

Forming Good and Bad Decisions and Judgments

- The availability heuristic
- Overconfidence
- Belief Perseverance
- Framing Effects
- Reason based-choice (not in your textbook)
- Thinking creatively

Availability (heuristic)

The availability heuristic is the heuristic where people judge the likelihood or frequency of an event based on its vividness or ease to recall specific examples.

Can we think of examples?



If NO, then
we judge the event as
unlikely

If YES, then
We judge the event as
likely

Examples

- (1) Estimate how many words have a k in 3rd position (cake) and how many words begin with a k (kitten)?
- (2) Estimate how many English words fit the pattern:
(a) _ _ _ _ n _ (b) _ _ _ i n g
- (3) Are there more deaths due to homicide or due to diabetes-related deaths in America?

Normally, we would count the frequency of events to get an accurate count. However, instead of counting, we take a “short cut” and think of the number of examples to estimate the frequency of these events.

Availability Heuristic

BACK STORY

WHAT SHOULD YOU REALLY BE AFRAID OF?

Fear, as FDR noted in 1933, paralyzes those who succumb to it. And yet much of what we worry about today is based on hype rather than reality. Yes, media headlines are partially to blame. But some things (sharks!) are just downright scary. Using the most recent U.S. data available, we hereby present a list of unsettling threats and their far riskier counterparts.

MURDERS (2008) 14,180	SUICIDES (2008) 33,289
CHILDREN ABDUCTED BY STRANGERS (1999) 115	CHILDREN WHO DROWN IN POOLS (2008) 288
BURGLARIES (2007) 2.2 MILLION	IDENTITY THEFTS (2005) 8.3 MILLION
SHARK ATTACKS (2008) 28	DOG BITES 4.5 MILLION*
AMERICANS KILLED BY TERRORIST ATTACKS AROUND THE WORLD (2008) 33	AMERICANS WHO DIE FROM THE SEASONAL FLU 36,171*
DEATHS BY ALLERGIC REACTION TO PEANUTS 50-100*	DEATHS BY UNINTENTIONAL POISONING (2009) 27,531
WOMEN WHO DIE FROM BREAST CANCER (2009) 40,170	WOMEN WHO DIE FROM CARDIOVASCULAR DISEASE (2009) 432,709
FATAL AIRLINE ACCIDENTS (2005) 321	FATAL CAR CRASHES (2004) 34,017
AMERICANS AUDITED BY THE IRS (2009) 1.4 MILLION	U.S. DEATHS (2007) 2.4 MILLION

* ANNUAL AVERAGES AND ESTIMATES.
SOURCES: AMERICAN CANCER SOCIETY; AMERICAN HEART ASSOCIATION; CENTERS FOR DISEASE CONTROL AND PREVENTION; CONSUMER PRODUCT SAFETY COMMISSION; FEDERAL TRADE COMMISSION; INTERNAL REVENUE SERVICE; INTERNATIONAL SHARK ATTACK FILE; NATIONAL COUNTERTERRORISM CENTER; NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION; NATIONAL TRANSPORTATION SAFETY BOARD; NEW ENGLAND JOURNAL OF MEDICINE; U.S. DEPARTMENT OF JUSTICE.

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AMERICAN CANCER SOCIETY



Availability Heuristic

Can we think of examples of the phenomena in question
(are examples psychologically available)?



If NO, then
we judge the event as
unlikely

If YES, then
We judge the event as
likely

k in 3rd position (c <u>a</u> ke)	begin with a k (<u>k</u> itten)
___ _ n _	___ _ i n g
diabetes-related deaths	deaths due to homicide

Other “Real-Life” Examples of the Availability Bias (Availability Heuristic)

- We overestimate the likelihood of winning the lottery because we hear about the winners all the time and underestimate the likelihood of losing because we don't hear about the losers.
- Those who are unemployed tend to overestimate the unemployment rate because they associate with the unemployed more often and examples are more psychologically available
- Those who are employed tend to underestimate the unemployment rate because they associate with those who have a job. It is easier to think of examples of people who have jobs.
- If we constantly tell ourselves negative self-statements, we tend to recall negative things about ourselves. If we constantly tell ourselves positive self-statements, we tend to recall positive things about ourselves.
- We also think of creative geniuses as a sudden light bulb of inspiration that leads to success because we hear about the successes. What we don't hear about all the failures.

How does the availability heuristic affect beliefs in psychology?

- People incorrectly believe that relationships between parents and adolescents are typically in constant conflict (chapter 10).
- People incorrectly believe that a majority of the elderly (those over 65) are in nursing homes. Only 5% are in nursing homes (chapter 10).
- Well intentioned Caucasian police officers can develop prejudicial attitudes toward minorities if they are to patrol neighborhoods that are predominately non-Caucasian.

Ego-centric bias

The belief that you contributed more to a group effort, such as a marriage or team project than you actually did.

This occurs because you can easily recall your contribution (the availability heuristic), rather than someone else's contributions, thus overestimating the relative proportion of your contributions.

- Researchers Michael Ross and Fiore Sicoly (1970) found that couples overestimated the relative contribution to their relationship:
 - both would say they put the dishes away more often than the other person,
 - the other person starts arguments more, etc.
- Basketball teams were more likely to attribute the turning point of the game to their own team than of the other team (regardless if it was a men's or women's team—there was no difference among gender).
- A student wrote that he thinks CEOs deserve an enormous salary because they think of all the thing they do for their corporation and not all of the other things everyone else does.



Ego-Centric Bias

Some people are motivated to overestimate the amount of work they contributed to a group effort, but the overestimation cannot be entirely explained by motivation.

There is a cognitive component.

- Recognizing the ego-centric bias, makes it is easier to understand how disagreements about relative contributions to group efforts can lead to disagreements, arguments and conflict.
- Without recognizing the possibility of the ego-centric bias, it can make it difficult to work together in good faith and difficult to maintain good relations.
- It is difficult to gauge who is overestimating their contribution in hindsight. Most students always accuse the other person of overestimating their contribution.

References:

Ross, M. and Sicoly, F. (1979). Journal of Personality and Social Psychology. 37, 322-336.

Example: I talked to my dad on the phone last night, and he told me that he wished I could have found out the bus schedule from Eugene to Portland for him, so he could choose to rent a car, or take the bus to Eugene (he flies in today). He said that he had already done so much in preparation for this visit, that the least I could do is check on the bus schedule.

Explanation of ego-centric bias: He forgets that I have done a lot of work on this end to prepare for his visit. He only realized what he has done, and to him, he feels that he has contributed more than I have.

Potential Impacts: If I didn't realize that he was suffering from the ego-centric bias, I would have been very angry with him last night. My understanding of this bias helped me remain cool when my dad expressed his opinion (instead of getting mad at him).

Example: When I was young, my brother and I had to do chores around the house. One of these chores was to put away the dishes after the dishwasher finished washing them. Quite often my brother would disagree with me about “whose turn it is to put away the dishes”. He would claim that he seems to always put away the dishes, while I would think the same thing.

Explanation of the ego-centric bias: When estimating how often each of us puts away the dishes, we easily think of all the times we put away the dishes and not the times the other person put away the dishes, thus inflating our own estimate.

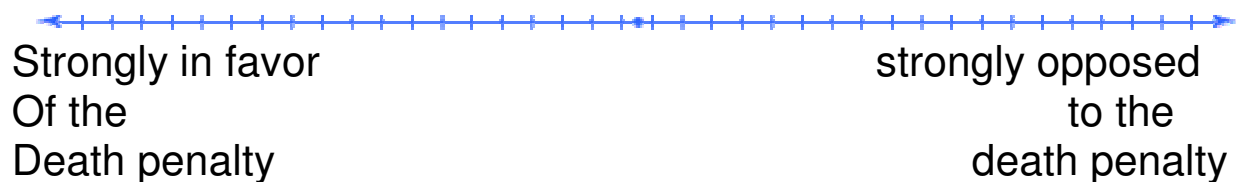
Potential impacts of not recognizing the ego-centric bias:

Years later after studying the psychology of thinking, I realized that my brother was not trying to be a jerk and was lazy about putting away the dishes. In his mind he really thought he put away the dishes more often than me. Likewise, I thought I put away the dishes more often. It is difficult to assess who really put away the dishes more often than the other person. Without realizing this as a factor in our disagreement, we could have escalated the conflict between us, think less of each other or get angry at one another (which we did).

Belief Perseverance

Clinging to one's initial conceptions after the basis on which they were formed has been discredited.

People were found who were strongly in favor of the death penalty and strongly opposed to the death penalty.



Both groups were shown two pieces of evidence. One strongly showed the death penalty deterred crime and the other showed the death penalty did not deter crime. Each study readily disputed the opposing study.

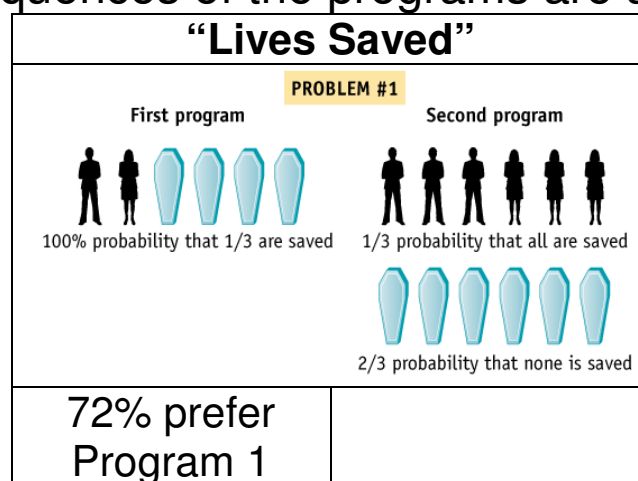
With mixed evidence, you would expect people's view on the death penalty would become more moderate. They actually became more extreme.

Asking people to become "as objective and unbiased as possible" did little to reduce belief perseverance. However, considering how the study would have shown the opposite result reduced belief perseverance. However, this is something we normally don't do.

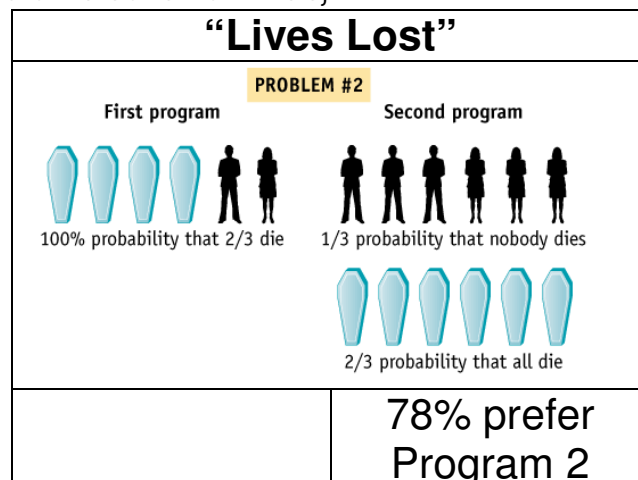
Framing Effects

Framing effects are when people give different answers to the same problem depending on how it is phrased (or framed). In rational choice theory, two frames are logically equivalent, should have the same response.

Imagine that the U.S. is preparing for the outbreak of an unusual disease, which is expected to kill 600 people. Two alternative programs have been proposed. Assume that the exact scientific estimates of the consequences of the programs are as follows:



However, when you describe it in the following way, which is logically equivalent to the first,



Framing Effects

Unleaded Gas: \$ 4.05
\$ 3.95 cash discount

Unleaded Gas: \$ 4.05 credit card surcharge
\$ 3.95

Most people prefer a gas station that provides the cash discount than the credit card surcharge.



Framing Effects

According to rational decision theory, each of the four programs have the same expected value (probability x lives saved). In each of the first description, people tend to be risk averse with gains (lives saved). In the second case, they are risk seeking with losses (lives lost).

When college-aged female participants were randomly assigned to receive

- A pamphlet describing the negative consequences of not performing breast self-examination (BSE) or
- A pamphlet describing the positive consequences of performing breast self-examination (BSE).

Those receiving pamphlets describing the negative consequences of not performing the BSE had more positive BSE attitudes, intentions and behaviors.

Other examples

- Ground beef that is described as 75% lean is described being better than being described as 25% fat.
- Students feel safer with condoms that are 90% successful versus those that are have a 10% failure rate.
- Samoa Air announced that it would charge passengers by weight. Is this a extra charge for heavy people or a discount for lighter people

Framing Effects: Language

In a CBS poll, people were asked how they felt about homosexuals or gay men and lesbians serving in the military using one of two questions.

- Do you favor or oppose homosexuals being allowed to serve openly?
- Do you favor or oppose gay men and lesbians being allowed to serve openly?

DO YOU FAVOR OR OPPOSE _____ BEING ALLOWED TO SERVE OPENLY?		
	"Homosexuals"	"Gay Men & Lesbians"
Favor	44%	58%
Oppose	42%	28%

How you are asked the question affect how much you are in favor or opposed to gay men and lesbians or homosexuals being allowed to serve openly in the military.

Other examples of how small changes in wording can affect you are the following:

- Death taxes or estate taxes
- Freedom fighters or terrorists
- Taxpayers or middleclass
- Illegal immigrants or undocumented workers
- Home or a house
- Cash discount or credit card surcharge
- Equal rights versus special rights

Framing Effects: Reason-Based Choice

Like framing effects, logically equivalent frames should not affect the outcome of a decision.

Consider the following problem:

Imagine that you serve on the jury of an only-child sole-custody case following a relatively messy divorce. The facts of the case are complicated by ambiguous economic, social and emotional considerations, and you decide to base your decision entirely on the following few observations:

Parent A	Parent B
<ul style="list-style-type: none">• Average Income• Average health• Average working hours• Reasonable rapport with the child• Relatively stable social life	<ul style="list-style-type: none">• Above-average income• Minor health problems• Lots of work-related travel• Very close relationship with the child• Extremely active social life

To which parent would you award sole custody of the child?

- 55% of the participants would award custody to parent B



However, when asked

To which parent would you deny sole custody of the child?

- 64% of the participants would deny custody to parent B.



- When asked which parent should you award custody, people looked for reasons to justify awarding custody and focused on the positive attributes of Parent B.
- When asked which parent should you reject custody, people looked for reasons to justify rejected custody and focused on the negative attributes of Parent B.

Is a new drug shown to be safe?
Is a new drug shown to be dangerous?



Women in military combat units have shown no improvement in combat readiness

Women in military combat units have shown no declines in combat readiness



