Heuristics and biases

Judgment

- Drawing conclusions from evidence
- The evidence we consider may be incomplete
  - Unavailable, too much to process
- The logic we use may be heuristic
  - A rule of thumb that’s often relatively efficient
- What heuristics do we use?
  - When do they fail us?
  - Short answer: We use lots of heuristics, and they often meet our needs

Availability heuristic

- Using the availability of examples in memory to judge the frequency of an event
- Used to fill in for actual knowledge
  - Could look up the answer, but that’s costly, relative to the benefit
- Predicts that factors that affect availability of examples should affect judgments
  - E.g., effects of school shootings, aviation disasters, etc.

Representativeness heuristic

- Assuming that the instances of a category resemble the prototype
  - Affords inferences from one to the other
- The prototypical public-interest lawyer is concerned about social justice
  - The prototypical lawyer not so much
  - Assuming that the instance resembles the prototype makes her a public-interest lawyer

Kathy is outspoken and very bright, and is deeply concerned with issues of discrimination and social justice.
Which of the following is more likely to be true?
(a) Kathy is a lawyer
(b) Kathy is a public-interest lawyer
Objectively, (a) is more likely
Because (b) is a subset of (a)

Which caused more deaths in the US in 2000?

<p>| | | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Strokes</td>
<td>167,366</td>
<td>All accidents</td>
</tr>
<tr>
<td>Suicide</td>
<td>29,199</td>
<td>Homicide</td>
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</tbody>
</table>
Is the Mississippi longer or shorter than 500 miles?
How long is it? _____ miles

Is the Mississippi longer or shorter than 3000 miles?
How long is it? _____ miles

Is the Mississippi longer or shorter than 500 miles?
How long is it? _____ miles

Is the Mississippi longer or shorter than 3000 miles?
How long is it? _____ miles

Anchoring and adjustment heuristic(s)

• Anchor: Initial idea about a number
  – In place of actual knowledge
  – Here, the anchor was supplied by the first question, but could come from elsewhere

• Adjustment: An idea about how to adjust the number to be more correct
  – Implies we have an idea that the anchor was wrong, somehow

Illusory covariation

• A “pattern” (covariation) that people perceive and use as basis for an inference
  – Pattern may or may not exist
  – Perception may be influenced by biases
  • E.g., confirmation bias

CT scan, normal brain
CT scan, Terri Schiavo’s brain (liquefied)
Illusory covariation

- “Pattern” (covariation):
  - Terri opens her eyes at roughly the same time as the attendant prompts her to
  - Covariation is between her eyes opening and the prompt

- Inference: That she was responding
  - A real pattern would involve many instances

Exam

- Multiple choice was out of 44 points
- Short answer was out of 16 points
  - Short-answer total is on p. 5 or on back of exam
- Key will be posted on course website
  - If you have questions, check then key first, then check with me

Exam results

- Mean = 43.8/60 (73%)