

# Introduction to Psychology

Introduction to the Human Sciences  
Lecture 2  
05 April 2019

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## Focus of Four Sessions



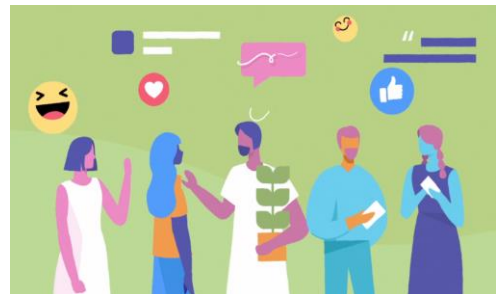
**Introduction**



**How we do study mental processes**



**Perception**



**Personality and Social Psychology**

## Introduction

- What is the difference between Psychology and Common Sense? How they are related?
- What is Psychology ?
- What are the goals of Psychology?
- What are the various levels of psychological analysis?
- What are the different types of Psychologists?
- What are two great debates of Psychology?
- What are the applications of Psychology?



If such grouping leads to bad decision, why don't we quit?

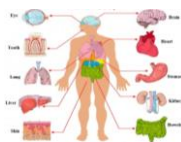
**Conformity, but is always bad?**

**Did conformity influence the perceptual ability as well?**



**Asch Experiment**

## What are the various levels of psychological analysis?



Biological

How biology give is associated with Psychology?

**FOCUS-** Genes, biochemistry, brain system, neurological and physiological

### STUDY -

- How does social media impact brain development?
- Genetic influence on social behaviour
- Neural responses to online peer influence and norm violation
- Are there differences in neurotransmitters when people engage in social ostracism?



Mental/Cognitive/Behaviour/ Individual

How an individual thinks, perceives, attends, and engages in behaviour ?

**FOCUS** - Perception and Cognition, behaviour, individual differences

### STUDY -

- How does online and offline social behaviour influence self and others perception?
- How does online and offline social engagement influences mentalizing (predicting people's motivation, response, feedbacks etc.) ?
- How stereotyping influences perception and action of others ?
- How and why do different people respond to online/ offline/ and /or both engagements?



Social level

How an individual thinks, perceives, attends, and engages in behaviour ?

**FOCUS** – society and culture shape one's mind

### STUDY -

- How do people differ in their online and offline behaviour?
- Do offline and online social engagement differ in normative influence or norm of reciprocity?
- How social media perpetuate stereotyping?
- Comparison b/w online and offline social engagement on social ostracism

## Stereotyping: Automaticity than Controlled

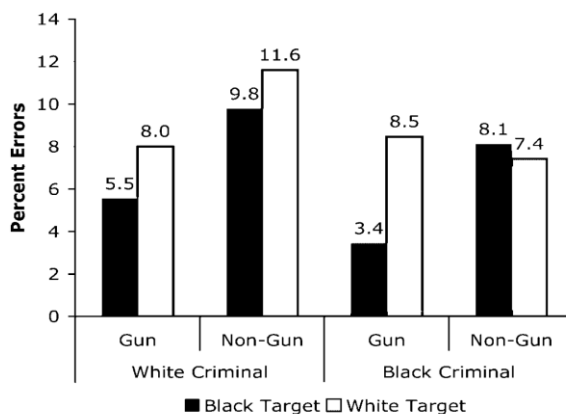


Figure 1. Frequency of errors as a function of Article Condition, Object Type, and Target Race, Study 1

Correll et al., 2002

05-04-2019

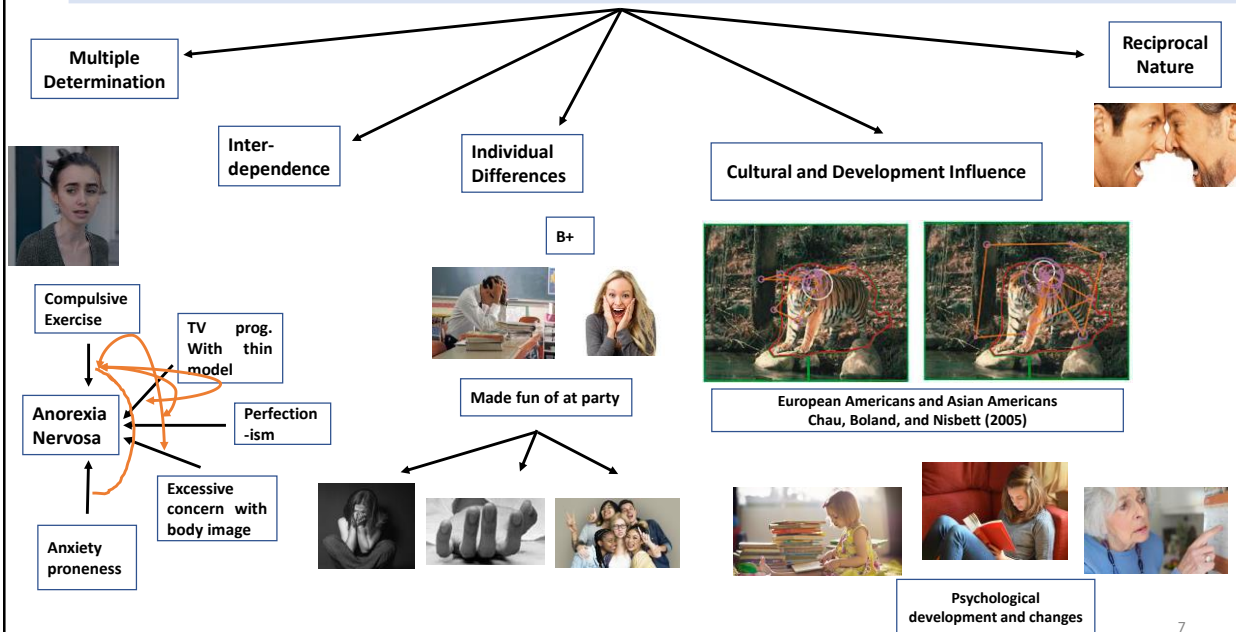
Perception and Cognition Group, CogSci, KCIS, IIIT-H

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- Implicit Association Tests shows 70% of white Americans find it easier to associate white faces with positive concepts such as "peace" and black faces with negative concepts such as "Bomb" than the other way around
- Surprisingly, 40% of African American show the same pattern

## Why Psychology is different than other Sciences?



## Case Study – Facilitated Communication



## Case Study – Facilitated Communication



### EXTRAORDINARY CLAIM

Is the evidence as strong as the claim?

### REPLICABILITY

Can the results be duplicated in other studies?

### RIVARLY HYPOTHESIS

Have important alternative explanations for the findings been excluded?



### CORRELATION VS. CAUSATION

Can we be sure that "A" causes "B"?

### FALSIFIABILITY

Can the claim be refuted?



### AIM

#### Everyday Thinking –

- Inaccurate observations – lacks validity and reliability
- Overgeneralization
- Selective observation

#### Scientific Thinking

- Reduce uncertainty and randomness
- Reduce Error
- Improve Predictability
- Causality and Probability

## Why is this so challenging?

- Complex System – 86 billion neurons and how it leads to thinking, emotion, action .... We still do not know
- Variability – So much variability that we differ in terms of finger prints; culture, knowledge, age, experience etc influences and shapes us who we are ... and similarly our thoughts, emotion and actions
- Reactivity – if one knows them being observed, they behave differently than them without knowledge ... so, your response changes for same condition when you are observed vs. when you do not ...

## What are the Essential Ingredients? – Systematic and Controlled Approach

- Systematic and objective observation
  - Hypothesis testing (Falsification of hypothesis)
  - Reducing subjectivity
  - Generalization validity
  - Ensuring Validity at every stage – from construct to conclusion
- Control – ruling out the various possible explanation for better predictability and causal probability
- Ruling out the metaphysical explanations
  - *People are poor and starving because God wills it ...*  
(Howard lee , 2007 from Essentials of Behavioral Research)

Demand Characteristics



SINGLE VS. DOUBLE BLIND



Observers Demand



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