

A Place for Cost-Benefit Analysis*

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What next? We are forever making decisions. Typically, when unsure, we try to identify, then compare, our options. We weigh pros and cons. Occasionally, we make the weighing explicit, listing pros and cons and assigning numerical weights. What could be wrong with that? In fact, things sometimes go terribly wrong. This paper considers what cost-benefit analysis can do, and also what it cannot.

1. What Is CBA, and What Is It For?

Here is an example of how things go wrong. Ontario Hydro is a Canadian government-owned utility company (a Crown Corporation, on a par with Canada Post). Ten years ago, Ontario Hydro was expecting to become a hugely profitable provider of electricity to consumers all over the continent. At that time, Ontario circulated a report explaining how it planned to meet projected demand. Of interest to us is the report's admission that, "The analysis conducted in the development of the Demand/Supply Plans includes those costs which are borne directly by Hydro. It is these costs which can properly be included in Hydro's rates. Costs and

benefits for the Ontario community, beyond these direct costs, are not factored into the cost comparisons.” Why not? Because “even if desirable, these costs are difficult to estimate in monetary terms given the diffuse nature of the impacts and wide variety of effects.” The costs that Ontario Hydro proposed to take into account “include the social and environmental costs incurred by Hydro but do not include social and environmental costs external to Hydro. This reflects normal business practice. In Hydro’s judgment, including additional costs and benefits on an equitable basis would be impracticable.”¹

It is amazing that people would defend such a patently unethical stance by describing it as “normal business practice.” Sadly, though, appealing to “normal business practice” is itself normal business practice, and Ontario Hydro is not especially guilty in that regard. Indeed, it is notable that Ontario Hydro was not duplicitous, since it did, after all, express its policy bluntly and publicly. Those who wrote the report evidently had no idea that what they were saying was wrong.

Environmentalists have their own “normal business practices,” though, and it is too easy to condemn organizations like Ontario Hydro without thinking things through. Many critics of cost-benefit analysis (henceforth CBA) seem driven by a gut feeling that CBA is heartless. They think that, in denouncing CBA, they are taking a stand against heartlessness. This is unfortunate. The fact is, weighing a proposal’s costs and benefits does not make you a bad person. What makes you a bad person is *ignoring* costs—the costs you impose on others.

The problem with Ontario Hydro arose, not when Ontario Hydro took costs and benefits into account, but rather when it decided *not* to do so. The problem in general terms is a problem of *external* costs. External costs are costs that decision makers ignore, leaving them to be paid by someone else. Ontario Hydro makes a decision that has certain costs. Some of the costs will fall not on Ontario Hydro but on innocent bystanders; following normal business practice, Ontario Hydro seems to say, “That’s not our problem.”

Decision makers naturally are tempted to ignore external costs. It is only human. Almost everyone does the same sort of thing in one context or another. Every time you leave an empty popcorn box in a theater rather than dispose of it properly, you are doing the same sort of thing as the person who dumps industrial waste in the river rather than dispose of it properly. Every time you drive a car, you are risking other people’s lives, and you probably

have never wasted a minute feeling guilty about it. (And just like you, industrial polluters defend themselves by saying, “But everybody does it!”) It is not only bad people who ignore the costs they impose on others. Part of the problem is simple laziness, when we think no one is watching. Another part of the problem is the normal human desire to conform, even when “normal practice” is unconscionable.

2. Is CBA Anti-Environmentalist?

CBA comes in many variations, and there are many that no ethicist would defend. Needless to say, no ethicist would defend conventional CBA, that is, CBA in the narrowly focused way that Ontario Hydro used it at the end of the 1980s. All sides agree: there can be no general justification for foisting external costs on innocent bystanders. Any controversy concerns whether there exists some other form of CBA that can, in general, be justified.

Those with expertise in accounting are trained to draw fine-grained distinctions between different variations on the basic theme of conventional CBA. Full Cost Accounting, for example, refers to an attempt to carry out CBA in such a way as to take *all* known costs, external as well as internal, into account.² From here on, except where otherwise noted, when I speak of CBA, I will be referring to cost-benefit analysis with Full Cost Accounting. As E. J. Mishan’s influential text defines it, “in cost-benefit analysis we are concerned with the economy as a whole, with the welfare of a defined society, and not any smaller part of it.”³

Understood in this way, CBA is not merely an accounting method. It is a commitment to take responsibility for the consequences of one’s actions. That is why, historically, environmentalists were among the most vocal *advocates* of CBA as a vehicle for making industries and governments answerable for the full cost of their decisions. It can work. Indeed, there has been an interesting further development in the case of Ontario Hydro. Perhaps having learned something about environmental ethics, Ontario Hydro changed its stance in 1993 and now trumpets its use of Full Cost Accounting methods.⁴

Under what general circumstances, then, should we want policy makers to employ CBA? Two answers come to mind: first, when one group pays the cost of a piece of legislation while another group gets the benefit; second, and more generally, whenever decision makers have an incentive not to take full costs into ac-

count. Where benefits of political decisions are concentrated while costs are dispersed, special interest groups can push through favorable policies even when costs to the population at large outweigh benefits.⁵ To contain the proliferation of such unconscionable policies, we might require that policies be justified by the lights of a proper CBA. Requiring decision makers to provide a CBA, which is then made available for public scrutiny, is one way of trying to teach decision makers to take environmental costs into account. We do not want upstream people ignoring costs they foist on downstream people.⁶ We want social and cultural and legal arrangements that encourage people to be aware of the full environmental cost, and also the full human cost, of what they do.

The most fundamental argument in favor of CBA has to do with CBA's role as a means of introducing accountability into decisions that affect whole communities. Think about it. If a business pollutes, would it be wrong to insist that the business should be paying the true full cost of its operation? As a mechanism for holding decision makers publicly accountable for external costs, CBA has the potential to constrain activities that are not worthwhile when external costs are taken into account. Accordingly, the National Policy Act of 1969 required CBA of all environment-related federal projects. To that extent, CBA is a friend of the environment. Or at least, it seemed that way at one time.

The tables seemingly have been turning, though. Throughout the 1970s, the Council on Wage and Price Stability and the Office of Management and Budget pressured the Environmental Protection Agency to pay more attention to the costs of complying with standards the EPA was trying to impose on industry. Finally, in 1981, President Reagan issued an Executive Order requiring government agencies to justify new regulations by submitting a formal CBA (of which an environmental impact statement would be only one part) to the Office of Management and Budget. Why? Why force agencies to perform CBA of their regulatory proposals? The point, very generally, was to force agencies to take into account costs they otherwise would have preferred to ignore. The Reagan administration reputedly felt some regulations were being pushed through by environmental zealots who did not care what their proposals cost in human terms. Accordingly, the Executive Order mandating CBA was perceived as having an anti-environmental thrust. Perhaps partly because of that bit of recent history, current environmentalist opinion remains, on the whole, anti-CBA. The following sections consider some of the main reasons (some cogent, some not) for distrusting CBA.

3. Is CBA Anthropocentric?

Is it only the interests of human persons that can be taken into account in a CBA? If so, then isn't CBA essentially anthropocentric? The answer is no. CBA as construed here is partly an accounting procedure, and partly a way of organizing public debate. In no way is it a substitute for philosophical debate. Animal liberationists who think full costs must (by definition?) include pain suffered by animals, for example, must argue for that point in philosophical debate with those who think otherwise. If CBA presupposed one or the other position, thereby preempting philosophical debate, that would be a flaw.

4. Does CBA Presuppose Utilitarian Moral Theory?

Utilitarian moral theory holds roughly that X is right if and only if X maximizes utility, where maximizing utility is a matter of producing the best possible balance of benefits over costs. It may seem obvious that CBA presupposes the truth of utilitarian moral theory. In fact, it does not. CBA is a way of organizing a public forum expressing respect for persons: persons present at the meeting and other persons as well, on whose behalf those present can speak (citizens of faraway countries, future generations, etc.). For that matter, those present at the forum will speak not only on behalf of other persons but on behalf of whatever they care about: animals, trees, canyons, historic sites, and so on.

The forum therefore is defensible on utilitarian grounds, but it does not depend on utilitarian moral theory, for this sort of CBA could and probably should be advocated by deontologists.⁷ A conventional CBA that ignored external costs would be endorsed neither by deontologists nor utilitarians, but CBA with Full Cost Accounting, defended in a public forum, could be endorsed by either.⁸

5. Does CBA Tell Us to Sacrifice the One for the Sake of the Many?

We can imagine advocates of CBA jumping to the conclusion that policies are justified whenever benefits exceed costs. That would be a mistake. We need to be more circumspect than that. When

benefits exceed costs, the conclusion should be that the policy has passed one crucial test and therefore further discussion is warranted. On the other hand, when a proposal *fails* the test of CBA, when costs exceed benefits, the implication is more decisive, namely that further discussion is not warranted. If enacting a certain proposal would help some people and hurt others, then showing that winners are gaining more than losers are losing counts for something, but it is not decisive. One must then argue that the gain is so great for some people that it justifies imposing a loss on other people. In contrast, to show that losers are losing more than winners are gaining should pretty much end the conversation. Failing CBA is a fairly reliable test of when something is wrong.⁹ Passing CBA, however, is not a reliable test of when something is right.

Consider the following case.¹⁰

HOSPITAL: Five patients lie on operating tables about to die for lack of suitable organ donors. A UPS delivery person just walked into the office. She is a suitable organ donor for all five patients. If you kidnap her and harvest her organs, you will be saving five and killing one.

Suppose we perform CBA in that case, and it yields the conclusion that, well, five is more than one. Would that imply that taking the delivery person's life is permissible? Required, even? No. Of course, we could quibble about how the calculation works out, but that would miss the fundamental point, which is that when we are talking about killing people, costs and benefits are not the only issue. CBA offers us guidance when our objective is to promote the best possible balance of costs and benefits, but not all situations call on us to maximize what is valuable. Promoting value is not always the best way of respecting it. There are times when morality calls on us not to maximize value but simply to respect it.

I argued that CBA does not presume the truth of utilitarian moral theory. Now it may seem that what I call CBA presumes that utilitarian moral theory is false! On the contrary, even from a broadly utilitarian perspective, we do not want ordinary citizens to have a license to kill whenever they think they can do a lot of good in the process. Some institutions have their utility precisely by *prohibiting* decisions based on utilitarian calculation. Hospitals, for example, cannot serve their purpose if they are a menace to innocent bystanders. Hospitals cannot serve their pur-

pose unless people can trust hospitals to treat people as rights-bearers. Respecting people's rights is part of what helps make it safe to visit hospitals. And making it safe to visit the hospital is a prerequisite of hospitals functioning properly. Accordingly, we cannot justify cutting up one patient to save five simply by saying five is more than one. Sometimes, numbers do not count. It is good policy to forbid killing, requiring ordinary citizens to respect human rights, period.

Therefore, there are limits to the legitimate scope of CBA, and must be, even from a utilitarian perspective. Consider the case of *Peeveyhouse vs. Garland Coal*.¹¹ Having completed a strip-mining operation on the Peeveyhouse property, Garland Coal refused to honor its contractual promise to restore the land to its original condition. The restored land would have been worth only \$300 and it would have cost \$29,000 to restore it. Still, Peeveyhouse wanted the land restored and Garland Coal had promised to do it.

Incredibly, the Oklahoma court awarded Peeveyhouse only the \$300, judging that Garland Coal could not be held financially liable for a restoration when such restoration would not be cost-effective. The Court's verdict generally is regarded as utterly mistaken, though, and one way of understanding the mistake is to see it as a case of failing to understand the limits of CBA's legitimate scope. We live in a society where hospitals cannot take organs without consent. We live in a society where Garland Coal normally would have to honor its contract with Peeveyhouse. Thus, we know where we stand. We need not be perpetually preparing to prove before a tribunal that strip-mining our land or harvesting our internal organs without consent is not cost-effective. Instead, we have a right simply to say no. In giving us moral space that we govern by right, our laws limit the energy we have to waste: trying to influence public regulators, fighting to keep what belongs to us, fighting to gain what belongs to others. In treating us as rights-bearers, our laws enable us simply to decline proposals that would benefit others at our expense.

Crucially, our being able to say no teaches people to search for ways of making progress that benefit everyone. CBA in its simplest form allows some to be sacrificed for the sake of the greater good of others, and therefore CBA in its simplest form is morally problematic. In contrast, CBA as a framework for public discussion, in a regime that treats people as rights-bearers, creates at least some pressure to craft proposals that promise benefits for all.¹²

Again, part of the message to take away from these discussions is that the proper purpose of CBA is not to show when a taking

is permissible. If we see CBA as indicating when takings are permissible, we will have a problem, because breaking contracts, or taking things from people (including their lives) whenever the benefit is worth the cost is not a way of respecting people. But if we treat CBA as a *constraint* on takings, ruling out inefficient takings without licensing efficient takings, then it is not disrespectful.

Therefore, it would be a mistake to see CBA as an *alternative* to treating people as ends in themselves. On the contrary, when CBA is working properly, and in particular when treated not as a seal of approval for good proposals but rather as a means of filtering out bad proposals, CBA becomes a way of preventing people from treating each other as mere means. The point is to stop people from foisting the costs of their policies on innocent people without consent. In other words, requiring people to offer an accounting of the true costs and benefits of their operations is a way of holding them publicly accountable for failing to treat fellow citizens as ends in themselves. CBA will not filter out every proposal that ought to be filtered out, but it will help to filter out many of the most flagrantly disrespectful proposals, and that is its proper purpose.

6. Must CBA Treat All Values as Mere Commodities?

As Mark Sagoff nicely expresses the point, “There are some who believe on principle that worker safety and environmental quality ought to be protected only insofar as the benefits of protection balance the costs. On the other hand, people argue—also on principle—that neither worker safety nor environmental quality should be treated as a commodity to be traded at the margin for other commodities, but rather each should be valued for its own sake” (Sagoff 1981, pp. 1288–89). The second argument, though, presents a false dichotomy. CBA is perfectly compatible with the idea that worker safety and environmental quality ought to be valued for their own sake.

To see why, imagine a certain recycling process is risky to the workers involved. The process improves environmental quality, but inevitably workers risk getting their hands caught in the machines, and so on. Notice: although we treat both environmental quality and worker safety as ends in themselves, we still have to weigh the operation’s costs and benefits. Is recycling’s environ-

mental benefit worth the risk? It is a good question, and we would be missing the point if we tried to answer it by saying environmental quality is valued for its own sake.

Nor must we imagine cases of different values (worker safety and environmental quality) coming into conflict. The need for CBA can arise even when environmental quality is the sole value at stake. For example, suppose the recycling process in question saves paper (and therefore trees), but saving trees comes at a cost of all the water and electricity used in the process; gasoline is used by trucks that collect the paper from recycling bins, and so on. Therefore, the very recycling process that reduces pollution and natural resource consumption in some respects also increases pollution and natural resource consumption in other respects. In this case, our reason to do CBA is precisely that we care about environmental quality. (If maintaining a politically correct environmentalist appearance were our only concern, we would not worry about it.)

Again, it would be beside the point to talk about environmental quality being valued for its own sake. In a nutshell, we sometimes find ourselves in situations of conflicting values, where the values at stake are really important. Critics of CBA sometimes seem to say, when values at stake are really important, that is when we should *not* think hard about the costs and benefits of resolving the conflict in one way rather than another. They seem to have things backwards.

Sagoff (1981, pp. 1290–91) asserts, “It is the characteristic of cost-benefit analysis that it treats all value judgments other than those made on its behalf as nothing but statements of preference, attitude, or emotion.” There are several things going on in this passage. I will mention three. First, the words “other than those made on its behalf” are a jest at the pseudo-scientific posturing of radical subjectivists, and the jest is on target. Second, Sagoff is insinuating that it is a mistake simply to assume that all values are reducible to costs and benefits, and here too, Sagoff is on target. On the one hand, it is an economist’s job to go as far as possible in treating values as preferences, and within economics narrowly construed, the reductionist bias serves a purpose. On the other hand, when we look at values in more philosophical terms, we cannot treat all values as mere preferences, as if attaching value to honesty were on a par with attaching value to chocolate. Accordingly, there is a problem with jumping from economic to philosophical discussions without stopping to remind ourselves that what is taken for granted in one kind of discussion cannot be taken for granted in the other.

The third thing Sagoff is saying is that CBA characteristically treats all values as mere preferences. Now, if Sagoff means to say CBA *typically* does so, he may be right. But if Sagoff were saying CBA *necessarily* does so, he would be mistaken. CBA is about weighing costs and benefits. It does not presume everything is either a cost or a benefit. We have to decide which values can be treated as mere preferences, costs, or benefits, and which have to be treated separately, as falling outside the scope of CBA. CBA itself does not make that decision for us. It is true by definition that to care about X is to have a preference regarding X, but we can care about X without thinking X is merely a preference. CBA assumes nothing about the nature of values, other than that they sometimes come into conflict and that no matter what we do, we will in effect be trading them off against each other.¹³ It does not assume trading off values is unproblematic; it assumes only that we sometimes have no choice.

“Recycling” is a politically correct word, to be sure, but does that mean we should support any operation that uses the word in its title, even if the operation is environmentally catastrophic? Or should we instead stop to think about the operation’s costs and benefits? Contra Sagoff, if we stop to think, that does not mean we are treating environmental quality as a mere “preference, attitude, or emotion.” Stopping to think can be a way of showing respect.

7. Can CBA Handle Qualitative Values?

Steven Kelman (1981, p. 33) says CBA presupposes the desirability of being able to express all values as dollar values. However, as Kelman correctly notes, converting values to dollars can be a problem. It can distort the true nature of the values at stake. On the other hand, it would be a mistake to think CBA *requires* us to represent every value as a dollar value. For example, Kelman and Sagoff surely would agree that if we care about Atlantic Green Turtles and do a CBA of alternative ways of protecting them, nothing in that process even suggests we have reduced the value of turtles to dollars.

We can do CBA with respect to different values; we can accept conflicts of value that prevent definitive answers. Kelman is right that something is gained when we genuinely and fairly can reduce all values to dollar values, because if we can do that, then there will be a “bottom line.” We can simply tally up values, and it

will be clear what CBA recommends. Often, though, trying to force the process to yield an unambiguously numerical bottom line would be to chase a mirage. If the art museum is about to close and I have one last chance to see either my beloved Vermeer or my beloved Seurat, but there is no time to see both, then I must make a choice. The interesting point is, even when I know precisely what the costs and benefits will be of seeing the Vermeer versus seeing the Seurat, that does not entail that there will be an unambiguous bottom line. Normally, people do not attach numbers to their values. You never hear people saying, "Well, according to my calculations, the Vermeer experience is seven percent more valuable than the Seurat experience, so clearly Vermeer is the way to go." Nor do we hear, "Although I'm more in the mood for Seurat, the rational choice is the Vermeer, since appraisers say the Vermeer is worth more money." The latter thought would be irrelevant when the values at issue concern my own appreciation of the paintings' intrinsic merits as paintings rather than the paintings' value as instruments for raising cash. In cases like that, the bottom line will be qualitative rather than quantitative. No matter how accurately I appraise the intrinsic merits of the paintings, my appraisals will still be qualitative.

An object's *intrinsic* value is the value it has in and of itself, beyond any value it has as a means to further ends. Note that an object's having intrinsic value does not imply that the object is priceless. There is such a thing as limited intrinsic value. A painting can have an intrinsic value that is real without being infinite, or even particularly large. The value I would get from selling it is its instrumental value to me. The value it has to me in and of itself, simply because it is a beautiful painting, is its intrinsic value to me.¹⁴ Both values are real, but one is instrumental and the other is intrinsic. Neither is necessarily large.

A related point: it would be better if Kelman (1981, p. 39) had not said, "selling a thing for money demonstrates that it was valued only instrumentally."¹⁵ Suppose I sell a painting. The money I receive from the sale is the painting's instrumental value to me, but does my decision to sell imply that the painting had no intrinsic value? No. Suppose I love the painting, but I need to raise a large sum of money to save my life, so I sell the painting. What this implies is not that the painting has zero intrinsic value but rather that the instrumental value of selling it outweighs the intrinsic value of keeping it, in that circumstance.

More generally, we sometimes put dollar values on things even when their value to us is essentially different from the value of

dollars. Incommensurability of different values is not generally an insurmountable obstacle to CBA. Still, there often is no point in trying to convert a qualitative balancing into something that *looks* like a precise quantitative calculation and thus *looks* scientific but in fact remains the same qualitative balancing, only now its qualitative nature is disguised by the attaching of made-up numbers.

Policy decisions can be like that. We can make up numbers when assessing the value of a public library we could build on land that otherwise will remain a public park. Maybe the numbers will mean something, maybe not. More often, even when we can accurately predict a policy's true costs and benefits, that does not entail that there will be any bottom line from which we simply read off what to do. When competing values cannot be reduced to a common measure without distortion, that makes it harder to know the bottom line. It may even mean there is no unitary bottom line to be known. Sometimes the bottom line is simply that one precious and irreplaceable thing is gained while another precious and irreplaceable thing is lost. Even so, that does not mean there is a problem with the very idea of taking costs and benefits into account. It just means we should not assume too much about what kind of bottom line we can expect to see.¹⁶

Ontario Hydro (since its reorganization), and the City of Vancouver Planning Department, to name two examples, say that in striving to provide a Full Cost Accounting, they try not to ignore vague nonmonetized costs, even though in practice such sensitivity means their bottom line will reflect not (or not only) numerical inputs so much as their version of informed common sense.¹⁷ Consider an analogy. A computer program can play chess by algorithm. Human chess players cannot. Human chess players need creativity, experience, alertness to unintended consequences, and other skills and virtues that are not algorithmic. People who formulate policy need similar skills and virtues, and interpersonal skills as well. Employing CBA cannot change that.

8. Some Things Are Priceless. So What?

Critics of CBA think they capture the moral high ground when they say some things are beyond price. They miss the point. Even if Atlantic Green Turtles are a priceless world heritage, we still have to decide how to save them. We still need to look at costs and benefits of trying to protect them in one way rather than another, for two reasons. First, we need to know whether a cer-

tain approach will be effective, given available resources. Dollar for dollar, an effective way of protecting them is better than an ineffective way. Second, we need to know whether the cost of saving them involves sacrificing something else we consider equally priceless.

If baby Jessica has fallen into an abandoned well in Midland, Texas and it will cost nine million dollars to rescue her, is it worth the cost? It seems somehow wrong even to ask the question; after all, it is only money. But it is not wrong. If it would cost nine million dollars to save Jessica's life, what would the nine million dollars otherwise have purchased? Could it have been sent to Africa where it might have saved nine thousand lives? Consider an even more expensive case. If a public utility company in Pennsylvania (in the wake of a frivolous lawsuit blaming its high-voltage power lines for a child's leukemia) calculates that burying its power lines underground will cost two billion dollars, in the process maybe preventing one or two deaths from leukemia, is it only money? If the two billion dollars could have been sent to Africa where it might have saved two million lives, is it obvious we should *not* stop to think about it?

Critics like to say not all values are economic values. They are right, but no values whatsoever are purely economic values in that sense. Even money itself is never only money. In a small town in Texas in 1987, a lot of money was spent to save a baby's life—money that took several lifetimes to produce. It was not only money. It did after all save a baby's life. It also gave a community a chance to show the world what it stands for. These are not trivial things. Neither are many of the other things on which nine million dollars could have been spent.

There are things so valuable to us that we think of them as beyond price. Some economists might disagree, but it is, after all, a fact. What does this fact imply? When we have no choice but to make tradeoffs, should we ignore items we consider priceless, or should we take them into account?¹⁸ The hard fact is, priceless values sometimes come into conflict. When that happens, and when we try rationally to weigh our options, we are in effect putting a price on that which is priceless. In that case, CBA is not the problem. It is a response to the problem. The world has handed us a painful choice, and trying rationally to weigh our options is our way of trying to cope with it.

Note in passing that although critics often speak of incommensurable values, incommensurability is not quite the issue, strictly speaking. Consider the central dilemma of the novel, *Sophie's*

Choice (Styron, 1979). Sophie's two children are about to be executed by a concentration camp commander. The commander says he will kill both children unless Sophie picks one to be killed, in which case the commander will spare the other one. Now, to Sophie, both children are beyond price. She does not value one more than the other. In some sense, she values each of them more than anything. Nevertheless, she does in the end pick one for execution, thereby saving the other one's life. The point is, although her values were incommensurate, she was still able to rank them in a situation where failing to rank them would have meant losing both. The values were *incommensurate*, but not *incommensurable*. To Sophie, both children were beyond price, but when forced to put a price on them, she could.

Of course, the decision broke her heart. As the sadistic commander foresaw, the process of ranking her previously incommensurate values was psychologically devastating. At some level, commensuration is *always* possible, but there are times when something (our innocence, perhaps) is lost in the process of making values commensurate. Perhaps that explains why some critics want to reject CBA; they see it as a mechanism for ranking values that should not be ranked. Unfortunately, although we can hope people like Sophie will never need to rank their children and can instead go on thinking of each child as having infinite value, and although we can wish we never had to choose between worker safety and environmental quality, or between different aspects of environmental quality, the real world sometimes requires tradeoffs.

9. Does CBA Work?

When individuals engage in CBA, they typically are asking themselves how much they should be willing to pay. That is an obvious and legitimate question because they are, after all, constrained by their budget. In contrast, legislators ask themselves how much they are willing to make *other* people pay, and that is a problem. In that case, paying has become an external cost, and it is no surprise if legislators seem rather cavalier about how much they are making other people pay. I said earlier that if the analysis shows that losers are losing more than winners are gaining, that should pretty much end the conversation. Unfortunately, in the real world, the conversation does not always stop there. When a program's benefits are concentrated within influential constituencies, legislators conceal how costly the program is to taxpayers at large. Sim-

ilarly, owners of dogs that bark all night ignore the costs they impose on neighbors. Again, it is not because people are evil. They are only human. Situations where we are not fully accountable—where we have the option of not paying the full cost of our decisions—tend not to bring out the best in us. CBA with Full Cost Accounting is one way of trying to introduce accountability.

In theory, then, CBA is a way of organizing agenda for public debates that respect all persons, and valuable nonpersons, too. How does it work in practice? An effective resolution to hold decision makers and policy makers accountable for all costs would, in theory, make for a cleaner, safer, more prosperous society. The prospect of a public accounting can make corporations and governments rethink what they owe to the environment, and in Ontario Hydro's case, it seems to have done exactly that. Still, there is much corruption in the world and nothing like CBA will ever put an end to it. As with any other accounting method, the quality of the output typically will be only as good as the quality of the inputs. The valuations we supply as inputs drive the results, so how to avoid biased valuations? Biased inputs generate biased outputs. CBA, then, has the potential to be a smokescreen for the real action that takes place before numbers get added.

Can anything guarantee that the process of CBA will not itself be subject to the same political piracy that CBA was supposed to limit? Probably not. As I said earlier, the verdict in *Peeveyhouse* generally is regarded as mistaken. What I did not mention is that, as Andrew Morriss (2000, p. 144) notes, "Shortly after the *Peeveyhouse* decision, a corruption investigation uncovered more than thirty years of routine bribery of several of the court's members." CBA per se does not correct for corrupted inputs. Neither does CBA stop people from applying CBA to cases in which CBA has no legitimate role. However, if the process is public, with affected parties having a chance to protest when their interests are ignored, public scrutiny will have some tendency to correct for biased inputs. It also will encourage planners to supply inputs that can survive scrutiny in the first place. If the process is public, people will step forward to scrutinize not only valuations, but also the list of options, suggesting possibilities that planners may have concealed or overlooked.

Even if we know the costs and benefits of any particular factor, that does not guarantee that we have considered everything. In the real world, we must acknowledge that for any actual calculation we perform, there could be some cost or benefit or risk we have overlooked. What can we do to avoid overlooking what in

retrospect will become painfully obvious? Although it is no guarantee, the best thing I can think of is to open the process to public scrutiny.

Kelman (1981, p. 33) says CBA presumes we should spare no cost in enabling policy makers to make decisions in accordance with CBA. Kelman is right to be critical of such a presumption, for CBA is itself an activity with costs and benefits. The activity of analyzing costs and benefits is not always warranted on cost-benefit grounds. It can be a waste of time. Therefore, CBA on its own grounds ought to be able to recognize that there is a limit to CBA's legitimate scope. Decisions have to be made about what options are worth considering in cost-benefit terms. When we bring people together to scrutinize a proposal, we risk starting a fight over how to distribute costs and benefits. We take people who otherwise might peacefully mind their own business, and we teach them to think of each other as political adversaries. Not all problems can be solved by community policy. Often enough, neighbors are perfectly capable of quietly working things out among themselves, and often enough it is best simply to let them.

10. Must CBA Measure Valuations in Terms of Willingness to Pay?

Suppose we want to assess the costs and benefits of building a library on land that otherwise would remain a public park. How are we supposed to measure costs and benefits? Must we look into people's souls to see how much they really want the library? What alternative do we have? What if we asked people how much they are willing to pay to have the library, and compared that to what they say they are willing to pay to keep the park? Would that be a reasonable way of ascertaining how much they care?

CBA often is depicted as requiring us to measure a good's value by asking how much people would pay for it. Such a requirement is indeed problematic. One problem: willingness to pay is a function not only of perceived values but also of resources available for bidding on those values. Poorer people show up as less willing to pay even if, in some other sense, they value the good as much.

Is there anything we could do to make it legitimate to use willingness to pay as a surrogate for value in some other sense? Perhaps. Part of the problem, to judge from the literature, is that surveys designed to measure willingness to pay do not in fact

take willingness to pay seriously. What they ask subjects to declare is not willingness to pay but *hypothetical* willingness to pay. The idea is, we justify building a waste treatment plant in a poorer neighborhood when we *judge* that poorer people would not pay as much as richer people would to have the plant built elsewhere. Critics call this environmental racism (because minorities tend to live in poorer neighborhoods). Whatever we call it, it looks preposterous.

Is there an alternative that would be more respectful of neighborhoods that provide the most likely building sites? Suppose we initially choose the site by random lottery, and suppose that by luck of the draw, Beverly Hills is selected as the site of the new waste treatment plant. Suppose we then ask Beverly Hills's rich residents what they are willing to pay to site the plant elsewhere. Suppose they say they jointly would pay ten million dollars to locate the plant elsewhere. Suppose we then announce that the people of Beverly Hills are actually, not just hypothetically, offering ten million to any neighborhood willing to make room for a waste treatment facility that otherwise will be built in Beverly Hills. Suppose one of the poorer neighborhoods votes to accept the bid. Would that be more respectful? Or instead, suppose no one accepts the Beverly Hills offer, and therefore the plant is built in Beverly Hills. Is there anything wrong with richer residents moving out, selling their houses to poorer people willing to live near the plant in order to live in better houses than they otherwise could afford? If siting a waste treatment plant drives down property values so that poorer people can afford to live in Beverly Hills, while rich people take their money elsewhere, is that a problem?

Note that even a random lottery will produce nonrandom results. No matter where the waste treatment facility is built, people who can afford to move away from waste treatment plants tend to be richer than the people who cannot. Home buyers who move in, accepting the nuisance in order to have a nicer house at a lower price, will tend to be poorer than buyers who opt to pay higher prices to live farther from the nuisance. One thing will never change: waste treatment facilities will tend to be found in poorer neighborhoods. Not even putting them all in Beverly Hills could ever change that.

Oddly, activists in effect are agitating for plants to be sited as far as possible from people who work in them, since siting waste treatment facilities within walking distance of the homes of people who might want the jobs they provide is classified as environmental

racism. Perhaps the question of how far people have to commute is not important; normally, though, environmentalists urge us to pay more attention to such issues. In any case, if a waste treatment plant must be in a populated area, neighbors will be affected. Someone will have to pay, and no accounting tool is to blame for that.

Critics presume the process of siting waste treatment facilities will *not* be conducted in a respectful manner. They presume politicians will site waste treatment facilities not in response to actual negotiations with communities but rather in response to calculations about what will minimize adverse effects on campaign contributions and ultimately on reelection bids. The critics may be right.¹⁹ If that is how it actually works, then politicians are asking the wrong question, morally speaking. In that case, no accounting method can yield the right answer. Under those circumstances, the point of subjecting the decision to public scrutiny is to lead (possibly racist) politicians not to recalculate answers so much as to start asking the right questions.

11. Must Future Generations Be Discounted?

In financial markets, a dollar acquired today is worth more than a dollar we will acquire in a year. The dollar acquired today can be put to work immediately. At worst, it can be put in the bank, and thus be worth perhaps \$1.05 in a year. Therefore, if you ask me how much I would pay today to be given a dollar a year from now, I certainly would not pay as much as a dollar. I would pay something less, perhaps about ninety-five cents. Properly valued, then, the future dollar sells at a discount. Therefore, there is nothing irrational about borrowing against the future to get a profitable project off the ground, even though the cost of borrowing a thousand dollars now will be more than a thousand dollars later.

But here is the catch. There is nothing wrong with taking out a loan, so long as we *pay it back*. But there is something obviously wrong with taking out a loan we have no intention of repaying. In other words, discounting is one thing when the cost of raising capital is internalized; it is something else when we borrow against *someone else's* future rather than our own. We have no right to discount the price that *others* will have to pay for our projects. We have no right to discount externalities. *Redistributive* discounting is objectionable: morally, economically, and sometimes ecologically as well.

Some critics worry about the moral status of the discounting they think CBA presupposes. Thus, Peter Wenz (1989, p. 100) says, "Absurdities arise when the current worth of future human lives is discounted, as CBA requires of all values that will be realized only in the future." As an example of such an absurdity, Wenz (p. 100) goes on to calculate that at a five percent discount rate, "a human life today is worth four human lives that will not be realized for 28.8 years, eight lives that are 43.2 years in the future, and so on." Obviously, Wenz is right: that would be absurd.²⁰ So, why think CBA requires that life's value, or any other value, be discounted? Some economists say it does not, and few (none that I know) would discount the value of lives in the way Wenz says they must.²¹ There are economists who go so far as to claim a proper analysis requires that values *not* be discounted.²² In any case, if we undertake a CBA, we must decide whether to introduce a discount rate. CBA will not make the decision for us. We also must decide whether to discount all considerations or only some. For example, we must decide whether to discount a life in the same way we discount the financial cost of *saving* a life (say, by building safer highways). To philosophers, the decision appears clear-cut: human lives are not commodities, although things we use to save lives typically are.

The thing about affluent people, and the reason why environmentalists are correct (not merely politically correct) to worry about poverty, is that affluent people can afford to be more future-oriented, that is, to operate with lower discount rates. The task, then, is two-fold: first, to teach people to see their future as depending on resources they are in a position to preserve, conserve, or degrade, and, second, to put them in a position where they can afford to be future-oriented.

Conclusions

What can you do with a CBA? You can draw conclusions like this: "We conducted CBA, taking the following costs and benefits into account. The proposal before us appears to pass inspection by the lights of such analysis. We therefore recommend further discussion. Or where the proposal does not pass inspection, where the losers would lose more than the winners would gain, we recommend that the proposal be rejected. In either case, we could be wrong. First, there may be costs or benefits we have not an-

anticipated. Second, even known costs and benefits are often impossible to quantify precisely; therefore, our numbers must be viewed with caution. Third, when used in support of a given proposal, CBA need not be decisive, for there are other grounds upon which policies can be prohibited, favorable CBA notwithstanding. Nevertheless, until someone either identifies additional costs or benefits for us to consider, or else informs us that the proposal violates a treaty (for example) that created rights and obligations that render costs and benefits moot, all we can do is go with our best understanding of the information before us. Barring new information, proceeding in accordance with the result of this CBA appears to be the best we can do.”

I talked about doing CBA with Full Cost Accounting, but no mechanical procedure can be guaranteed to take all costs into account. For any mechanical procedure we devise, there will be situations where that procedure overlooks something important. This is not a reason to reject the very idea of CBA, though. Rather, it is a reason to be wary of the desire to make decisions in a mechanical way. We cannot wait for someone to devise the perfect procedure, guaranteed to give everything its proper weight. Whatever procedures we devise for making decisions as individuals or as a community, we need to exercise judgment. At some point we draw the line, make a decision, and get on with our lives, realizing that any real-world decision procedure inevitably will be of limited value. It will not be perfect. It never will be beyond question.

CBA with Full Cost Accounting is only one form of CBA. Many other forms of CBA are indefensible, and no ethicist would defend them. We do well not to conflate different forms of CBA, though, and we do well not to demonize the general idea of weighing costs and benefits. CBA is an important response to a real problem. However, it is not magic. There is a limit to what it can do. CBA is a way of organizing information. It can be a forum for eliciting further information. It can be a forum for correcting biased information. It can be a forum for giving affected parties a voice in community decision making, thereby leading to better understanding of, and greater acceptance of, the tradeoffs involved in running a community. CBA can be all of these good things, but it is not necessarily so. CBA can constrain a system’s tendency to invite abuse, such as the environmental racism just discussed, but CBA is prone to the same abuse that infects the system as a whole. It is no panacea. It is an antidote to abuse that is itself subject to abuse.

CBA is not inherently biased, but if inputs are biased, then so will be the outputs, generally speaking. However, although the method does not inherently correct for biased inputs, if the process is conducted publicly, so that people can publicly challenge suppliers of biased inputs, there will be some tendency for the process to correct for biased inputs as well. We can hope there will be adequate opportunity for those with minority viewpoints to challenge mainstream biases, but we cannot guarantee it. The most we can say is that CBA done in public view helps to give democracies a fighting chance to operate as democracies are supposed to operate.

NOTES

*A version of this paper will appear in Schmitz and Willott (2002).

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1. Demand/Supply Report of the Ontario Hydro Commission, as quoted in McDonald, Stevenson, and Craig, (1992) pp. 33–34.
2. In speaking to different people, I find that the terms are not quite standardized. What I have in mind when I speak of Full Cost Accounting is what some people call Multiple Accounts Analysis or Life Cycle Analysis. They might reserve the term ‘Full Cost Accounting’ to refer to a kind of CBA that considers all costs, but only in terms of their impact on current stakeholders. Whatever term we use, though, suffice it to say I have in mind a kind of CBA that does not deliberately ignore any cost whatever, including costs imposed on future generations.
3. Mishan, (1976) p. 11.
4. I do not know whether Ontario Hydro’s change of heart was partly in response to the 1992 *Ethical Assessment* of McDonald, Stevenson, and Craig, cited above.
5. And if everyone belongs to one interest group or another, that does not mean we all break even in the final accounting. It is as if a hundred of us sat in a circle, and the government went round the circle collecting a penny from each, then favoring one of us with a fifty cent windfall. After repeating the process a hundred times, we are each a dollar poorer, fifty cents richer, and happy. So Friedman (1989) describes the game.
6. This is the illuminating central metaphor used by Scherer (1990).
7. In modern moral theory, deontology often is thought of as the main theoretical alternative to utilitarianism. Generally and roughly, deontology is the

theory that X is right if and only if X expresses respect for all persons as ends in themselves, and treats no one solely as a mere means.

8. Shrader-Frechette (1998) offers different arguments for a similar conclusion.
9. Kelman (1981, pp. 34–35) argues that there are cases in which an action is right even though its costs exceed its benefits. Kelman has in mind actions that involve keeping a promise or speaking out against injustice, cases in which there is something wrong with the very idea of asking about costs and benefits. In such cases, the balance of costs and benefits normally is not decisive because we should not have been asking about costs and benefits in the first place. All of that is compatible with my claim that, in cases where costs and benefits *should* be taken into account, determining that the losers are losing more than the winners are gaining should be considered a conversation stopper.
10. For a classic discussion of this case, see Thomson (1976).
11. 382 P.2d 109 Oklahoma, 1962. For a discussion of what the case shows about relative merits of statutory versus common law, see Morriss (2000, p. 144).
12. In the terminology of welfare economics, a move is a pareto-improvement when it makes no one worse off and makes at least some people better off. In the most sophisticated critique of CBA of which I am aware, David Copp attributes to E. J. Mishan (citing an earlier work than the one cited above) the view that CBA's justification is linked with the notion of pareto-improvement because when benefits exceed costs, the move is *potentially* pareto-improving. Copp (1985, p. 143) finds this puzzling, and so do I. As Mishan himself admits in his later work (1976, p. 15), "A Pareto improvement which positively requires that when some are made better off, no one is actually made worse off, is assured of fairly wide acceptance. ...A *potential* Pareto improvement, which is consistent with a great many people actually being made worse off, has much less appeal."
13. Hubin (1994, p. 172n) says cost-benefit moral theories (admittedly a slightly different topic) are "absolutely agnostic on the question of what things are of intrinsic value."
14. There is also a debate over whether there is a kind of intrinsic value that does not presuppose the existence of a valuer. We often speak of persons as having a value as ends in themselves, independently of any value attributed to them by other valuers. The question is whether trees, for example, also can in this sense be ends in themselves. The purpose of the "Last Man Argument" in environmental ethics is to set the stage for discussion of this latter question.
15. Kelman has authorized us to delete this phrase from the version of the paper to be reprinted in Schmidt and Willott (2002).
16. See also Lindblom (1994).
17. As gleaned from case studies "Full Cost Accounting For Decision Making At Ontario Hydro" prepared by ICF Incorporated for the Environmental Protection Agency, and "Environmentally Sustainable Development Guidelines For Southeast False Creek," prepared by Sheltair Inc. For the City of Vancouver, 1998.
18. Hargrove (1989, p. 211) notes that quantitative analysis may be inappropriate.

- ate when dealing with intrinsic values. Fair enough, but quantitative analysis often is inappropriate with purely instrumental values too. Not all instrumental values are reducible to monetary values. For example, seat belts are of purely instrumental value, yet when the car hits the ditch and begins to roll over, no amount of money would be a reasonable substitute for having our seat belts fastened.
19. Bullard (1990).
 20. Actually, it looks economically problematic as well. If we suppose a zero inflation rate, then a dollar in the future is not worth less than a dollar today. It is worth exactly one dollar. That does not change when we introduce the possibility of earning interest. The possibility of interest means only that it is better to get the dollar earlier because we then can earn additional interest. If lives are like dollars in that respect, then the implication is not that a life later is worth less than a life now. Rather, the implication is very roughly that, just as it would be better to have an extra year's interest, it would be better to have an extra year of life. (That is, if I were going to be given a second life, and if I knew my second life would end in the year 2150, I would pay to have that life begin in 2110 rather than 2130. For analogous reasons, the dollar that began to collect interest in 2110 rather than 2130 would sell at a premium.)
 21. For a typically circumspect discussion, see Stiglitz (1994).
 22. See Cowen (1992); see also Cowen and Parfit (1992).

REFERENCES

- Bullard, Robert. (1990) *Dumping In Dixie: Race, Class, and Environmental Quality*, Boulder: Westview Press.
- Copp, David. (1985) "Morality, Reason, and Management Science: the Rationale of Cost-Benefit Analysis," *Social Philosophy and Policy* 2 (pp. 128–51).
- Cowen, Tyler. (1992) "Consequentialism Implies a Zero Rate of Discount," *Philosophy, Politics, and Society*, sixth series, edited by Peter Laslett and James Fishkin, New Haven: Yale University Press (pp. 162–68).
- Cowen, Tyler, and Derek Parfit. (1992) "Against the Social Discount Rate," *Philosophy, Politics, and Society*, sixth series, edited by Peter Laslett and James Fishkin, New Haven: Yale University Press (pp. 144–61).
- Friedman, David. (1989) *The Machinery of Freedom*, LaSalle: Open Court Publishing.
- Hargrove, Eugene C. (1989) *Foundations of Environmental Ethics*, Denton: Environmental Ethics Books.
- Hubin, Donald C. (1994) "The Moral Justification of Benefit/Cost Analysis," *Economics and Philosophy* 10 (pp. 169–94).
- Kelman, Steven. (1981) "Cost-Benefit Analysis: An Ethical Critique," *Regulation* (Jan./Feb., pp. 33–40).
- Lindblom, Charles. (1994) "The Science of Muddling Through," *Foundations of Administrative Law*, edited by Peter Schuck, New York: Oxford University Press (pp. 104–10).

- McDonald, Michael, J.T. Stevenson, and Wesley Craig. (1992) *Finding a Balance of Values: An Ethical Assessment of Ontario Hydro's Demand/Supply Plan*, Report to Aboriginal Research Coalition of Ontario.
- Mishan, E. J. (1976) *Elements of Cost-Benefit Analysis*, 2nd ed., London: George Allen & Unwin.
- Morriss, Andrew. (2000) "Lessons for Environmental Law from the American Codification Debate," *The Common Law and the Environment*, edited by Roger Meiners and Andrew Morriss, Lanham: Rowman & Littlefield (pp. 130–57).
- Sagoff, Mark. (1981) "At the Shrine of Our Lady of Fatima, or Why Political Questions Are Not All Economic," *Arizona Law Review* 23 (pp. 1283–98).
- Scherer, Donald. (1990) *Upstream/Downstream: Issues in Environmental Ethics*, Philadelphia: Temple University Press.
- Schmidt, David and Elizabeth Willott. (2002) *Environmental Ethics: What Really Matters. What Really Works*, New York: Oxford University Press.
- Shrader-Frechette, Kristin. (1998) "A Defense of Risk-Cost-Benefit Analysis," *Environmental Ethics: Readings In Theory and Application*, edited by Louis Pojman, 2nd ed., Belmont: Wadsworth (pp. 507–14).
- Stiglitz, J. E. (1994) "The Rate of Discount for Benefit-Cost Analysis and the Theory of the Second Best," *Cost-Benefit Analysis*, edited by Richard Layard and Stephen Glaister, Cambridge: Cambridge University Press (pp. 116–59).
- Styron, William. (1979) *Sophie's Choice*, New York: Random House.
- Thomson, Judith Jarvis. (1976) "Killing, Letting Die, and the Trolley Problem," *Monist* 59 (pp. 204–17).
- Wenz, Peter. (1989) "Democracy and Environmental Change," *Ethics and Environmental Responsibility*, edited by Nigel Dower, Aldershot: Avebury (pp. 91–109).