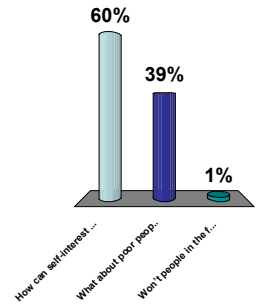


Today's lecture: What is cost-benefit analysis and is it ethical?

What question is at the heart of Solow's "sustainability paradox"?

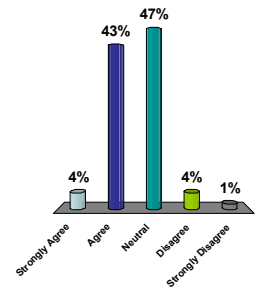
1. How can self-interest lead to sustainability?
2. What about poor people today?
3. Won't people in the future be much wealthier?



Today's lecture: What is cost-benefit analysis and is it ethical?

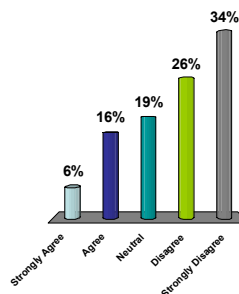
Cost-benefit analysis is a Good Thing™ (mostly)

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree



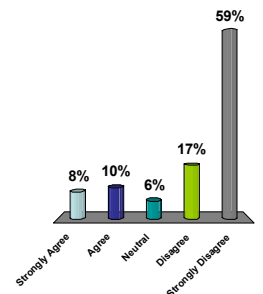
You can put a value on human life.

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree



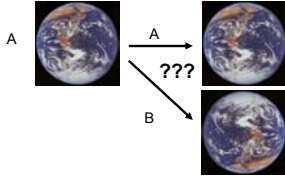
The value of human life in India is less than in the U.S.

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree



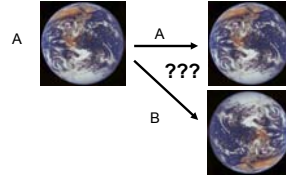
CBA: The basic idea

- Should we keep things the way they are, or should we make a change?
- If we're currently living in world A, should we stay in world A or move to world B?



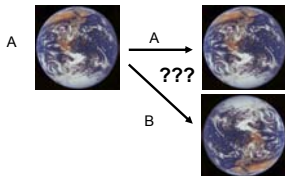
CBA: The basic idea

- Let's look at the benefits for the winners (How much are you willing to pay to move from A to B?) and at the costs for the losers (How much would you need to be paid to move from A to B?).



CBA: The basic idea

- The cost-benefit test: Do the benefits exceed the costs?
- With repeated use over time, everybody wins. (Sounds like “mutual coercion”...)



What is Cost-Benefit Analysis?

- CBA is an economic tool to help make controversial public policy decisions.
- CBA is based on the philosophy of utilitarianism (Bentham, Mill, “greatest good for the greatest number”). It is unabashedly anthropocentric.
- CBA is about preferences, not money!
- CBA can be *informational* or *mandatory*.

Informational CBA

- Richard Posner: “If the government and the taxpayer and the voter all know—thanks to cost-benefit analysis—that a project under consideration will save 16 sea otters at a cost of \$1 million apiece, and the government goes ahead, I would have no basis for criticism.”
- The big idea: Let's look and understand our options before making a decision.

Do you support the *informational* use of cost-benefit analysis?

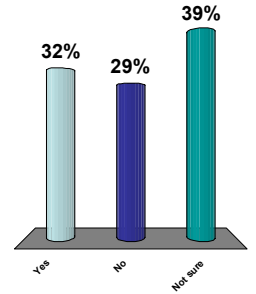
1. Yes
2. No
3. Not sure

Mandatory CBA

- CBA is a statutory requirement for many federal and state agencies.
- Revised Code of Washington RCW 34.05.328: "Before adopting a rule... an agency shall...determine that the probable benefits of the rule are greater than its probable costs..."
- The big idea: CBA is a good idea, especially compared to the alternative.

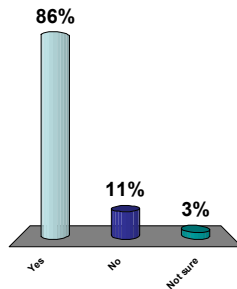
Do you support the *mandatory* use of cost-benefit analysis?

1. Yes
2. No
3. Not sure



Should rural and urban households have the same water quality standards?

1. Yes
2. No
3. Not sure

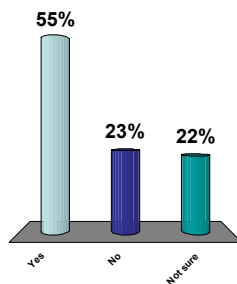


Example: Arsenic in drinking water

- Arsenic occurs naturally in some water systems (and is human-caused in others).
- Long-term exposure can cause cancer.
- Reducing levels from 50ppb to 10ppb may save 20-30 lives nationally.
- Urban areas: \$0.86/household per year.
- Rural areas: \$300/household per year.

Should rural and urban households have the same water quality standards?

1. Yes
2. No
3. Not sure



Alternatives

- Storage system
- Green roofs
- Example from Sea



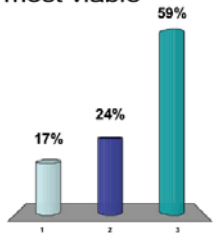
Welcome to the virtual tour of the 110th Cascade project, a Seattle Public Utilities (SPLU) project local in northward Seattle. This prototype project, the second NCS project, features a series of urban drainage and street design innovations.

The tour begins at 3rd Avenue NW and moves east along NW 110th Street to Greenwood Avenue NW. At each stop in the tour, labeled on the map of the project site below, you'll learn about the goals of the pioneering project.

1 Drainage 2 Water Quality 3 Landscaping 4 Mobility 5 Community 6 Education

In your view, which alternative seems the most viable

- Using cisterns (tanks) to collect runoff
- Requiring green roofs
- Using the S.E.A.-Street model

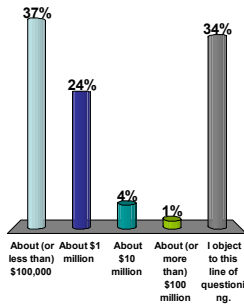


Example: Newborn screening

- Should all newborn babies be screened for rare diseases that are fatal if undetected?
- Example: Maple syrup urine disease (MSUD) can lead to brain damage and death; it affects 1 in 100,000 infants (about 1 a year in Washington State).
- What is the maximum amount of the state budget you'd set aside for screening? (Or do you object to this line of questioning?)

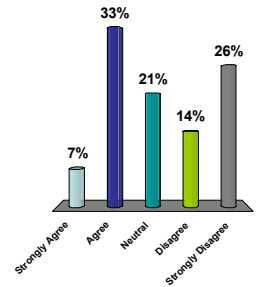
Maximum WA state budget \$\$\$ for MSUD newborn screening?

- About (or less than) \$100,000
- About \$1 million
- About \$10 million
- About (or more than) \$100 million
- I object to this line of questioning.



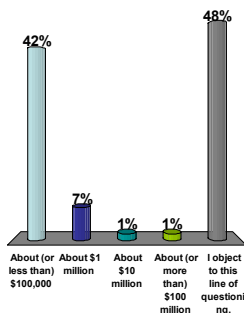
You can put a value on human life.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree



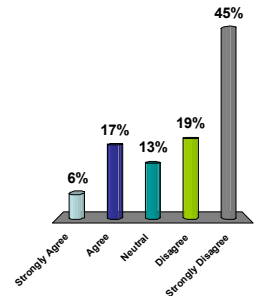
Maximum India state budget \$\$\$ for MSUD newborn screening?

- About (or less than) \$100,000
- About \$1 million
- About \$10 million
- About (or more than) \$100 million
- I object to this line of questioning.



The value of human life in India is less than in the U.S.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

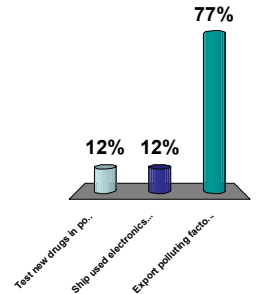


CBA is controversial because the issues are controversial!

- CBA makes us consider options and outcomes.
- What's the alternative to CBA?
- Winston Churchill: "Democracy is the worst form of government except all those other forms..."
- Is CBA the worst form of decision-making except for all those other forms?
- Economists tend to be skeptical of other approaches (because people are selfish!)
- Ex: birth control, orphan drugs.

The Larry Summers memo argued that rich countries should...

1. Test new drugs in poor countries
2. Ship used electronics to poor countries
3. Export polluting factories to poor countries



Information and misinformation

"A lie can get halfway around the world while the truth is putting its boots on."

- <http://www.bellaonline.com/articles/art11064.asp>
- <http://www.number-10.gov.uk/output/Page127.asp>
- <http://www.randomhouse.com/catalog/display.pperl?isbn=9781400064281>
- <http://serendip.brynmawr.edu/local/scisoc/emergence/resources/kuperberg18jan06.html>
- <http://english.pravda.ru/world/2002/01/25/26007.html>
- <http://www.quotationsbook.com/quotes/23441/view>
- <http://lib.washington.edu/>
- <http://www.oxfordreference.com/views/ENTRY.html?subview=Main&entry=t91.e2278&authstatuscode=202>

Three CBA controversies

- Measurement issues: Can you (and should you) put a value on nature? Does it make sense for the EPA to value a human life at about \$6 million?
- Discounting: Does CBA undervalue the future by using *present values*? (Recall exponential growth: after 300 years, \$1 invested at 5% interest becomes \$2.3m.)
- Lomborg on climate change.