse but do not always show. By this view, people do

not have fixed unambiguous “preferences” to which they give expression through private activities and which therefore should be given expression in public decisions. Rather, they

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may have what they themselves regard as “higher” and “lower” preferences. The latter may come to the fore in private decisions, but people may want the former to come to the fore in public decisions. They may sometimes display racial prejudice, but support antidiscrimination laws. They may buy a certain product after seeing a seductive ad, but be skeptical enough of advertising to want the government to keep a close eye on it. In such cases, the use of private behavior to impute the values that should be entered for public decisions, as is done by using willingness to pay in private transactions, commits grievous offense against a view of the behavior of the citizen that is deeply engrained in our democratic tradition. It is a view that denudes politics of any independent role in society, reducing it to a mechanistic, mimicking recalculation based on private behavior.

Finally, one may oppose the effort to place prices on a non-market thing and hence in effect incorporate it into the market system out of a fear that the very act of doing so will reduce the thing’s perceived value. To place a price on the benefit may, in other words, reduce the value of that benefit. Cost-benefit analysis thus may be like the thermometer that, when placed in a liquid to be measured, itself changes the liquid’s temperature.

Examples of the perceived cheapening of a thing’s value by the very act of buying and selling it abound in everyday life and language. The disgust that accompanies the idea of buying and selling human beings is based on the sense that this would dramatically diminish human worth. Epithets such as “he prostituted

himself," applied as linguistic analogies to people who have sold something, reflect the view that certain things should not be sold because doing so diminishes their value. Praise that is bought is worth little, even to the person buying it. A true anecdote is told of an economist who retired to another university community and complained that he was having difficulty making friends. The laconic response of a critical colleague—"If you want a friend why don't you buy yourself one"—illustrates in a pithy way the intuition that, for some things, the very act of placing a price on them reduces their perceived value.

The first reason that pricing something decreases its perceived value is that, in many circumstances, non-market exchange is associated with the production of certain values not associated with market exchange. These may include spontaneity and various other feelings that come from personal relationships. If a good becomes less associated with the production of positively valued feelings because of market exchange, the perceived value of the good declines to the extent that those feelings are valued. This can be seen clearly in instances where a thing may be transferred both by market and by non-market mechanisms. The willingness to pay for sex bought from a prostitute is less than the perceived value of the sex consummating love. (Imagine the reaction if a practitioner of cost-benefit analysis computed the benefits of sex based on the price of prostitute services.)

Furthermore, if one values in a general sense the existence of a non-market sector because of its connection with the production of certain valued feelings, then one ascribes added value to any non-marketed good simply as a repository of values represented by the non-market sector one wishes to preserve. This seems certainly to be the case for things in nature, such as pristine streams or undisturbed forests: for many people who value them, part of their value comes from their position as repositories of values the non-market sector represents.

The second way in which placing a market price on a thing decreases its perceived value is by removing the possibility of proclaiming that the thing is "not for sale," since things on the market by definition are for sale. The very statement that something is not for sale affirms,

enhances, and protects a thing's value in a number of ways. To begin with, the statement is a way of showing that a thing is valued for its own sake, whereas selling a thing for money demonstrates that it was valued only instrumentally. Furthermore, to say that something cannot be transferred in that way places it in the exceptional category—which requires the person interested in obtaining that thing to be able to offer something else that is exceptional, rather than allowing him the easier alternative of obtaining the thing for money that could have been obtained in an infinity of ways. This enhances its value. If I am willing to say "You're a really kind person" to whoever pays me to do so, my praise loses the value that attaches to it from being exchangeable only for an act of kindness.

In addition, if we have already decided we value something highly, one way of stamping it with a cachet affirming its high value is to announce that it is "not for sale." Such an announcement does more, however, than just reflect a preexisting high valuation. It signals a thing's distinctive value to others and helps us persuade them to value the thing more highly than they otherwise might. It also expresses our resolution to safeguard that distinctive value. To state that something is not for sale is thus also a source of value for that thing, since if a thing's value is easy to affirm or protect, it will be worth more than an otherwise similar thing without such attributes.

If we proclaim that something is not for sale, we make a once-and-for-all judgment of its special value. When something is priced, the issue of its perceived value is constantly coming up, as a standing invitation to reconsider that original judgment. Were people constantly faced with questions such as "how much money could get you to give up your freedom of speech?" or "how much would you sell your vote for if you could?", the perceived value of the freedom to speak or the right to vote would soon become devastated as, in moments of weakness, people started saying "maybe it's not worth *so much* after all." Better not to be faced with the constant questioning in the first place. Something similar did in fact occur when the slogan "better red than dead" was launched by some pacifists during the Cold War. Critics pointed out that the very posing of this stark choice—in effect, "would you *really* be willing

to give up your life in exchange for not living under communism?"—reduced the value people attached to freedom and thus diminished resistance to attacks on freedom.

Finally, of some things valued very highly it is stated that they are "priceless" or that they have "infinite value." Such expressions are reserved for a subset of things not for sale, such as life or health. Economists tend to scoff at talk of pricelessness. For them, saying that something is priceless is to state a willingness to trade off an infinite quantity of all other goods for one unit of the priceless good, a situation that empirically appears highly unlikely. For most people, however, the word priceless is pregnant with meaning. Its value-affirming and value-protecting functions cannot be bestowed on expressions that merely denote a determinate, albeit high, valuation. John Kennedy in his inaugural address proclaimed that the nation was ready to "pay any price [and] bear any burden . . . to assure the survival and the success of liberty." Had he said instead that we were willing to "pay a high price" or "bear a large burden" for liberty, the statement would have rung hollow.

III

An objection that advocates of cost-benefit analysis might well make to the preceding argument should be considered. I noted earlier that, in cases where various non-utility-based duties or rights conflict with the maximization of utility, it is necessary to make a deliberative judgment about what act is finally right. I also argued earlier that the search for commensurability might not always be a desirable one, that the attempt to go beyond expressing benefits in terms of (say) lives saved and costs in terms of dollars is not something devoutly to be wished.

In situations involving things that are not expressed in a common measure, advocates of cost-benefit analysis argue that people making judgments "in effect" perform cost-benefit calculations anyway. If government regulators promulgate a regulation that saves 100 lives at a cost of \$1 billion, they are "in effect" valuing a life at (a minimum of) \$10 million, whether or not they say that they are willing to place a dollar value on a human life. Since, in this view,

cost-benefit analysis "in effect" is inevitable, it might as well be made specific.

This argument misconstrues the real difference in the reasoning processes involved. In cost-benefit analysis, equivalencies are established *in advance* as one of the raw materials for the calculation. One determines costs and benefits, one determines equivalencies (to be able to put various costs and benefits into a common measure), and then one sets to toting things up—waiting, as it were, with bated breath for the results of the calculation to come out. The outcome is determined by the arithmetic; if the outcome is a close call or if one is not good at long division, one does not know how it will turn out until the calculation is finished. In the kind of deliberative judgment that is performed without a common measure, no establishment of equivalencies occurs in advance. Equivalencies are not aids to the decision process. In fact, the decision-maker might not even be aware of what the "in effect" equivalencies were, at least before they are revealed to him afterwards by someone pointing out what he had "in effect" done. The decision-maker would see himself as simply having made a deliberative judgment; the "in effect" equivalency number did not play a causal role in the decision but at most merely reflects it. Given this, the argument against making the process explicit is the one discussed earlier in the discussion of problems with putting specific quantified values on things that are not normally quantified—that the very act of doing so may serve to reduce the value of those things.

MY OWN JUDGMENT is that modest efforts to assess levels of benefits and costs are justified, although I do not believe that government agencies ought to sponsor efforts to put dollar prices on non-market things. I also do not believe that the cry for more cost-benefit analysis in regulation is, on the whole, justified. If regulatory officials were so insensitive about regulatory costs that they did not provide acceptable raw material for deliberative judgments (even if not of a strictly cost-benefit nature), my conclusion might be different. But a good deal of research into costs and benefits already occurs—actually, far more in the U.S. regulatory process than in that of any other industrial society. The danger now would seem to come more from the other side. ■