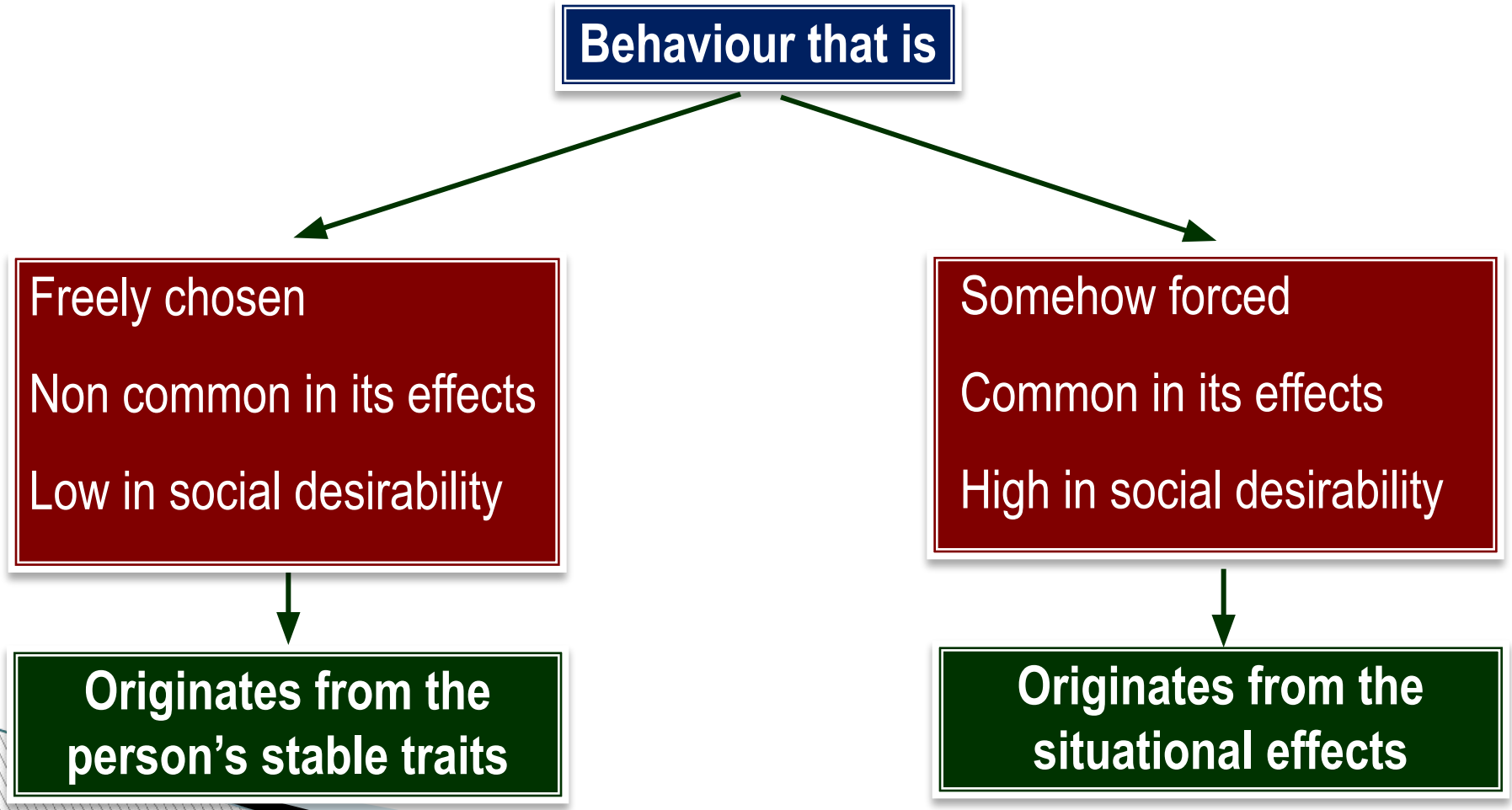
Social Cognition

Lecture 2

Correspondent Inference Theory



Kelley's Covariation Model

- ***Kelley's covariation theory*** derived principally from **Heider's covariation principle**, which states that people explain events in terms of things that are present when the event occurs but absent when it does not.

Kelley's Covariation Model

Attributions based on 3 kinds of info, which represent the degree to which:

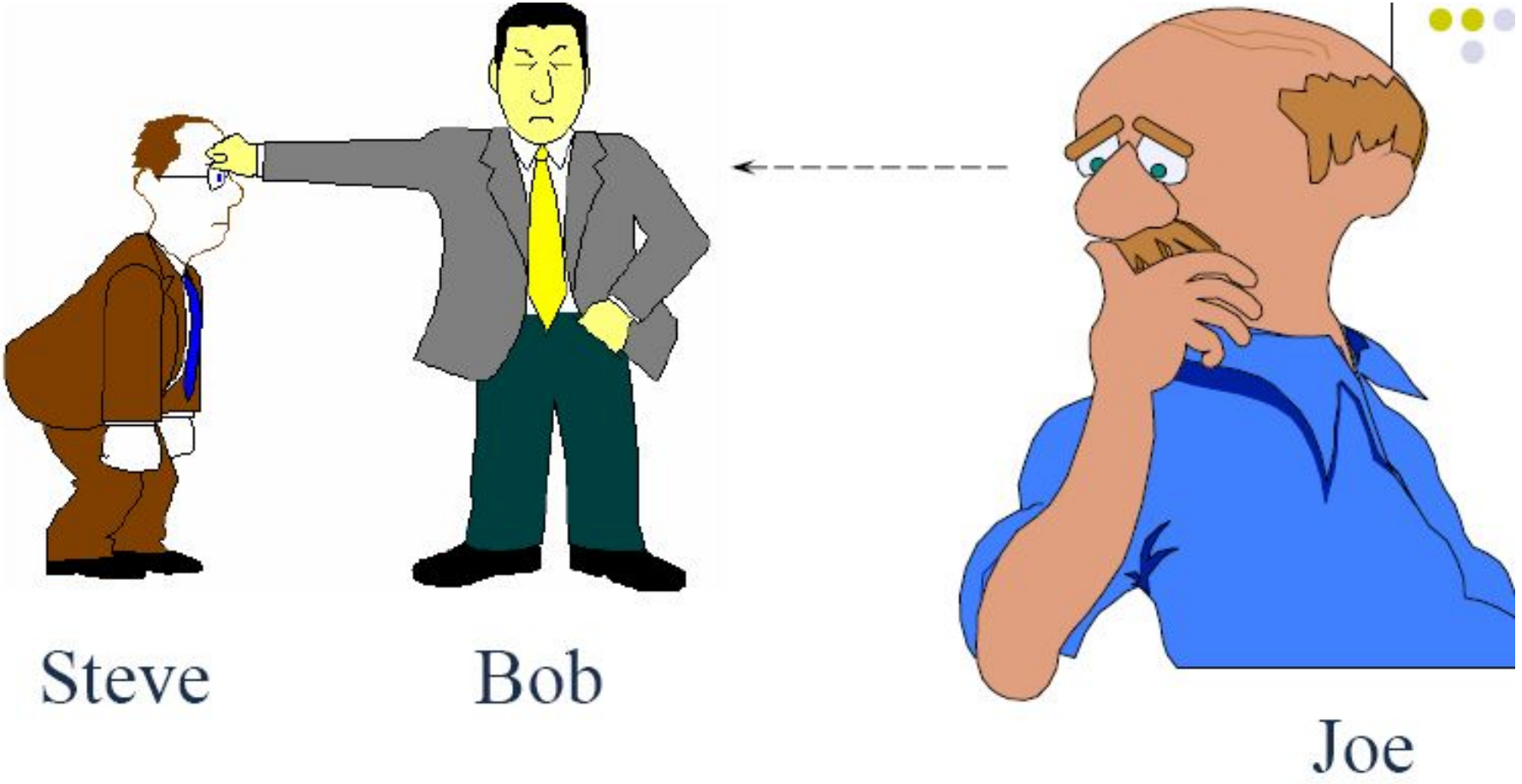
- **Consensus**
  …**other actors** perform the same behavior with the same object.

Kelley's Covariation Model

- **Consistency**
  …the actor performs that same behavior toward an object on **different occasions**.

Kelley's Covariation Model

- **Distinctiveness**
  …the actor performs **different behaviors** with different targets.



Joe observes Bob hitting Steve. How does Joe explain this behaviour?

Kelley's Attribution Model: External

- High Consensus
  (Everyone hits Steve)
- High Consistency
  (Bob always hits Steve)
- High Distinctiveness
  (Bob only hits Steve)

Kelley's Attribution Model: Internal

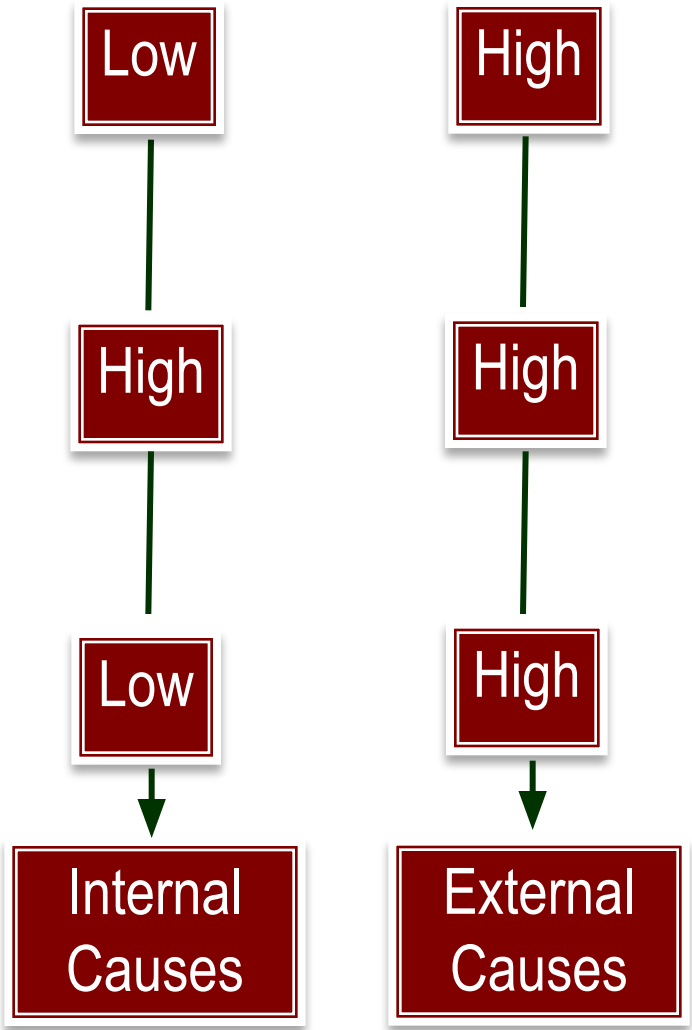
- Low Consensus
  (Only Bob hits Steve)
- High Consistency
  (Bob always hits Steve)
- Low Distinctiveness
  (Bob hits everyone)

Theory of Causal Attribution

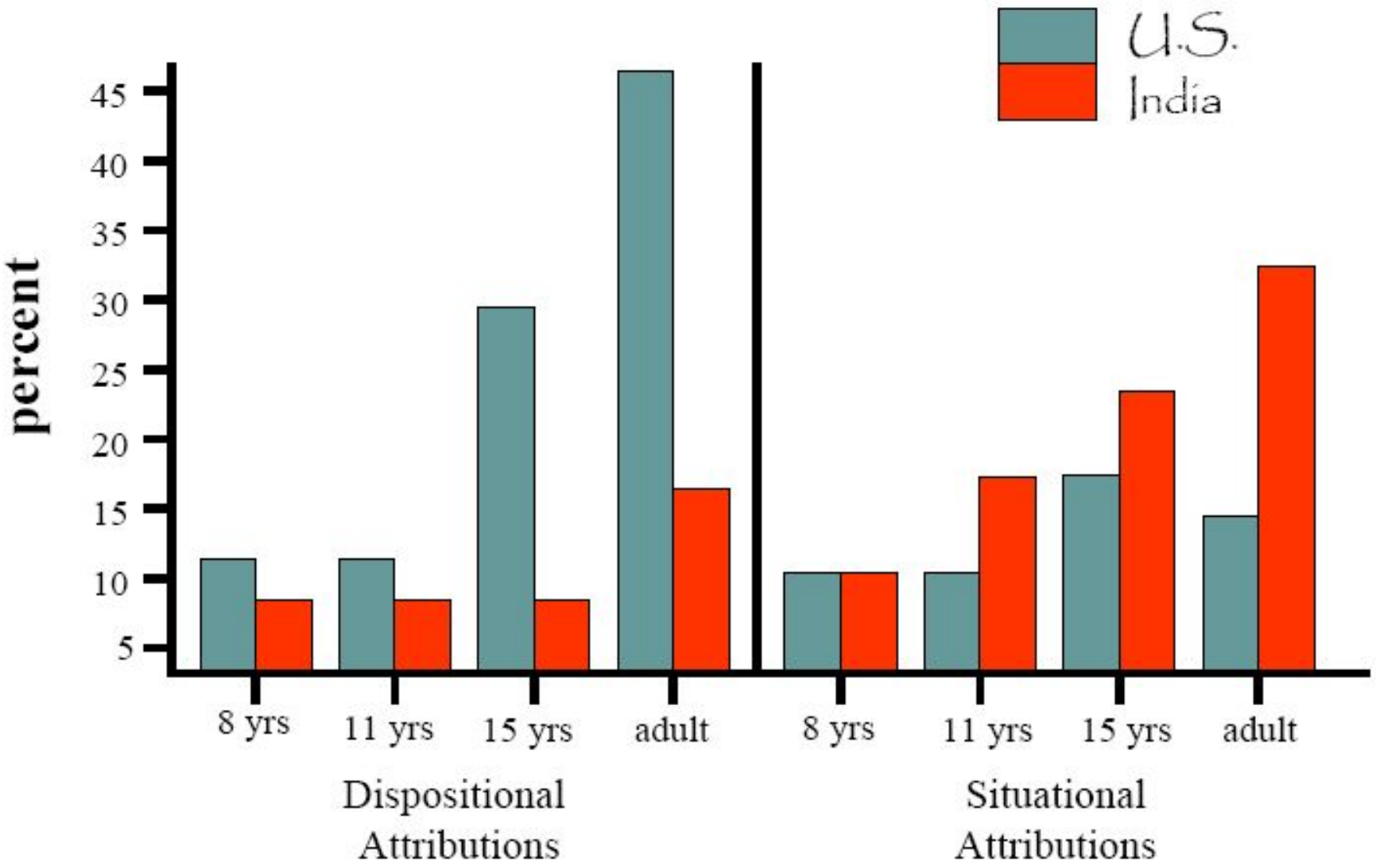
Consensus
The extent to which an individual's response is similar to one shown by others

Consistency
The extent to which an individual responds to a given situation in the same way as on different occasions

Distinctiveness
The extent to which an individual responds in the same way as to different situations

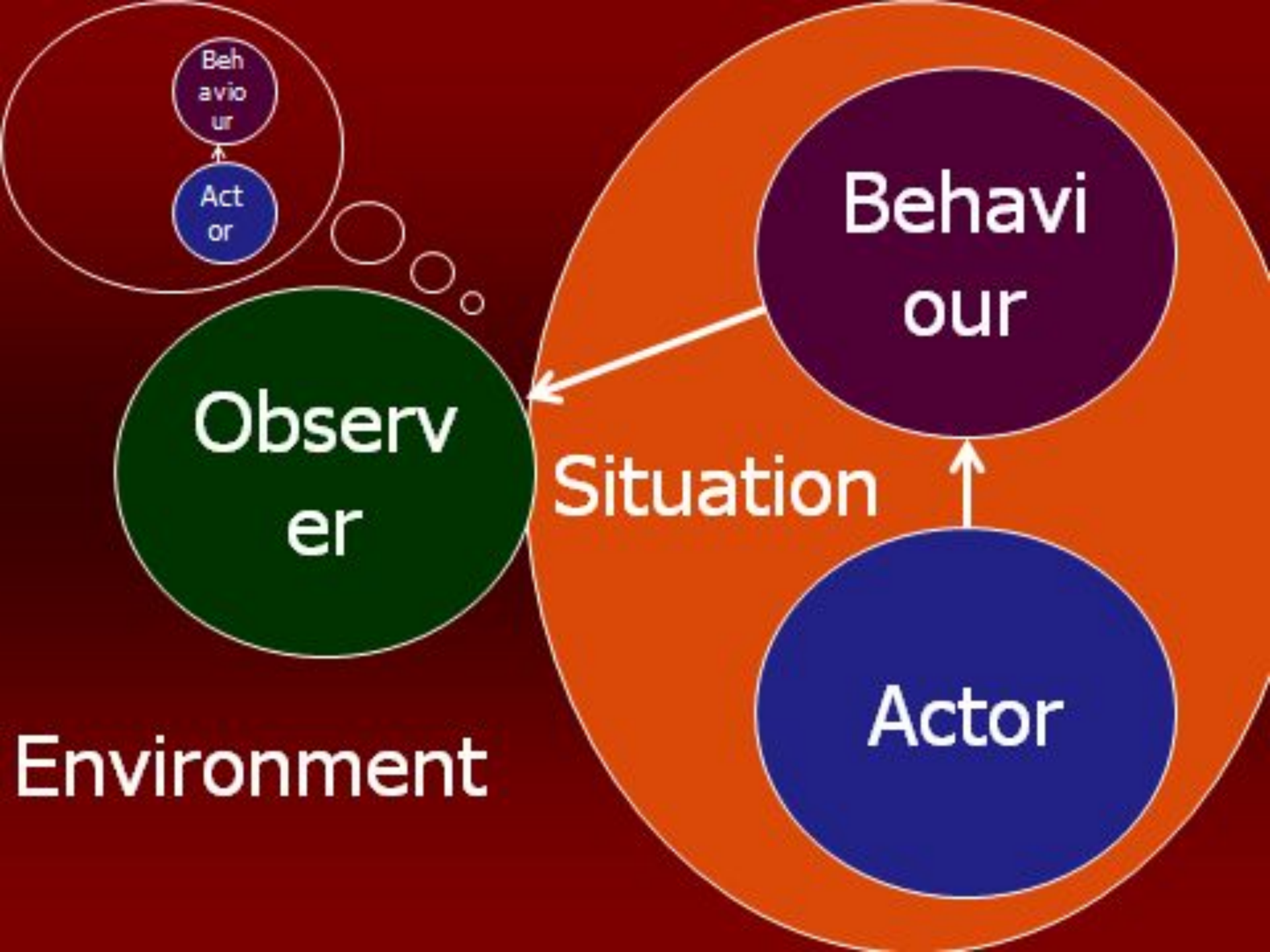


Cross-cultural Variations in Attributional Bias



Errors in Attribution

- Difficult to discern the cause of behaviour, therefore we use shortcuts or heuristics.
- This leads to errors and biases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Fundamental Attribution Error

Tendency to attribute others' behaviour to enduring dispositions (e.g., attitudes, personality traits) because of both:

- Underestimation of the influence of situational factors.
- Overestimation of the influence of dispositional factors.

Fundamental Attribution Error

Four possible explanations:

- Behavior is more noticeable than situational factors.
- Insignificant weight is assigned to situational factors.
- People are cognitive misers.
- Richer trait-like language to explain behavior.

Actor/Observer Bias

- There is a pervasive tendency for actors to attribute their actions to situational requirements, whereas observers tend to attribute the same actions to stable personal dispositions

Self-serving bias

Tendency to attribute:

- Personal success □□ Internal
- Personal failure □□ External
- Other's success □□ External
- Other's failure □□ Internal

Self-serving bias

	Self	Other
Success	Internal	External
Failure	External	Internal

Self-serving bias

- **Motivational**: Self-esteem maintenance.
- **Social**: Self-presentation and impression formation.
- **Cultural**: Effects are less prevalent in Eastern/Collectivistic cultures

Ultimate Attribution Error

FAE applied to in- and out- groups, i.e., Bias towards:

- internal attributions for in-group success and external attributions for in-group failures
- Opposite for out-groups

CONFIRMATION BIAS

The tendency to test a proposition by searching for evidence that would support it.

- If you want to support a particular viewpoint/candidate/etc., you look for material that supports this POV and ignore material that does not.

- People are more likely to readily accept information that supports what they want to be true, but critically scrutinize/discount information that contradicts them.

- **However, it is not necessarily this ideologically motivated;** it can just mean that people only test hypotheses by trying to confirm them, not by trying to reject them.

CONFIRMATION BIAS: PERSON PERCEPTION

Snyder & Swann, 1978

- Introduced a person to the participants of the experiment
- Had to ask questions to get to know him/her better.

CONFIRMATION BIAS: PERSON PERCEPTION

When people were asked to determine if someone was introverted, asked questions like, “Do you enjoy being alone?”

When people were asked if someone was extraverted, asked questions like, “Do you enjoy large groups of people?”

- If you *really wanted a rational judgment, you should ask* ***both*** kinds of questions, regardless of how the prompt was framed.

NEGATIVITY BIAS

- We pay **more attention to negative information than** positive information (often deliberately, sometimes automatically).

- If I get 10 positive teacher evaluations and 1 negative one, I will likely overweight/pay more attention to the negative evaluation and remember the feedback as being more negative overall than it really was.


How I feel after reading 1,000 insightful, positive comments about my work.
The whole internet loves me.
How I feel after reading 1,000 insightful, positive comments about my work and one negative one.
The whole internet hates me :(

NEGATIVITY BIAS

Evolutionary Rationale

- Threats need to be dealt with ASAP
- Rewards can be delayed until it is safe to indulge them

INFLUENCE OF SCHEMAS

1. Schemas Guide Attention

- Attention is a limited resource.
- We automatically allocate attention to relevant stimuli.
- We are also very good at ignoring irrelevant stimuli.
- What is relevant? What is irrelevant?
- That's decided by your activated schemas.
- Classic Examples: selective attention test, The Monkey Business Illusion
- Real Life Examples:
- **Motorcycle Safety: You're looking for cars, not bikers**
- **Lifeguarding: You're looking for troublemakers, not drowning children**

INFLUENCE OF SCHEMAS

2. Schemas Guide Construal

- New information almost always processed with top-down influences.
- Example: The “Donald Study”
- Participants were primed with two different word sets
- **ADVENTURE: Independent, Persistent, Self-Confident**
- **RECKLESS: Aloof, Stubborn, Conceited**
- They then read a story about Donald, who does something ambiguous (like cross the Atlantic alone in a tiny sailboat)

- When they evaluated Donald, they rated him higher on traits consistent with the schemas they were exposed to.
- Those who saw “adventure” words judged him as **adventurous.**
- Those who saw “reckless” words judged him as **reckless.**

SCHEMAS AND MEMORY

We remember schema-consistent information better than schema-inconsistent behavior.

- Because schemas influence attention, also influence memory.
- We remember stimuli that capture the most of our attention.

Caveat: Behavior that is ***heavily*** schema-inconsistent will also be remembered very well (because it is surprising, which also captures attention).

SCHEMAS AND MEMORY

Cohen, 1981

- Participants watched video of a husband & wife having dinner.
- Half were told that the woman was a librarian, half a waitress.
- The video included an equal number of "events" that were consistent with either "librarian" or "waitress" stereotypes.
- Students later took a test to see what they remembered.

  - Was the woman drinking wine or beer?
  - Did she receive a history book or a romance novel as a gift?

- **People remember stereotype-consistent information much more than stereotype-inconsistent information**

INTUITION AND HEURISTICS

HEURISTICS

Common “intuitive system” processes

- A grab-bag of mental processes that are commonly used to make quick and efficient judgments & decisions

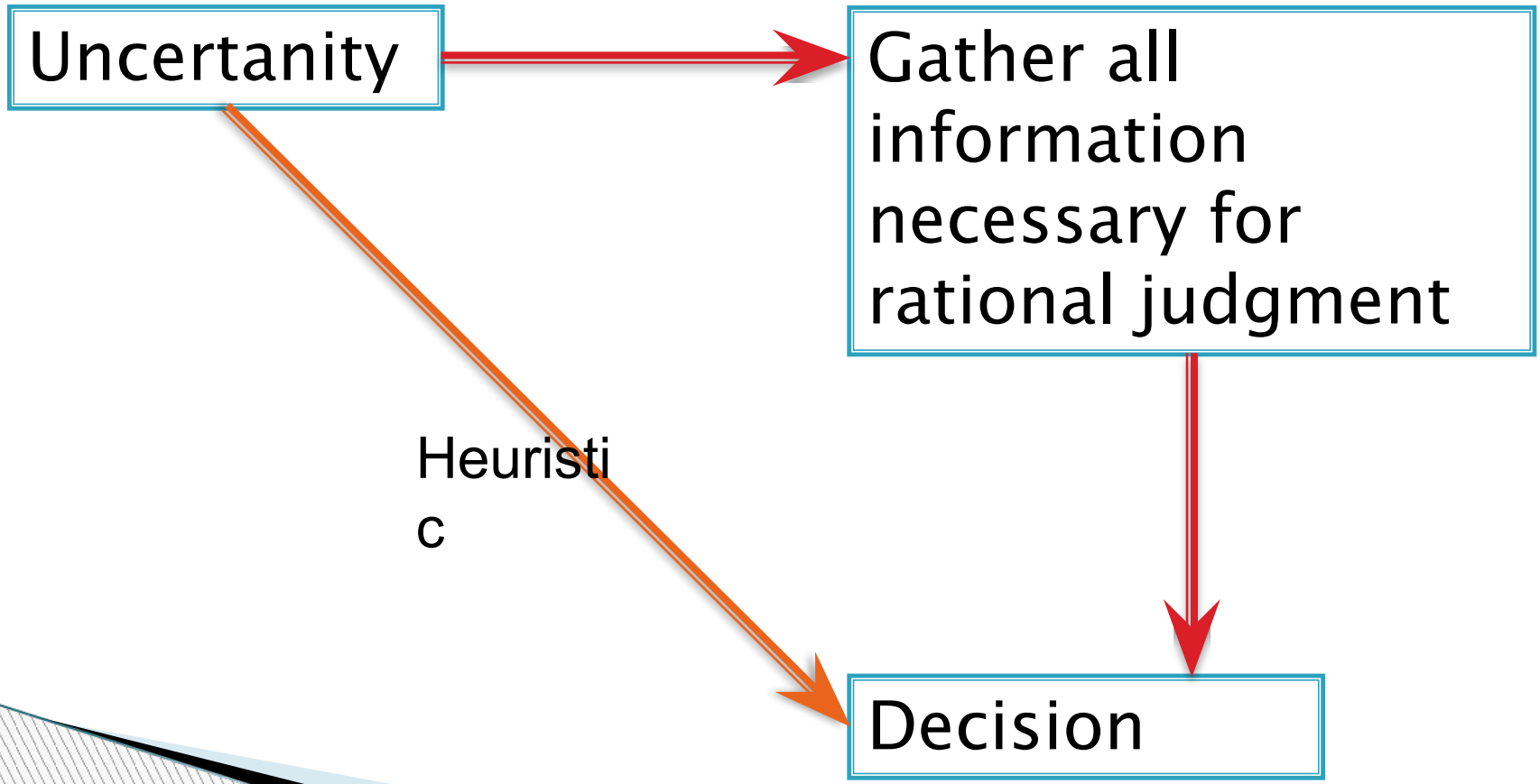
The most famous/popular heuristics:

1. Representativeness Heuristic
2. Availability Heuristic
3. Simulation Heuristic
4. Anchoring and adjustment Heuristic

+

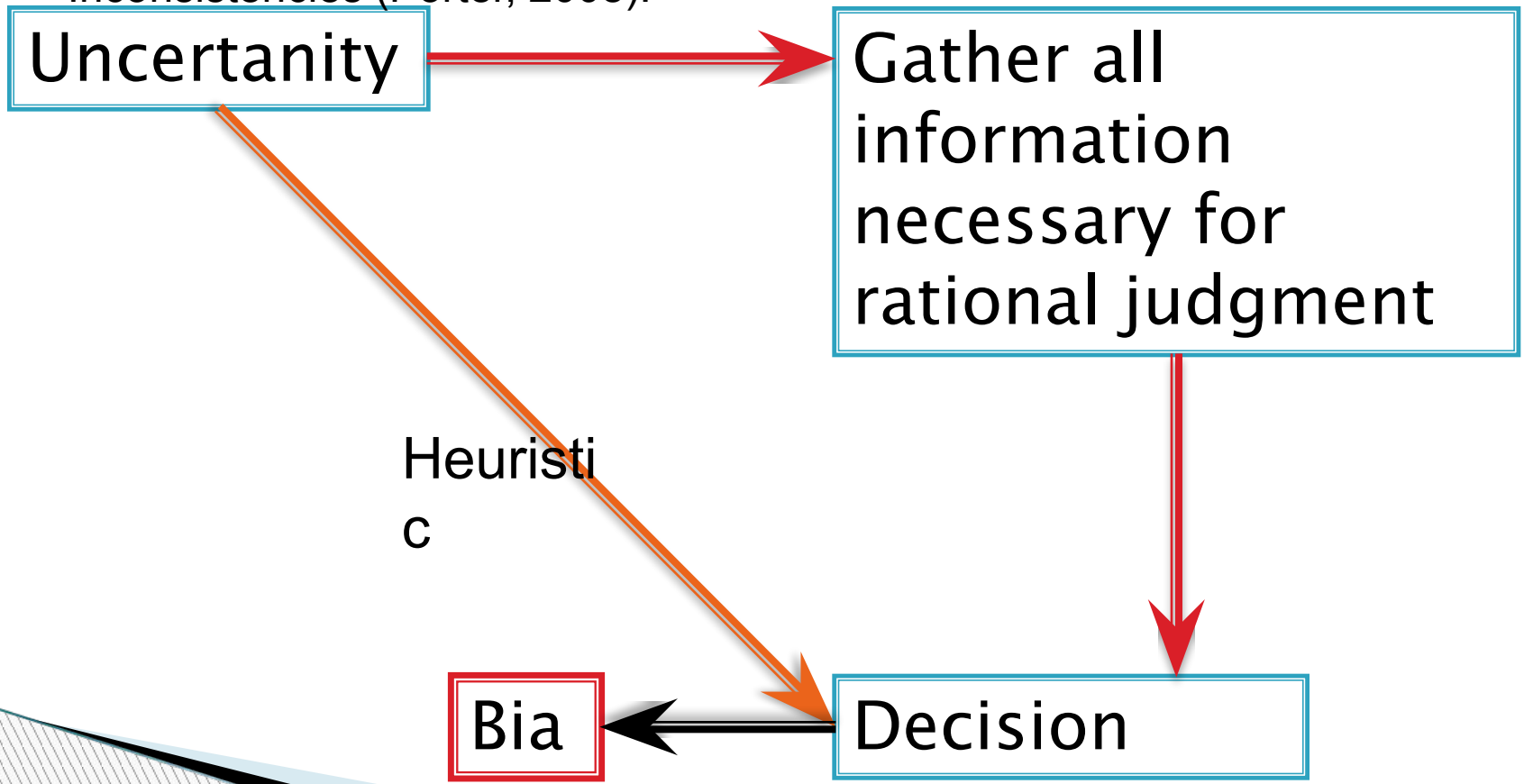
5. Gaze Heuristic

Heuristics


Uncertanity
Gather all information necessary for rational judgment
Heuristi c
Decision

Heuristics

In certain situations, heuristics lead to predictable biases and
Inconsistencies (Porter, 2008).



Availability heuristic

- **The availability heuristic** is a phenomenon (which can result in a cognitive bias) in which people predict the frequency of an event, or a proportion within a population, based on how easily an example can be brought to mind.

Availability heuristic

Consider these pairs of causes of death:

Lung Cancer vs Motor Vehicle Accidents

Emphysema vs Homicide

Tuberculosis vs Fire and Flames

From each pair, choose the one you think causes more deaths in the US each year.

Causes of Death	People's Choice	Annual US Totals	Newspaper Reports/Year
Lung Cancer	43%	140,000	3
Vehicle Accidents	57%	46,000	127
Emphysema	45%	22,000	1
Homicides	55%	19,000	264
Tuberculosis	23%	4,000	0
Fire and Flames	77%	7,000	24

(Combs & Slovic 1979,
see also Kristiansen 1983)

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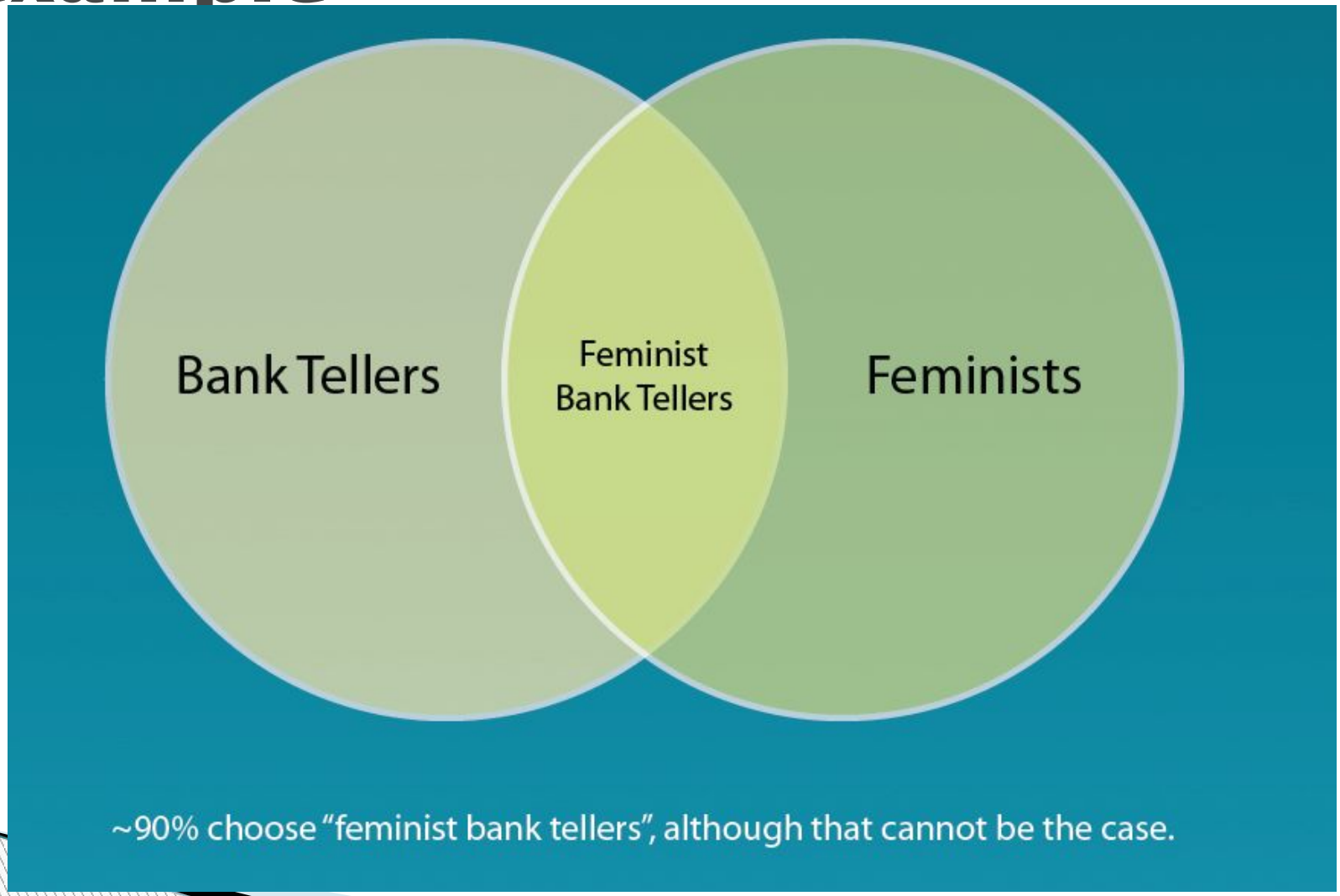
Availability heuristic - example

- Someone is asked to estimate the proportion of words that begin with the letter "R" or "K" versus those words that have the letter "R" or "K" in the third position. Most English-speaking people could immediately think of many words that begin with the letters "R" (roar, rusty, ribald) or "K" (kangaroo, kitchen, kale), but it would take a more concentrated effort to think of any words where "R" or "K" is the third letter (street, care, borrow, acknowledge); the immediate answer would probably be that words that begin with "R" or "K" are more common. The reality is that words that have the letter "R" or "K" in the third position are more common. In fact, there are three times as many words that have the letter "K" in the third position, as have it in the first position.

Representativeness heuristic - example

- Linda is 31 years old, single, outspoken, and very bright. She majored in philosophy. As a student, she was deeply concerned with issues of discrimination and social justice, and also participated in antinuclear demonstrations. Please check off the most likely alternative.
  - Linda is a bank teller.
  - Linda is a bank teller and is active in the feminist movement.

Representativeness heuristic - example



(Porter, 2008)

Representativeness Heuristic

- The tendency to judge frequency or likelihood of an event by the extent to which it “resembles” the typical case.

Simulation Heuristic

- The tendency to judge the frequency or likelihood of an event by the ease with which you can imagine (or mentally simulate) an event.

Example:

In the Olympics, bronze medalists appear to be happier than silver medalists, because it is easier for a silver medalist to imagine being a gold medalist.

Anchoring and adjustment Heuristic

- The tendency to judge the frequency or likelihood of an event by using a starting point (called an anchor) and then making adjustments up and down from this starting point.

Example:

If one party in a negotiation starts by suggesting a price or condition, then the other party is likely to base its counteroffer on this anchor.

Why do we have this heuristic?

- Representativeness often works
- Group prototypes are formed in the first place by averaging across everyone in the group, so there is a kernel of truth

Representativeness Mantra:
"This seems like..."

AVAILABILITY HEURISTIC: APPLIED

- Group Projects
- Because you worked on your portion of a group project, it's easy for you to recall exactly what you worked on
- Because you **didn't work on your partners' portions, it's not** easy for you to recall exactly what they worked on

Result: People tend to overestimate their own
contributions to joint projects.

AVAILABILITY HEURISTIC: APPLIED

Marriage & Chores (Ross & Sicoly, 1979)

- Married couples were asked to give the percentage of the household chores that they did
  - Not surprisingly...estimates added up to over 100%
  - Both husbands and wives tended to think that they did more of the chores!

Gaze heuristic

- The **gaze heuristic** is a heuristic used in directing correct motion to achieve a goal using one main variable. An example of the gaze heuristic is catching a ball. The gaze heuristic is one example where humans and animals are able to process large amounts of information quickly and react, regardless of whether the information is consciously processed.

- The gaze heuristic is a critical element in animal behavior, being used in predation heavily. At the most basic level, the gaze heuristic ignores all casual relevant variables to make quick gut reactions.

Gaze heuristic

Gaze heuristic

Gaze heuristic

Gaze heuristic

When a man throws a ball high in the air and catches it again, he behaves as if he had solved a set of differential equations in predicting the trajectory of the ball... At some subconscious level, something functionally equivalent to the mathematical calculation is going on.

Richard Dawkins, The Selfish Gene

gaze heuristic

How To Catch A Flyball

CALCULATE TRAJECTORY:

$$z(x) = x\left(\tan\alpha_0 + \frac{mg}{\beta v_0 \cos\alpha_0}\right) + \frac{m^2 g}{\beta^2}\ln\left(1 - \frac{\beta}{m}\frac{x}{v_0\cos\alpha_0}\right)$$

Gaze heuristic

- Experimental studies have shown that if people ignore the fact they were solving a system of differential equations to catch said ball, and simply focus on one idea (like adjusting their running speed or positioning the arm) they will consistently arrive in the exact spot the ball is predicted to hit the ground. The gaze heuristic does not require knowledge of any of the variables required by the optimizing approach, nor does it require the catcher to integrate information, yet it allows the catcher to successfully catch the ball.