Social Cognition

Lecture 2

Attribution Theory deals with how the **social perceiver** uses information to arrive at **causal explanations** for events”

Attribution Theory

Attribution theory, the approach that dominated social psychology in the 1970s.

Attribution theory is a bit of a misnomer, as the term actually encompasses multiple theories and studies focused on a common issue, namely, **how people attribute the causes of events and behaviors.** This theory and research derived principally from a single, influential book by Heider (1958) in which he attempted to describe ordinary people's theories about the causes of behavior. His characterization of people as "naive scientists" is a good example of the phenomenological emphasis characteristic of both early social psychology and modern social cognition.

Theories of attribution

- Heider (1958): **‘Naive Scientist’**
- Jones & Davis (1965): **Correspondent Inference Theory**
- Kelley (1973): **Covariation Theory**

Errors & Biases

Errors

- Fundamental Attribution Error
- Ultimate Attribution Error

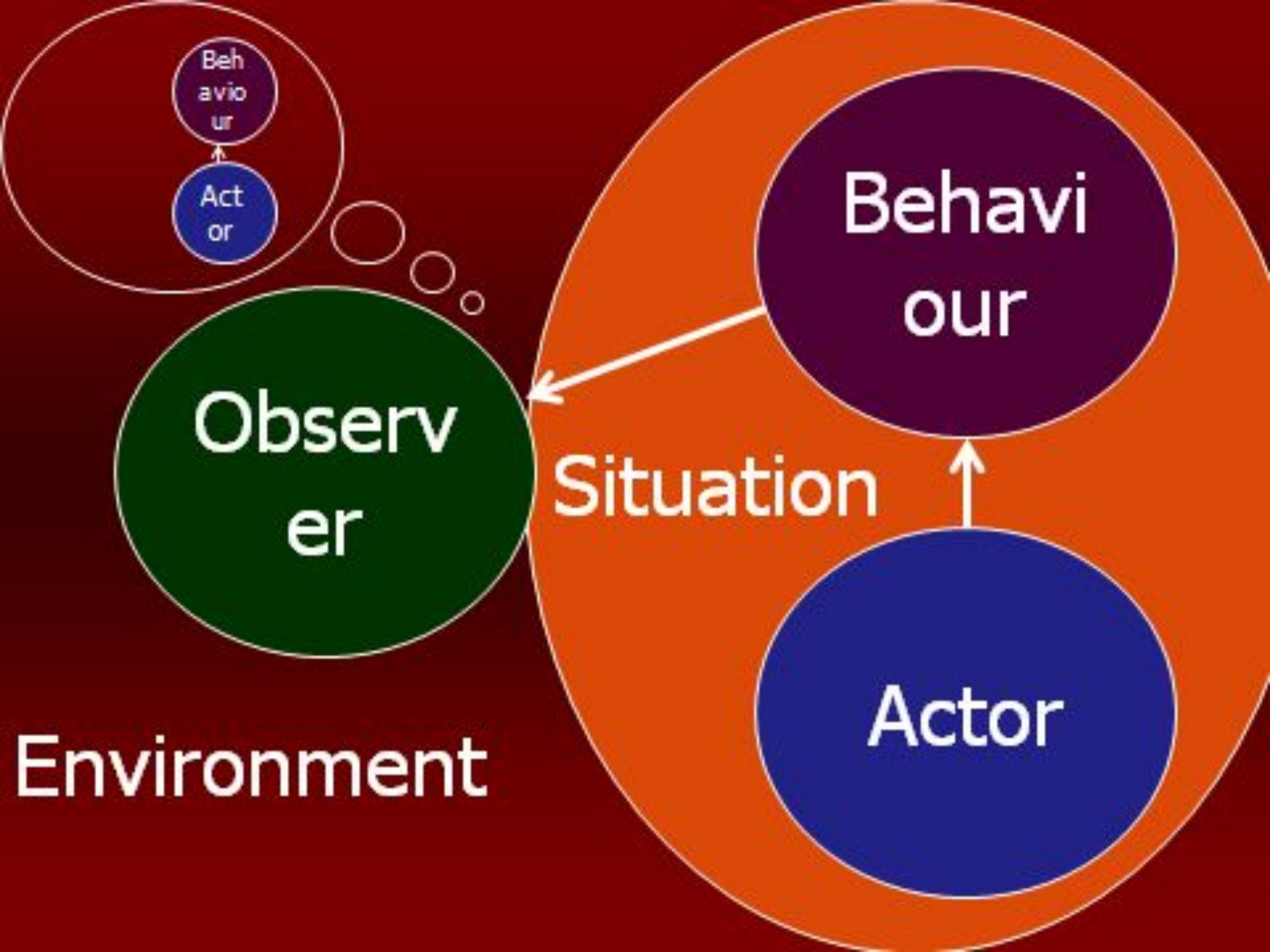
Biases

- Self-serving bias
- Negativity bias
- Optimistic Bias
- Confirmation Bias

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.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Fundamental Attribution Error

Explanations:

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

Ultimate Attribution Error

FAE applied to in- and out- groups

Bias towards:

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

Actor/Observer Bias (Self-serving 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

	Self	Other
Success	Internal	External
Failure	External	Internal

Explanation of Self-serving bias

- **Motivational**: Self-esteem maintenance.
- **Social**: Self-presentation and impression formation.

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 pay more attention to the negative evaluation and remember the feedback as being more negative overall than it really was.

EXPLANATIONS OF NEGATIVITY BIAS

Evolutionary Rationale

Threats need to be dealt with ASAP

The Optimistic Bias

- Believing that bad things happen to other people and that you are more likely to experience positive events in life

- How often do you think about being unemployed someday?

The Optimistic Bias (continued)

- Do you think you will be in a car accident this weekend? Let's hope not!

- The overconfidence barrier
  - The belief that our own judgment or control is better or greater than it truly is

CONFIRMATION BIAS

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

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

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 point of view 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.

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.

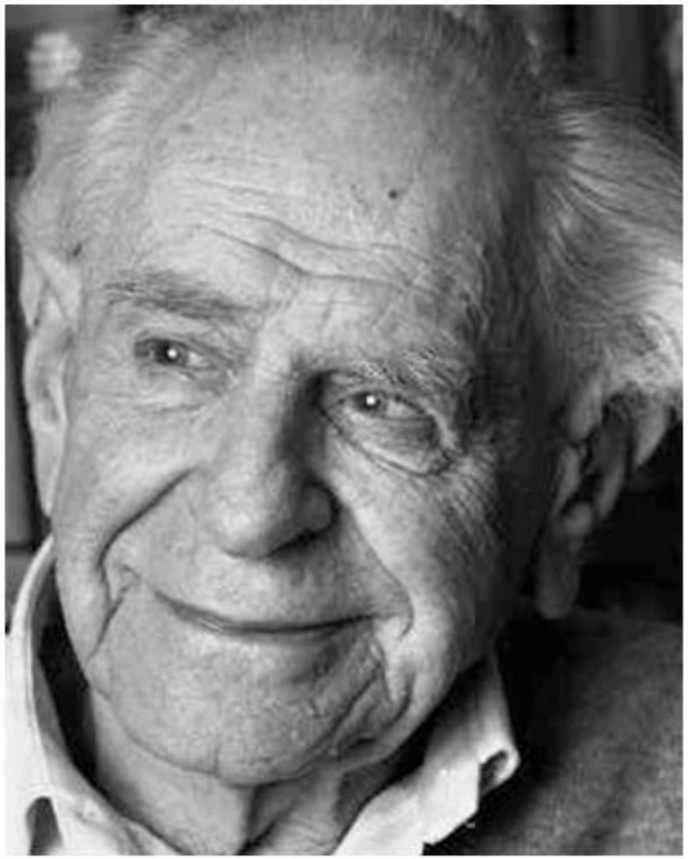
Karl Popper
(1902-1994)

No amount of experimentation can ever prove me right; a single experiment can prove me wrong. – Albert Einstein

Karl Popper & The problem of demarcation

- Karl Popper: Austrian-British philosopher and professor at the LSE (1902 – 1994)

- The problem of demarcation: How do you distinguish between science and pseudoscience?



In 1946, after the Second World War, he moved to the United Kingdom to become reader in logic and scientific method at the London School of Economics.

Falsifibility

- Some philosophers and scientists, most notably Karl Popper, have asserted that no empirical hypothesis, proposition, or theory can be considered scientific if it does not admit the possibility of a contrary case.
- For example, the proposition *"all swans are white"* would be falsified by observing a black swan, which would in turn depend on there being a black swan somewhere in existence.

Falsifibility

- Popper proposed falsification as a way to determine if a theory is scientific. If a theory is falsifiable, then it is scientific; if it is not, then it is not science. A theory not open to falsification requires faith that it is not false. He uses this criterion of demarcation to draw a sharp line between scientific and unscientific theories.
- Falsifiability was one of the criteria used by Judge Overton to determine that 'creation science' was not scientific and should not be taught in public schools. It was enshrined in United States law for whether scientific evidence is admissible in a jury trial.

CONFIRMATION BIAS: 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).

INFLUENCE OF SCHEMAS

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, Invisible Gorilla (The Monkey Business Illusion)

CONFIRMATION BIAS: SCHEMAS INFLUENCE 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.
- Participants 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**

Causal Attribution Across Cultures

- Culture influence attribution processes.
- Social psychologists have widely studied the use of fundamental attribution error across different cultures.
- Researchers have today confirmed the fact that attribution errors including fundamental attribution errors, vary across culture and the major difference relates to the fact that whether there is **individualist or collectivist** culture.

Causal Attribution Across Cultures

- Individualist culture emphases the individual, and therefore, its members are predisposed to use individualist or dispositional attribution in terms of traits, attitudes, intentions, interest etc.

- In collectivist cultures, the emphasis is more context in which the groups and interindividual relationships are emphasized. As a consequence, members of collectivist culture are likely to include situational elements in their attribution.

Causal Attribution Across Cultures

- Singh et al. (2003) studied the role of culture in blame attribution. In a series of three cross-cultural experiments, they successfully demonstrated that in Western culture like the US and Europe, a person is considered blameworthy for not meeting an expectation.

- Participants from western culture blamed the individual more than the group, whereas participants from Eastern culture like China, India, Japan etc. blame group more than individual.

Causal Attribution Across Cultures

- Cross-cultural differences have been reported in the attribution of success and failure (Fry and Ghosh, 1980). They look matched groups of White Canadian and Asian-Indian Canadian children aged between 8 and 10 years.

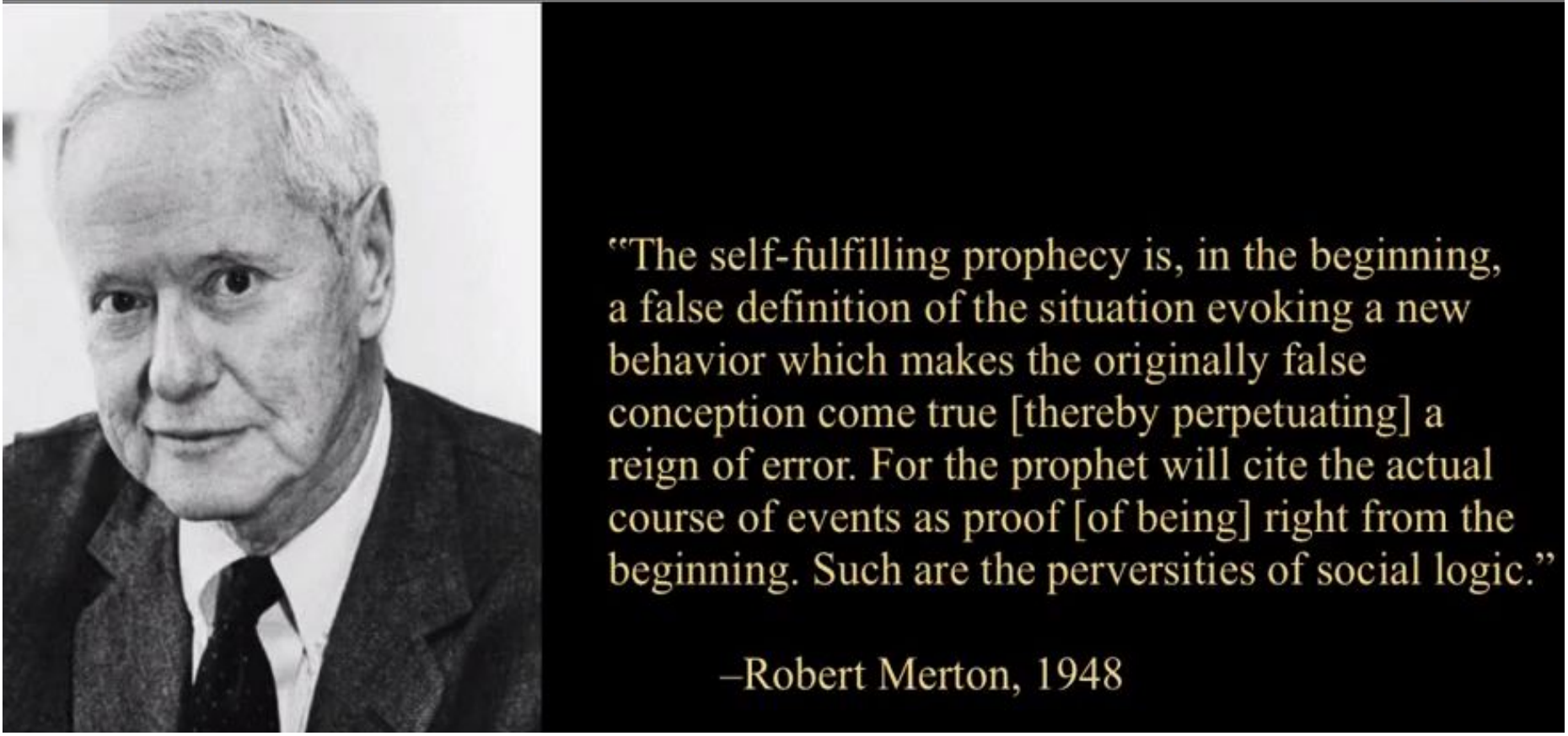
- It was observed that the self-serving bias was present in White Canadian children, who attributed success to the internal factors like ability and efforts and failure to bad luck and other external factors.
- On the other hand Asian-Indian Canadian children attributed success more in terms of external factors like luck and failure mainly in terms of internal factors like lack of ability.

Self-Fulfilling Prophecies

- A self-fulfilling prophecy is a prediction that directly or indirectly causes itself to become true, by the very terms of the prophecy itself, due to positive feedback between belief and behavior.

Self-Fulfilling Prophecies

- Although examples of such prophecies can be found in literature as far back as ancient Greece and ancient India, it is 20th-century sociologist Robert K. Merton who is credited with coining the expression "self-fulfilling prophecy" and formalizing its structure and consequences.
- In his 1948 article Self-Fulfilling Prophecy, Merton defines it in the following terms:



- In other words, a positive or negative prophecy, strongly held belief, or delusion—declared as truth when it is actually false—may sufficiently influence people so that their reactions ultimately fulfill the once-false prophecy.
- **Self-fulfilling prophecy are effects in behavioral confirmation effect, in which behavior, influenced by expectations, causes those expectations to come true.**

THE SELF-FULFILLING PROPHECY

By ROBERT K. MERTON

IN A SERIES OF WORKS seldom consulted outside the academic fraternity, W. I. Thomas, the dean of American sociologists, set forth a theorem basic to the social sciences: "If men define situations as real, they are real in their consequences." Were the Thomas theorem and its implications more widely known more men would understand more of the workings of our society. Though it lacks the sweep and precision of a Newtonian theorem, it possesses the same gift of relevance, being instructively applicable to many, if indeed not most, social processes.

"If men define situations as real, they are real in their consequences," wrote Professor Thomas. The suspicion that he was driving at a crucial point becomes all the more insistent when we note that essentially the same theorem had been repeatedly set forth by disciplined and observant minds long before Thomas.

When we find such otherwise discrepant minds as the redoubtable Bishop Bossuet in his passionate seventeenth-century defense of Catholic orthodoxy; the ironic Mandeville in his eighteenth-century allegory honeycombed with observations on the paradoxes of human society; the irascible genius Marx in his revision of Hegel's theory of historical change; the seminal Freud in works which have perhaps gone further than any

Behavioral Confirmation

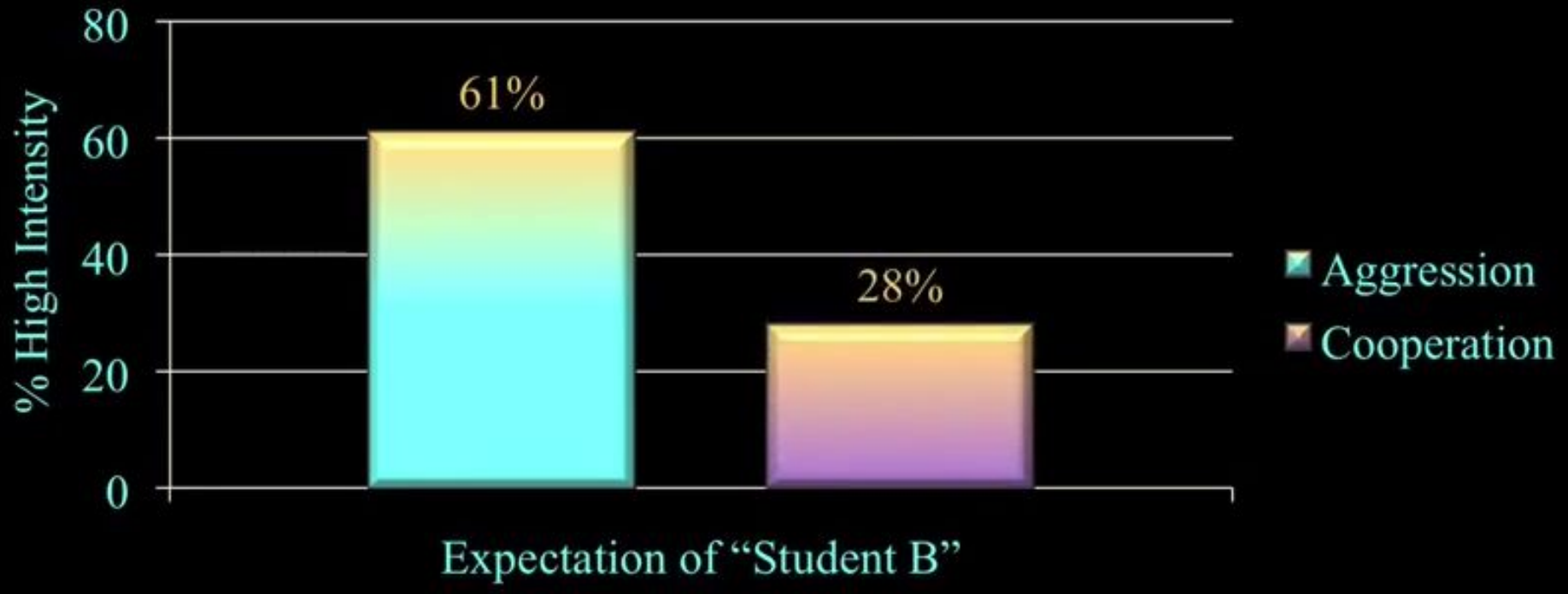
- *Behavioral confirmation* takes place when people's social expectations lead them to act in a way that causes others to confirm these expectations.
- It's a social type of self-fulfilling prophecy.

Behavioral Confirmation

- *Behavioral confirmation* takes place when people's social expectations lead them to act in a way that causes others to confirm these expectations.
- It's a social type of self-fulfilling prophecy.
- Classic experiment: Reaction time contest over 24 trials
  - Source: Snyder, M., & Swann, W. B., Jr. (1978). Behavioral confirmation in social interaction: From social perception to social reality. *Journal of Experimental Social Psychology, 14*, 148-162.

Reaction Time Contest

The Results: Expectations Matter!



The Results: Expectations Matter!

- Students who were expected to be competitive became more aggressive—an example of behavioral confirmation.
- Because the expectations held by Student A were randomly assigned by the *experimenters*, we can be sure that the people Student A competed with didn't differ in aggression *before* the study.
- In other words, we know that the prophecy was self-fulfilling.

Phase 2 of the Experiment

- Student A was removed from the study.
- Student B competed in another contest – this time, with someone who wasn't given expectations.
- Question: *Would students who were earlier expected to behave aggressively continue to behave aggressively once the person with expectations was gone?*

Reaction Time Contest

Reaction Time Contest

What Did They Find?

- Under certain circumstances, Student A's expectations of aggression or cooperation continued to have an effect on Student B's behavior with a new person.

Our perceivers may have created for themselves a situation not unlike that of Kelly's (1955) example:

> A man construes his neighbor's behavior as hostile. By that he means that his neighbor, given the proper opportunity will do him harm. He tries out this construction of his neighbor's attitude by throwing rocks at his neighbor's dog. His neighbor responds with an angry rebuke. The man may then believe that he has validated his construction of his neighbor as a hostile person (Kelly, 1955, pp. 12–13).

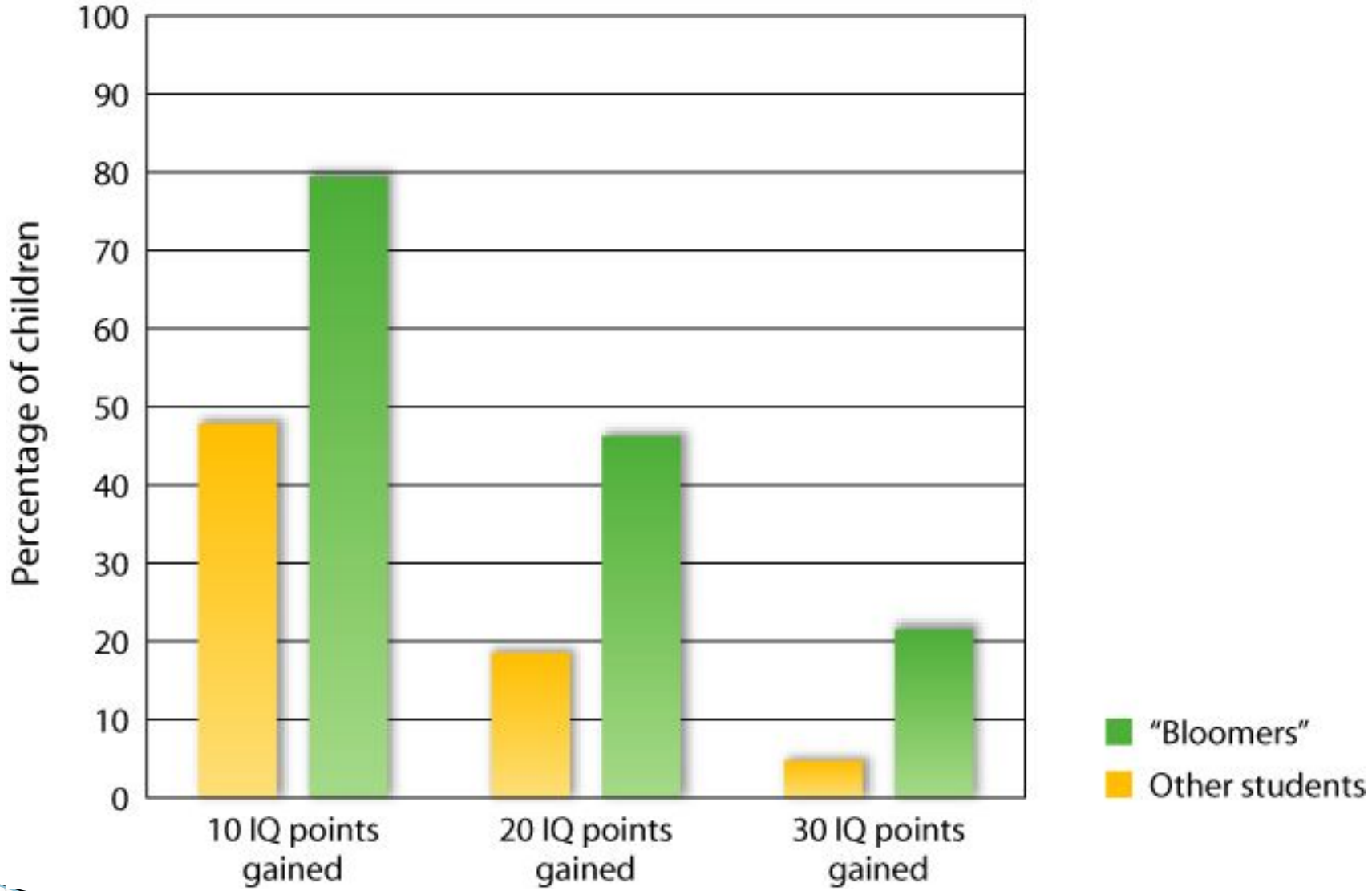
Making Schemas Come True: The Self-Fulfilling Prophecy

Elementary school children administered a test

Teachers told that certain students had scored so highly that they would be sure to "bloom" academically during the next year ("so-called "bloomers" assigned these labels at random)

Administered an IO test at the end of the year

The Self-Fulfilling Prophecy (cont.)



From: Rosenthal & Jacobson (1968)

Certain students were identified as those who would "bloom."

As measured by IQ tests, the intelligence of bloomers did improve... *but the bloomers were selected at random!*

Based on classroom observations, bloomers were:

- Treated more warmly (e.g., received more personal attention, encouragement, and support
- Given more challenging material to work on
- Given more feedback
- Given more chances to respond in class and longer time to respond

Self-Fulfilling Prophecies

- A person "becomes" the stereotype that is held about them

- Selective filtering
  - Paying attention to sensory information that affirms a stereotype
  - Filtering out sensory information that negates a stereotype

Heuristics: Mental shortcuts in social cognition

Heuristics

Heuristics are rules or principles that allow us to make social judgments more quickly and with reduced efforts.

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.

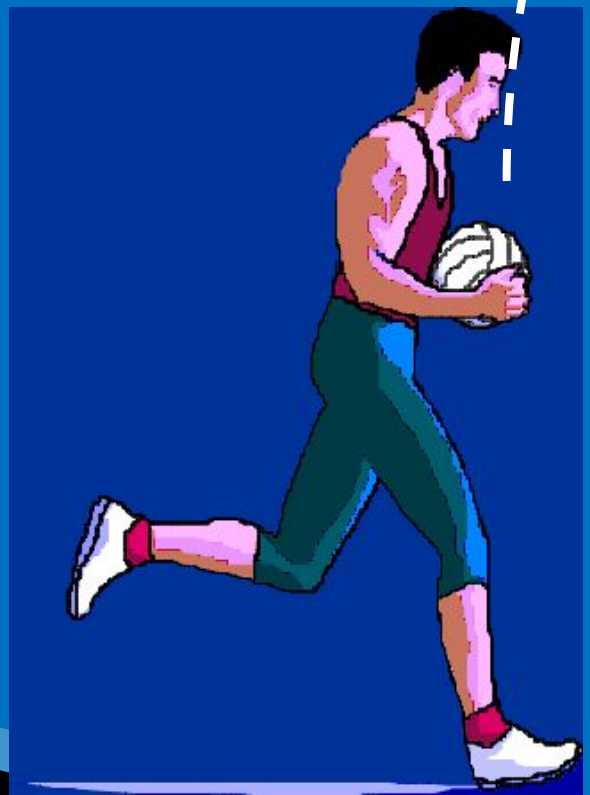
- The gaze heuristic does not require knowledge of any of the variables required by the optimizing approach, nor does it require the catcher to integrate information, yet it allows the catcher to successfully catch the ball.

Gaze heuristic

Gaze heuristic

Gaze heuristic

Gaze heuristic



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

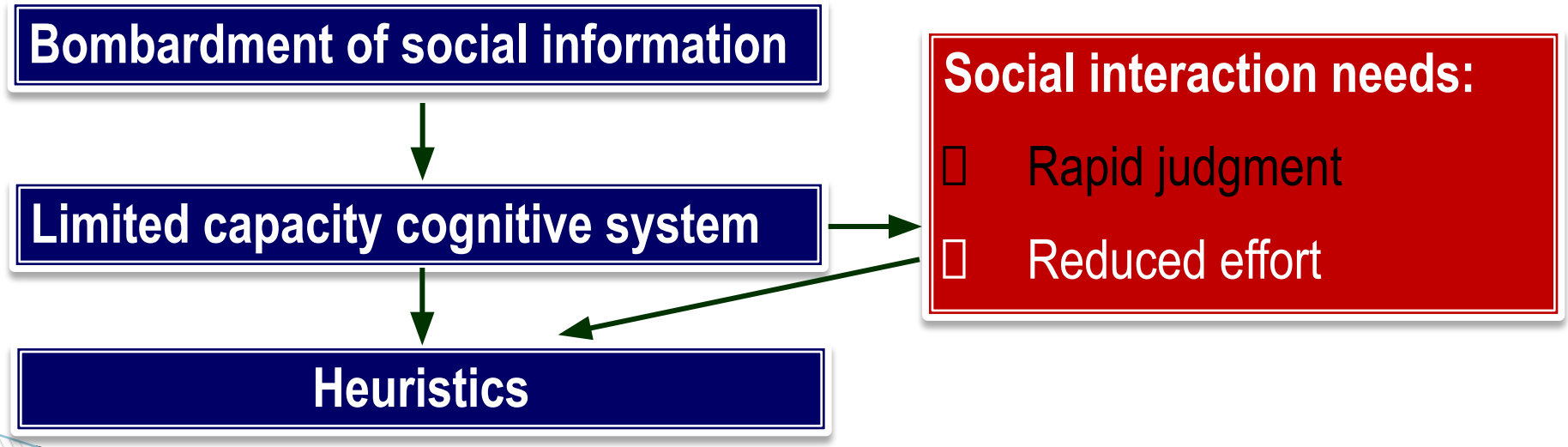
- The **gaze heuristic** is a heuristic used in directing correct motion to achieve a goal using one main variable.

- 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.

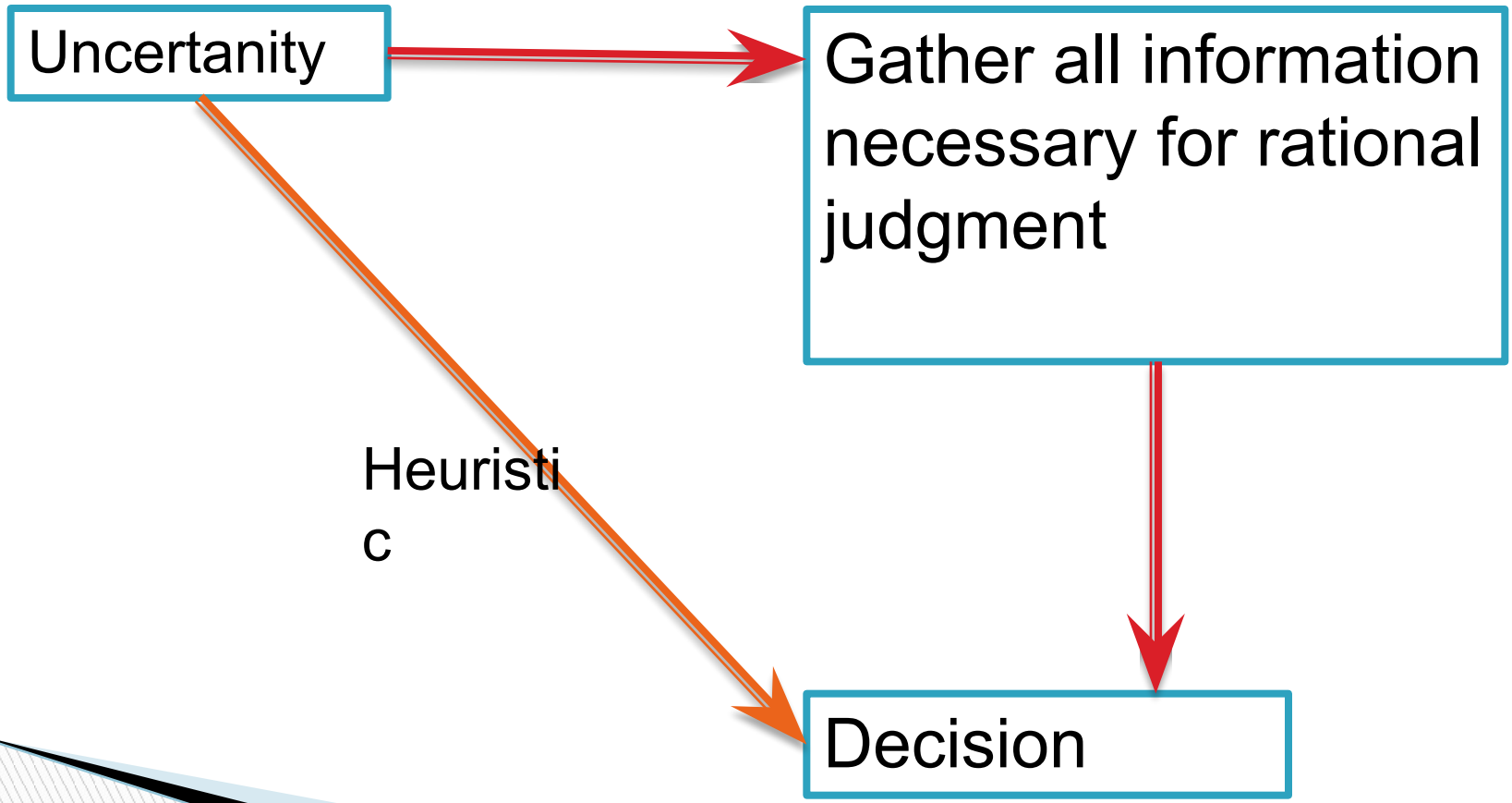
- At the most basic level, the gaze heuristic ignores all casual relevant variables to make quick reactions.

When do we use heuristics:

- Lack of time for full processing
- Information overload
- When issues are not important
- When we have little solid information to use in decision making



Heuristics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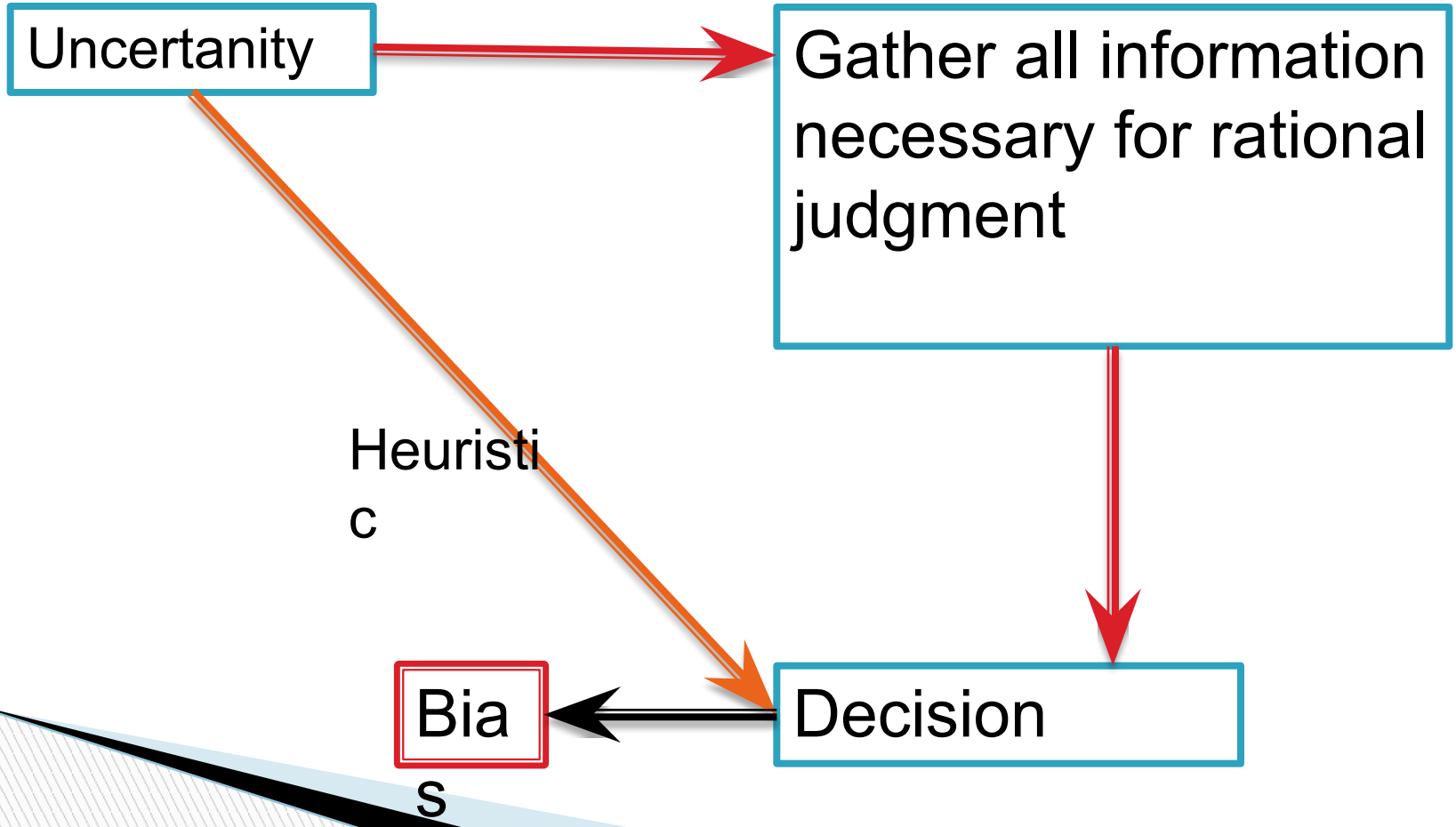
Heuristics

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



HEURISTICS

The most famous/popular heuristics:

1. Availability Heuristic
2. Representativeness Heuristic
3. Simulation Heuristic

Availability Heuristic

- What comes to mind first: “If I think of it, it must be important”
- Suggests that, the easier it is to bring information to mind, the greater it’s important or relevant to our judgments or decisions.

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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(Combs & Slovic 1979,
see also Kristiansen 1983)

AVAILABILITY HEURISTIC

- 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

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!

Representativeness Heuristic : Judging by resemblance

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

Heuristics

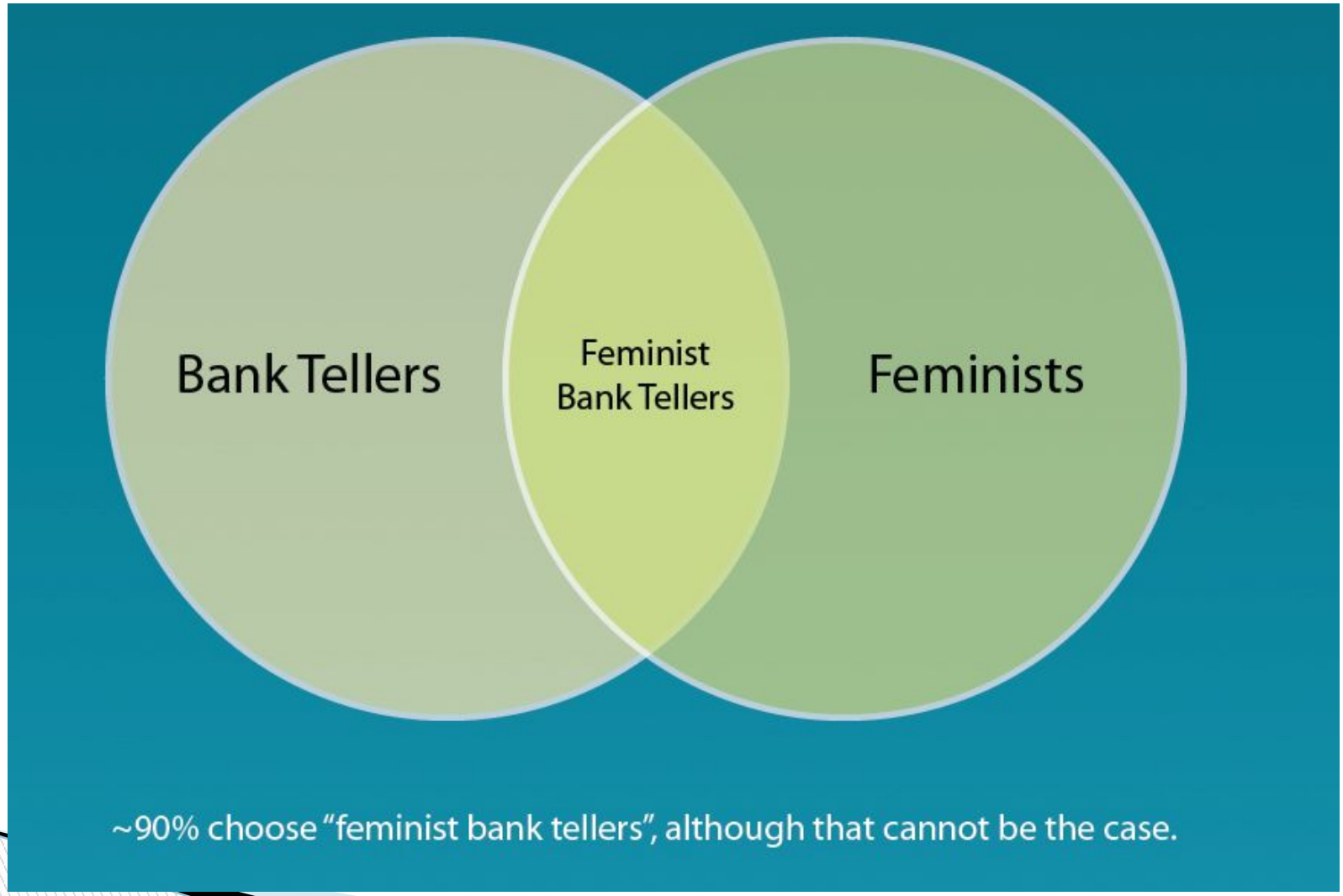
- This is Linda.
- Linda is:
  - 31 years old
  - Single
  - Outspoken
- As a student, Linda was deeply concerned with issues of social justice, and participated in anti-nuclear demonstrations.

What is more probable?

A) Linda is a bank teller

B) Linda is a bank teller and is active in the feminist movement

Representativeness heuristic – example 1



(Porter, 2008)

People who are bank tellers

People who are bank tellers AND feminists

Representativeness heuristic – example 2

D-daughter
S – son

1) DSSDSD
2) DDDSSS
3) DDDDDD

Simulation Heuristic

- A third kind of heuristic is the *simulation* heuristic, which is defined by the ease of mentally undoing an outcome.

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

Simulation Heuristic

- **Example I.**

"Mr. Crane and Mr. Tees were scheduled to leave the airport on different flight sat the same time. They traveled from town in the same limousine, were caught in a traffic **pm,** and arrived at the airport thirty minutes after the scheduled departure of their flights. Mr. Crane is told his flight left on time. Mr. Tees is told that his fight was delayed and just left five minutes ago" (Kahneman & Tversky, **1982).**

Who is more upset?

"The guy whose flight just left." Right. Why?

Because it seems easier to undo the bad outcome. That is, it is easier to imagine how things could have turned out so that they could have made the plane they missed by minutes, but harder to imagine how they could have made the plane that was missed by a wide margin

Simulation Heuristic

- So people mentally simulate the event. If it seems easer to undo, then it is more frustrating: It has more impact (also see Kahneman & Miller, 1986).

- .

Simulation Heuristic

Example II:

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.


NIKE


BRASIL


EA7
London 2012
EA7
London 2012
EA7
London 2012

Counterfactual Thinking

- Imagining different outcomes for an event that has already occurred
- Is usually associated with bad (or negative) events
- Can be used to improve or worsen your mood

Counterfactual Thinking

- Upward counterfactuals
  - “If only I had bet on the winning horse!"
  - "If only I’d cooked the turkey at 350 instead of 400 degrees!"
  - "I would have won if I’d bought the OTHER scratch-off lottery ticket!"

Counterfactual Thinking

- Downward counterfactuals
  - "I got a C on the test, but at least it's not a D!"
  - "He won't go out with me but at least he didn't embarrass me in front of my friends."
  - "My team lost, but at least it was a close game and not a blowout!"


O'P'
THE SACRAMENTO BEE
©2014-10/9-TCA
EBOLA!!!
OBESITY:
300,000
DEATHS PER YEAR
TOBACCO:
450,000
DEATHS PER YEAR
ALCOHOL:
88,000
DEATHS PER YEAR