

FUNDAMENTALS OF PSYCHOLOGY

Session 2

Introduction

Rules & Game Play

1. At all time you must have
 - A pen/pencil
 - A notebook
 - Water Bottle

2. Deep-Shallow Game

3. Expect Breaks, feel free to take a break

4. Brownie points for application based questions

Course contents

Day 1

1. **Neurotransmitters** A view into biology of Psychology
 2. **Evolution** The boundary of psychology
-

Day 2

3. **Social Psychology** How we interact with the world
 4. **Cognitive psychology** How we think
-

Day 3

5. **Personality Psychology** Who am I and what is me
6. **Spiritual Psychology** What is my relationship w/ myself

Session 2 Content

1. Experiments

2. Social Psychology

- Conformity Studies
- Freud
- Classical Conditioning
- Behaviorism
- Fritz Heider
- Schachter and Singer
- Bem

3. Cognitive Psychology

- Dissonance
Leon Festinger
- Errors in thinking
Kahnemann

4. Group Psychology

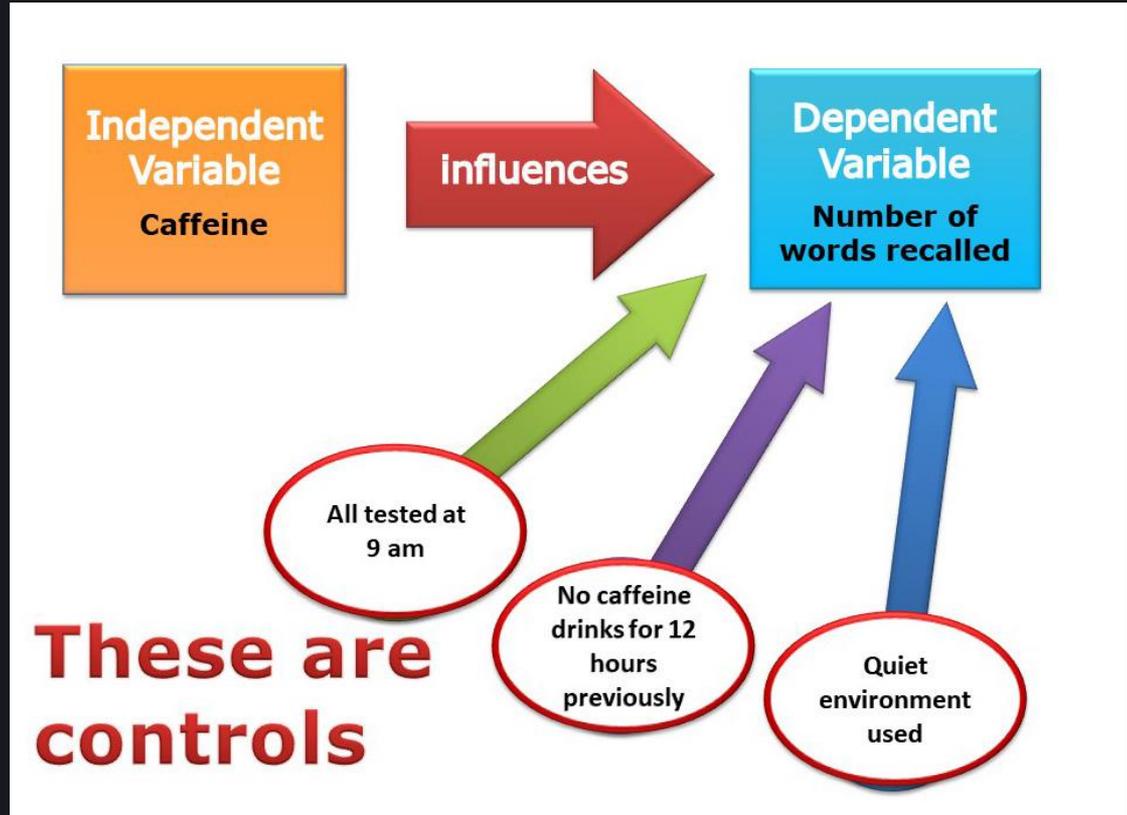
Additional Discussions

1. How experiments are done
2. How to read a scientific paper



Setting the experiment

1. Independent Variable
2. Dependent Variable
3. Exogenous Variable
4. Control Group
5. Experimental Group
6. External Validity
7. Internal Validity



Setting the experiment

1. Hypothesis

1. Sleep deprived college students would perform significantly lower on a test.
2. To test this hypothesis, a randomized group of college students are assigned to a full night of sleep.
3. Another group of college students is assigned to a deprived sleep (less than 5 hours of sleep)
4. After they wake up, they are given a test and their scores are measured.



Setting the experiment

2. Variables

1. **Independent Variable**
Sleep Deprivation
2. **Dependent Variable**
Test Scores
3. **Exogenous Variable** (may have an effect on IV and DV relationship)
Age, Gender, Background, etc.



Setting the experiment

3. Experimental & control group

1. **Experimental Group**
Sleep Deprived Students (presence of independent variable)
2. **Control Group**
Well slept students (independent variable absent)



2. Social Psychology

Conformity studies



Conformity studies

Solomon

Asch



Khan Academy

Asch line experiments - Conformity

Solomon Asch

Asch conformity studies

The diagram illustrates the experimental setup for the Asch line experiment. On the left, a stick figure labeled 'experimenter' stands next to a board. The board has a 'target line' and a 'Comparison Line'. To the right, a group of stick figures labeled 'other participants' is shown. One participant is highlighted with a box and the text 'Will you'. Above the participants, there are several 'B' labels and question marks, indicating the choice of lines. An arrow points from the experimenter towards the participants.

target line

Comparison Line

Will you

other participants

The Khan Academy logo, a green hexagon with a white leaf-like shape inside.

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Conformity studies

Stanley Milgram



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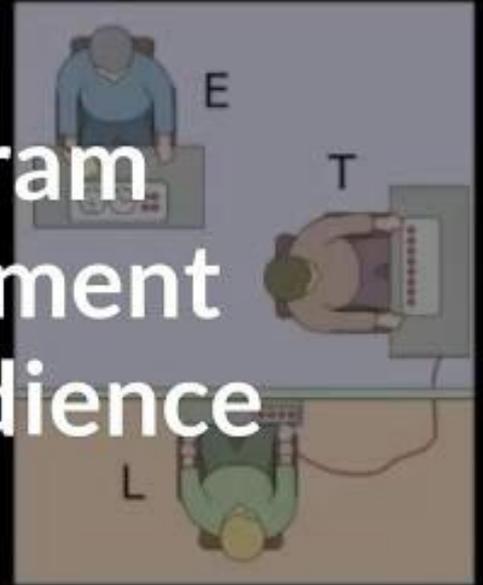


1. Please continue (if you go on)
2. The experiment requires that you continue
3. It is absolutely essential that you continue



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Milgram experiment on obedience



Conformity studies

Philip Zimbardo



Khan Academy



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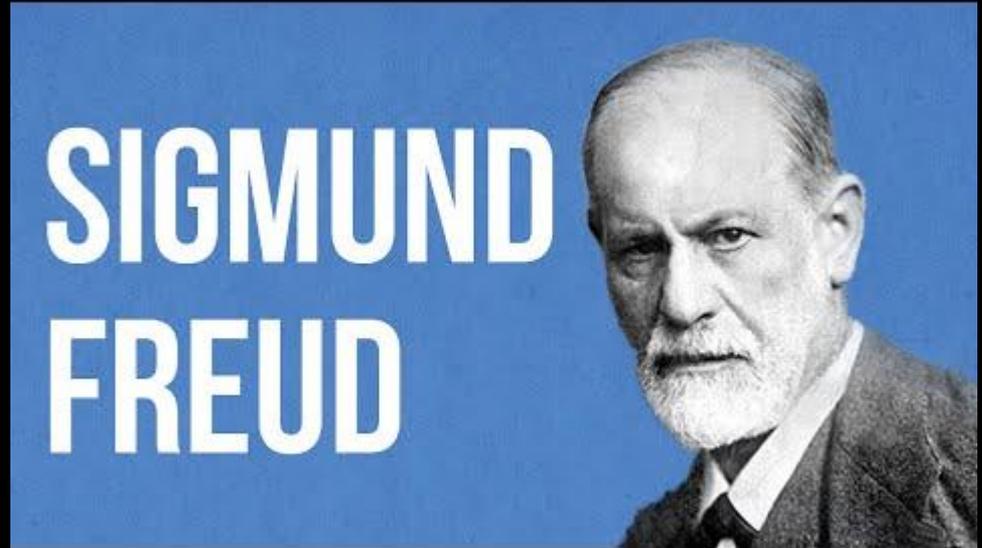
Conformity Studies

Philosophical take

1. **Zimbardo**
Sense of I is malleable.
I am prone to roles
2. **Milgram**
Sense of my judgement is malleable. I am prone to authority.
3. **Asch**
Sense of my perception is wrong.
Interpretation is bigger than raw perception.

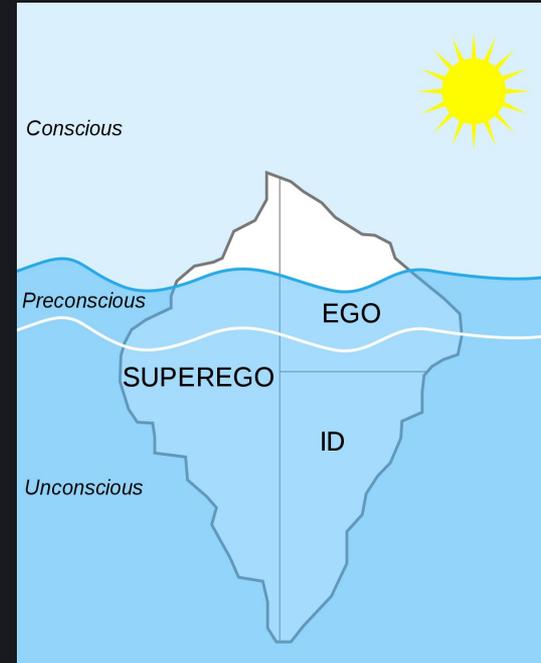
Social psychology

3. Freud



Freud

Id, ego and superego



Freud (Advanced)

Why is he different

1. Psychodynamics
2. Not scientific, more theoretical, philosophical and literary
3. Very controversial since
4. Had unignorable insight into the working of the mind

Social psychology

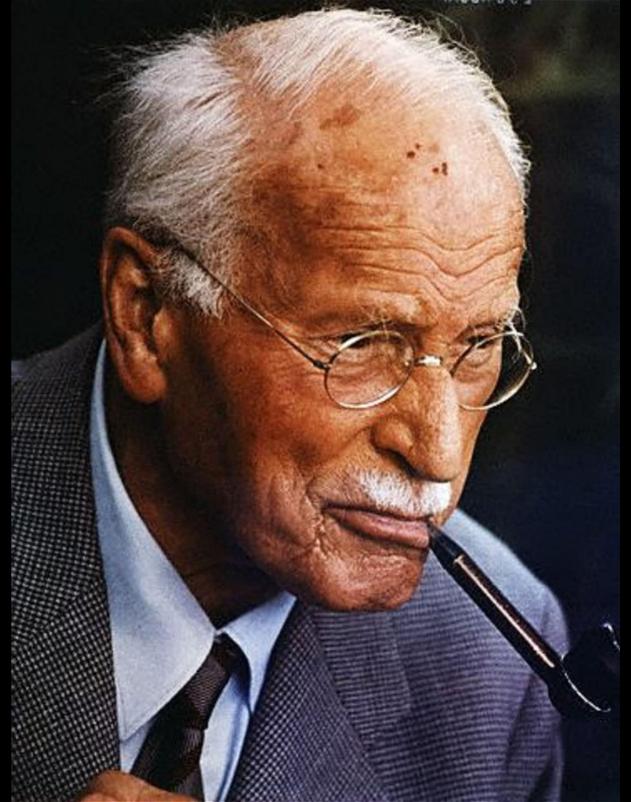
Carl Jung

(1875 - 1961)

Archetypes as unconscious

Disagreement about fixation on sex

Collective Unconscious - Dreams and
Symbolism



Social psychology

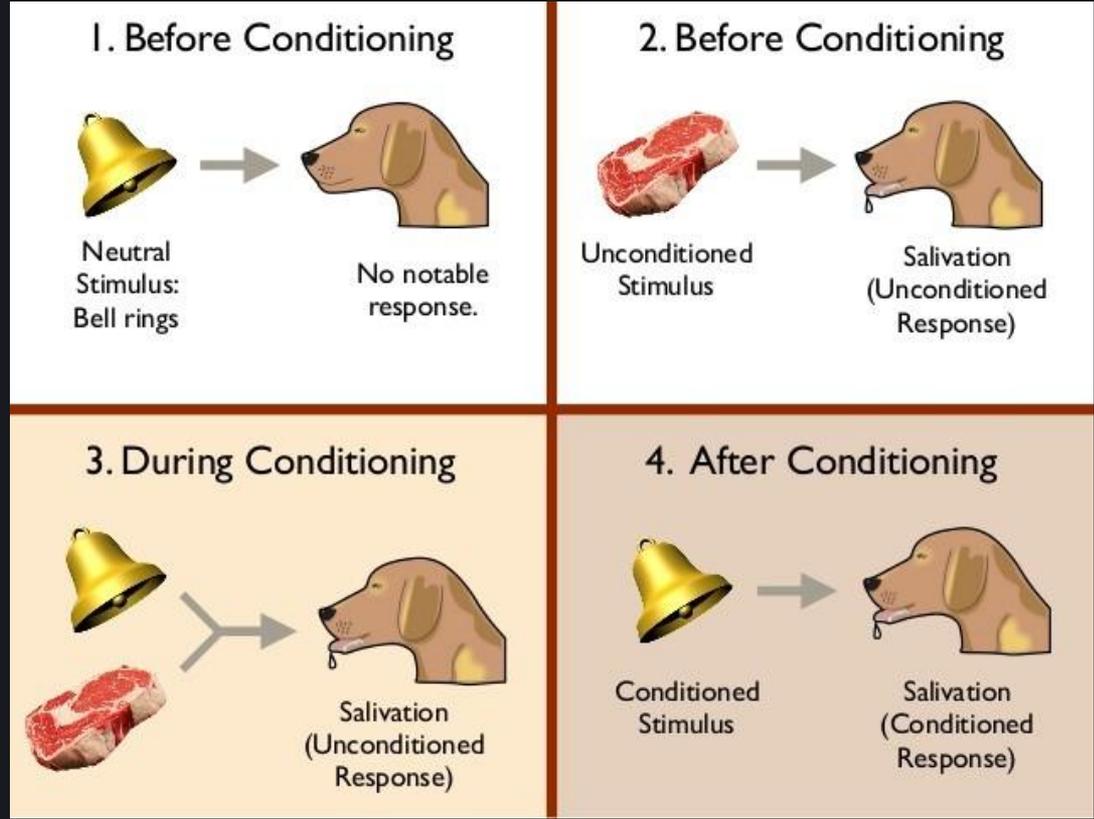
4. Classical Conditioning

Pavlov and Classical Conditioning



Social psychology

Philosophical discussion



Social psychology

5. Behaviourism



Behaviourism

Operant Conditioning

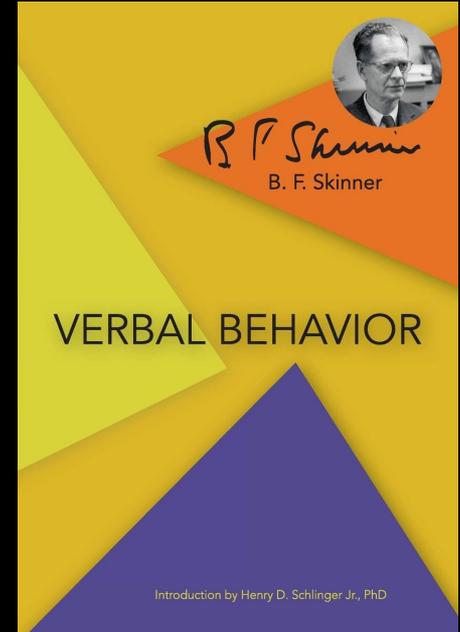


Behaviorism

Philosophical take

Chomsky and
Behaviourism

Language



Chomsky and
Behaviourism

Philosophical Take

Meaning

Behavior and The
Limitations of Psychology



Social psychology

6. Fritz Heider



Fritz Heider

Lay Scientific Theory

Formula

ACTOR'S DISPOSITION + IMMEDIATE SITUATION
= BEHAVIOR

Fritz Heider

1. Lay Scientific Theory

Experiment

Students whose first initial in their last name is
A-K

The student was free to choose any topic and position to make a
speech about

Source: Study from PG's classroom with
E Tory Higgins

Fritz Heider

1. Lay Scientific Theory

Experiment

Students whose first initial in their last name is
L-Z

The instructor of the course treated the speech as a debate and assigned the topic and position to the student

Source: Study from PG's classroom with
E Tory Higgins

Fritz Heider experiment speech

The United States of America was formed out of the ashes of civil war; a violent and spirited revolution of those who wanted the freedom to choose their destiny against an oppressive government that refused to listen. The struggle of the unrepresented and repressed goes on today, in Palestine. The Palestinian people fight a revolutionary war against an oppressive Israeli government in which they have no voice. They, much like the patriots in the American Revolution, have no political recourse, no means to negotiate with the powerful.

...

...

The Palestinian people face the same overwhelming odds our forefathers did; a large professional military force and unsympathetic Israeli government. They struggle for a homeland they were forced out of, a homeland they inhabited for thousands of years. In this America, born from the ashes of revolutionary war, born of hope in the face of superior military might, we should embrace the Palestinian people as they struggle for the same freedoms our forefathers won us two centuries ago.



Fritz Heider

Lay Scientific Theory

Experiment

Based on the evidence you have, how Pro-Palestinian do you think this student really is?

Rate the extent to which the student is truly Pro-Palestinian on a scale from 0 [not at all] to 10 [extremely]

Score	A-K (No. of students)	L-Z (No. of students)
0-1		
2		
3		
4		
5		
6		
7		
8-10		

Score	A-K (No. of students)	L-Z (No. of students)
0-1	0	2
2	0	1
3	0	3
4	0	2
5	4	10
6	4	9
7	9	6
8-10	29	11

Fritz Heider

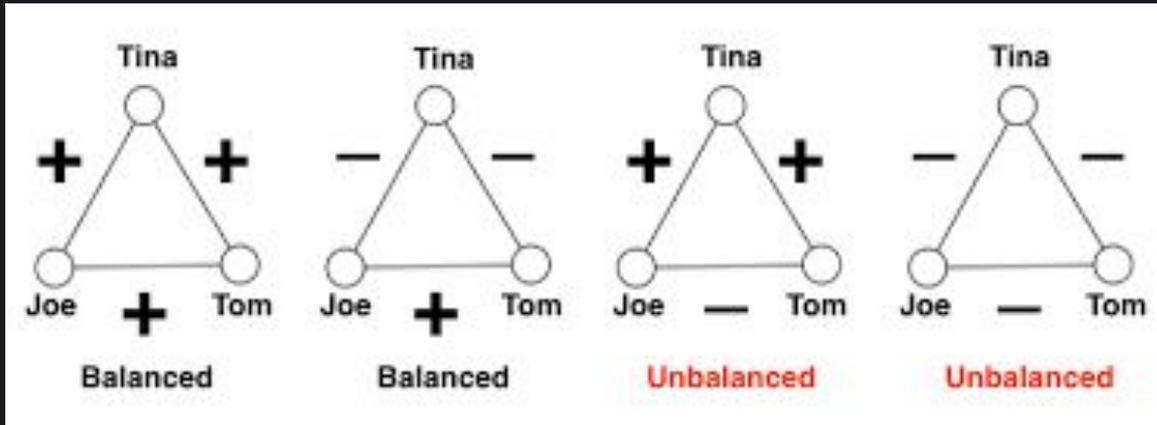
1. Lay Scientific Theory

Discuss Palestine Experiment



Fritz Heider

2. Balance Theory



Social psychology

7. Schachter and Singer



Schachter and Singer

Physiological Arousal +
Psychological explanation



Label



Emotion



7. Schachter and Singer

The misattribution of arousal study tested Schachter and Singer's two-factor theory of emotion. Psychologists Donald G. Dutton and Arthur P. Aron wanted to use a natural setting that would induce physiological arousal.

In this experiment, they had male participants walk across two different styles of bridges. One bridge was a very scary (arousing) suspension bridge, which was very narrow and suspended above a deep ravine. The second bridge was much safer and more stable than the first.

7. Schachter and Singer

At the end of each bridge an attractive female experimenter met the [male] participants. She gave the participants a questionnaire which included an ambiguous picture to describe and her number to call if they had any further questions.

The idea of this study was to find which group of males were more likely to call the female experimenter and to measure the sexual content of the stories the men wrote after crossing one of the bridges.

Social psychology

8. Bem



8. Bem

Self Perception Theory

Lepper, Greene & Nisbett (1973) did a field experiment to test children's attitudes towards coloring



Self perception theory

Experiment

1. Children (who liked coloring prior to the experiment) were asked to engage in coloring, according to three conditions:
2. They knew they would be rewarded after coloring
3. They were rewarded by surprise, and
4. No reward was granted
5. After 7-14 days, the children are given the choice to engage in any activity they want.

Self perception theory

Experiment Conclusion

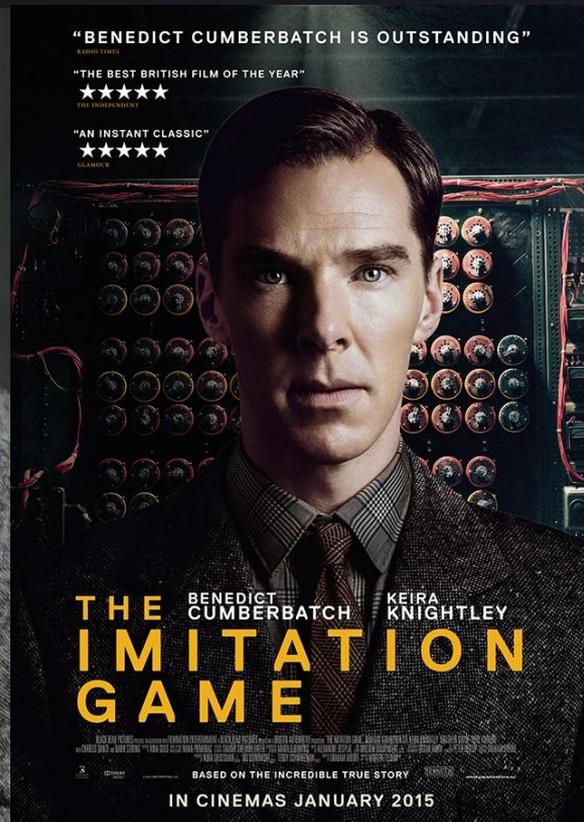
According to standard reinforcement theories, the two first conditions should have yielded more coloring time, because they were associated with reward. However, this was not the case. Instead, the children infer that they color not because they like it, but because of the situation: to receive an award.

Bem

Philosophical take

9. Cognitive

Alan Turing



Cognitive Psychology

How we think

1. Perception
2. Memory: Working and Long Term
3. Language
4. Meta Cognition

Cognitive psychology

Leon Festinger

1. 1955 experiment
2. The subject performed a series of repetitive and boring mental tasks and then was asked to lie to the "next subject" (actually an experimental accomplice) and say that the tasks were interesting and enjoyable.
3. Some subjects were paid \$1 for lying, while others were paid \$20.
4. Subjects who were paid \$1 for lying later evaluated the tasks as more enjoyable than those who were paid \$20.

Leon Festinger

Philosophical Takes

1. Consistency between past and present and future
2. Unconscious need for consistency, difficult to tolerate contradiction

Leon Festinger and Bem meet



Cognitive psychology

Errors in thinking



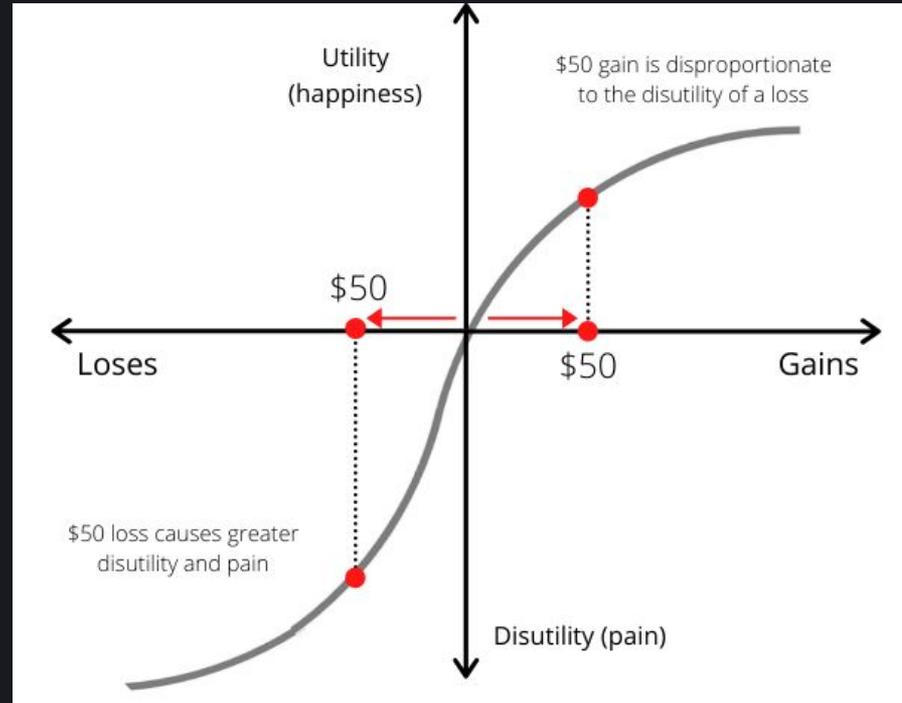
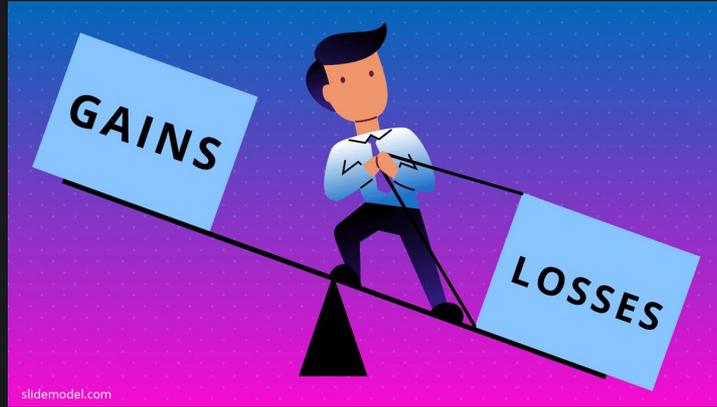
Errors in thinking

1. Fundamental Attribution Error



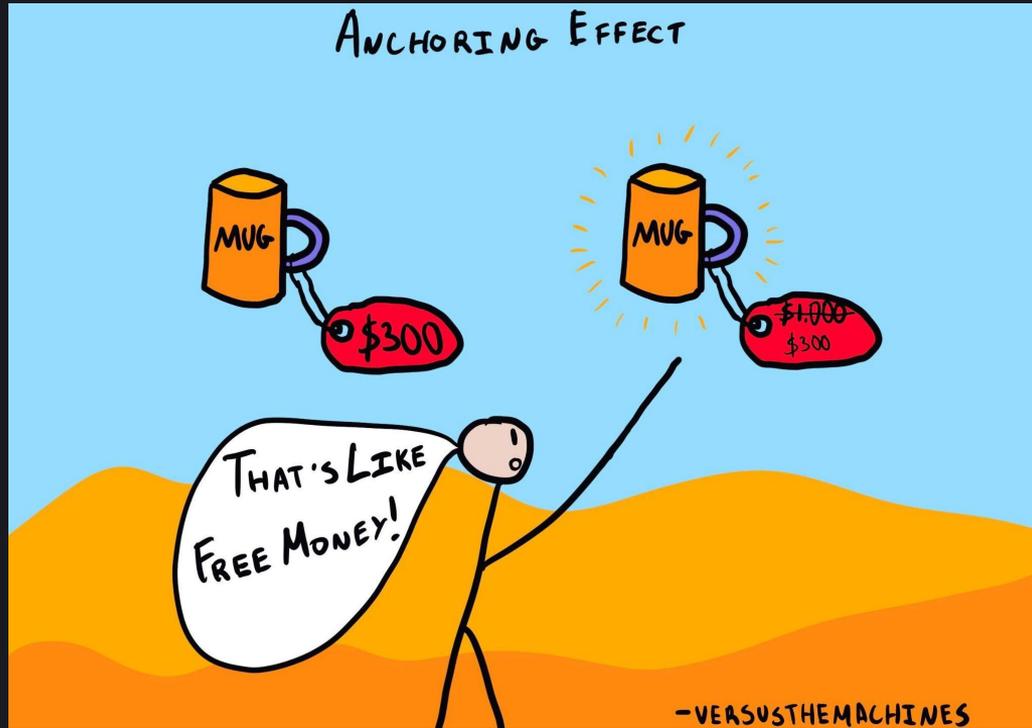
Errors in thinking

2. Prospect Theory



Errors in thinking

3. Anchoring and adjustments



Errors in thinking

4. Discounting



4.

Group
psychology

Group Psychology

1. Group Think

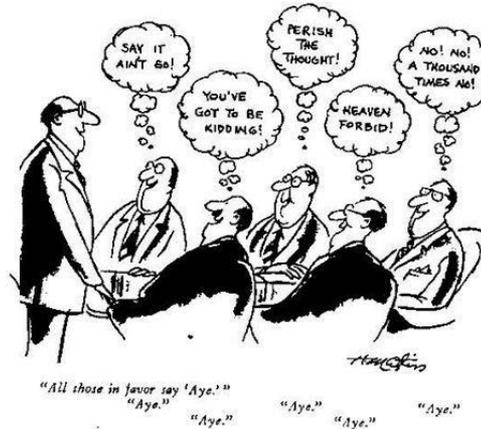


Groupthink is a phenomenon where people tend to confirm with group decisions to avoid feeling outcast, leading to errors in decision making.

2. Group polarization

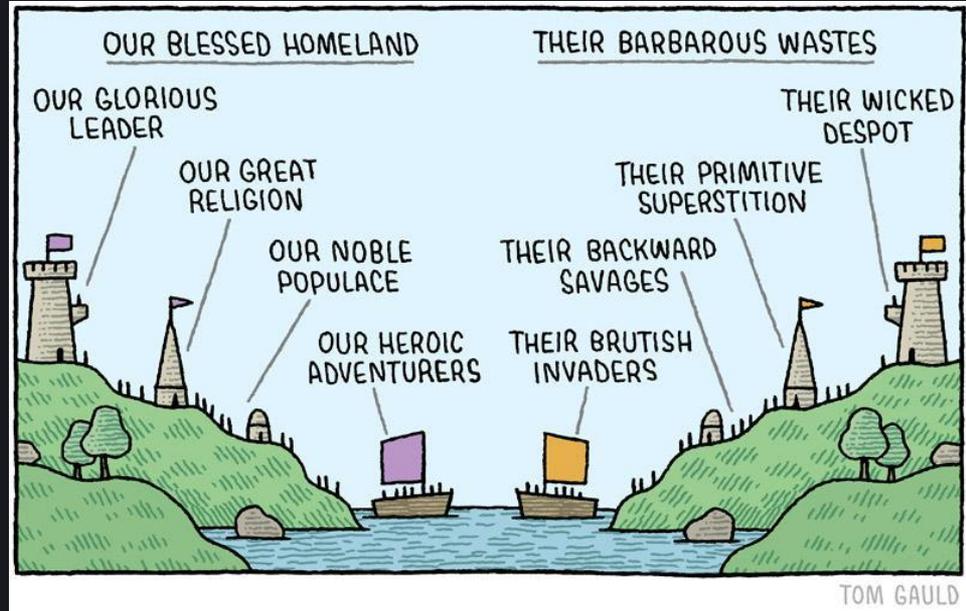
Group Polarization

- Groups tend to make more extreme decisions than the individual.



Group Psychology

3. In group, out group



End.