Existence value: Active, passive, and non-use value

- People may place a value on the very existence of “unique phenomena of nature” that they neither visit nor ever anticipate visiting.
- Difficulty of drawing a sharp line between use and non-use.
- Active use – person makes some nonrivalrous use of the object in question (hiking in the wilderness).
- Passive use or non-use – person values good not actively used (thinking about existence of wilderness).
- Non-use value – people are willing to pay even though they don’t use it.
### Benefit categories

**TABLE 9-1** Taxonomy of Benefits: Possible Partitioning of WTP

<table>
<thead>
<tr>
<th>Type of Use</th>
<th>Benefit Category</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Active Use</strong></td>
<td>Rivalrous consumption</td>
<td>Logging of old-growth forest</td>
</tr>
<tr>
<td></td>
<td>Nonrivalrous consumption: direct</td>
<td>Hiking in wilderness</td>
</tr>
<tr>
<td></td>
<td>Nonrivalrous consumption: indirect</td>
<td>Watching a film of wilderness area</td>
</tr>
<tr>
<td><strong>Passive Use</strong></td>
<td>Option value</td>
<td>Possibility of visiting wilderness area in the future</td>
</tr>
<tr>
<td>(nonuse)</td>
<td>Pure existence value: good has intrinsic value</td>
<td>Perceived value of natural order</td>
</tr>
<tr>
<td></td>
<td>Altruistic existence value: gift to current generation</td>
<td>Others hiking in wilderness</td>
</tr>
<tr>
<td></td>
<td>Altruistic existence value: bequest to future generation</td>
<td>Future others hiking in wilderness</td>
</tr>
</tbody>
</table>

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Active use

- **Rivalrous consumption goods:**
  - Example: Mushroom hunting
  - Value is easily determined through markets.

- **Direct nonrivalrous consumption:**
  - Example: Hiking in a wilderness
  - Consumption is on site and can usually be observed.

- **Indirect nonrivalrous consumption:**
  - Example: A book or a video of a wilderness
  - Consumption is offsite (a book or movie about something) and also may be observable.
Passive use

- **Option value:**
  - value to keep open the possibility of use in the future.

- **Pure existence value:**
  - good has intrinsic value apart from use value.

- **Altruistic existence value:**
  - driven by desire for others to consume the good.

- **Bequest value:**
  - altruism is directed toward future generations.
Difficulty with non-use value

- Definition of non-use is not clear
  - Is talking about a wilderness use or non-use?
- A good may have both use and non-use values
  - Difficult to separate the non-use value and use value components from the individual’s total WTP
  - The partitioning of the total benefits between use and non-use values is conceptually ambiguous.
  - When each effect is valued independently as a separate benefit category, the sum is likely to overestimate the total WTP.
- Non-use value cannot be directly observed, only discovered through stated preferences.
  - Contingent Valuation Method
Measurement of existence value

- **Directly Eliciting Total Economic Value**
  - Directly eliciting total value from surveys
  - Requires the analyst to frame correct questions and to convey a full description of the policy in question.

- **Special difficulty with altruistic existence values:**
  - Altruistic values may depend on the distribution of costs and benefits: who will use the good and who bears the cost of maintaining it?

- **WTP of use and non-use values are sensitive to the order in which they are valued**
  - Use values should normally be discovered before non-use values, or else non-use will be overestimated.
  - Sensitive to geographic areas
    - higher existence values for assets in closer proximity
    - The extrapolation of samples over a large geographic area is controversial.
Public opinion and economic analysis frequently conflict in the evaluation of public subsidies for the construction and operation of stadiums for professional sports teams. Valid CBAs of sports stadiums based only on use benefits almost never find positive social net benefits, especially if conducted from the national perspective. One possible exception is the baseball stadium built for the Baltimore Orioles at Camden Yards, which appears to have increased average attendance from 30 thousand to 45 thousand per game. Further, approximately 70 percent of the increase in attendance consists of residents from outside Maryland, suggesting the possibility of positive net benefits if the CBA were conducted from a state rather than a national perspective.

Bruce W. Hamilton and Peter Kahn conducted a detailed CBA from the perspective of the residents of Maryland. They reported the following annual benefits and costs:

<table>
<thead>
<tr>
<th>Annual Benefits:</th>
<th>$3.36 million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job creation</td>
<td>$0.48 million</td>
</tr>
<tr>
<td>Out-of-stadium incremental taxes</td>
<td>$1.25 million</td>
</tr>
<tr>
<td>Incremental admission tax</td>
<td>$1.20 million</td>
</tr>
<tr>
<td>Sales tax on incremental stadium spending</td>
<td>$0.43 million</td>
</tr>
</tbody>
</table>

| Annual Costs:                     | $14.00 million |
| Annual Net Benefits:              | $10.64 million |
The net cost of the stadium to Maryland taxpayers is $10.64 million per year, which is equivalent to about $14.20 per Baltimore household per year. Hamilton and Kahn note that building the stadium was probably necessary to keep the Orioles from eventually moving to another city, and that citizens of Maryland, even if they never attend Orioles games, may place a value on the stadium because they get pleasure from simply having the Orioles in Baltimore. Hamilton and Kahn call these values “public consumption benefits,” which can be thought of as passive use benefits, consisting of some combination of option value and existence value. Only if the annual value of public consumption benefits exceed $10.64 million would Oriole Park at Camden Yards pass the net benefits test.

Should existence values be included in CBA?

- Existence values for unique and long-lived assets should be estimated whenever possible.
- Costs and benefits should be presented with and without their inclusion to make clear how they affect net benefits.
- When existence values can’t be measured, the analyst should discuss their possible significance on the sign of net benefits.