

# **INTRODUCTION TO PSYCHOLOGY**

SUMMARY 1

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## **Introduction**

In this lecture, we discuss the definitions of psychology and behavior. We also discuss the approaches in psychology and the scientific method in psychology. At the end of this summary, you are expected to:

- Understand the scope of psychology
- Different perspectives in psychology
- The scientific research method in psychology

At the end of the summary, you can find collected past-papers questions.

## **Approaches in Psychology**

Psychology is the scientific study of our thoughts, feelings and behaviors. So it is the study of why we do, what we do, why we feel the way we feel and why we think as we think. And we mean by approach or perspective in psychology a particular view as to why, and how, it is we think, feel, and behave as we do. These approaches can be behavioral, biological, evolutionary, developmental, psychodynamic and cognitive. These are discussed below.

### Behavioral

Behavioral psychology is basically interested in how our behavior results from the stimuli both in the environment and within ourselves.

## Biological

The biological approach believes us to be as a consequence of our genetics and physiology. It is the only approach in psychology that examines thoughts, feelings, and behaviors from a physical point of view.

## Evolutionary

Evolutionary psychology focus on how evolution has shaped the mind and behavior.

## Developmental

Developmental psychology, also known as Human Development, is the scientific study of progressive psychological changes that occur in human beings as they age.

## Psychodynamic

Sigmund Freud was the founder of the psychodynamic approach to psychology. This school of thought emphasized the influence of the unconscious mind on behavior.

## Cognitive

Focus on our information processes of perception, attention, language, memory, and thinking, and how they influence our thoughts, feelings and behaviors.

## Human behavior

What is unique about humans? What do we have in common with other species? How do we differ from each other? How did we come to be who we are?

Humans alone and in context: we act in different ways, depending on whether we are alone, with one other person or in a group. In the following points, we discuss some settings that affect our behaviors.

### Innate Capacities

*Achievement through experience:* We remember what has happened and alter behavior accordingly.

*Achievement through innate capacity:* Even seen in infants in areas such as arithmetic (!)

**Eyewitness memory** is a person's episodic memory for a crime or other dramatic event that he or she has witnessed.

### Displays and Communication

– Social topic (Takes two to communicate)

– Verbal

Language, sound

– Display

Body structure (tail feathers in peacock), behavior or posture (smile or folded arms)

### Social Behavior in Humans

–Varied as compared to most animals

–Flexible as compared to most animals

–Strategic and careful, but also unconscious and irrational  
Changes when social behavior occurs around more than one person  
(large groups, crowds, mobs)

Why does social behavior change so much under these circumstances?

Good question for psychology

### **Diversity of Perspectives**

Many perspectives are used to study the breadth of psychology content.

Example: Different perspectives that can be brought to bear On a single phenomenon: EATING

To study EATING, we can look at:

- Biological Basis for eating
- Cultural Influences on eating
- Eating and the social world
- Eating Disorders
- Cognitive Control over eating

### **The Scientific Method**

There are two themes that give the psychology coherence as a field, these are the types of questions psychologists ask and the ways we answer those questions.

## Theme 1: Types of Questions

Why do we do what we do? Why do we think what we think? Why do we feel what we feel?

## Theme 2: Ways of Answering

The scientific method; and that is why psychology is a science

### **Different Research Methods used in Psychology**

The goals of psychological studies are to describe, explain, predict, and perhaps influence mental processes or behavior. The scientific method is a set of principles and procedures that are used by researchers to develop questions, collect data, and reach conclusions.

#### Research Methods

Research methods fall into two “design” categories in psychology. Research methods that are *experimental* in design include the laboratory, field and quasi-experiment. *Non-experimental* methods include the observational, survey, interview and case study methods. Experimental methods produce measurable quantitative data. Non-experimental methods can sometimes give quantitative data, but information is more likely to be descriptive or qualitative in nature.

#### **Observation**

Perhaps the simplest form of research is *(Naturalistic) Observation*. It means, observing behavior in their natural environment. It often involves counting behaviors, such as number of aggressive acts, number of smiles, etc.

Observation is useful for describing behavior and for suggesting causal hypotheses that could be tested in experiments

## Correlational Studies

Correlation means relationship, so the purpose of a correlational study is to determine if a relationship exists, what direction the relationship is, and how strong it is. *It cannot make any assumptions of cause and effect* (no causation).

In correlational studies, the relationship is between two variables. There are three possible results of a correlational study: a positive correlation, a negative correlation, and no correlation. These are usually shown in graphs. The correlation coefficient is a measure of correlation strength and ranges from  $-1.00$  to  $+1.00$ .

Positive Correlations:

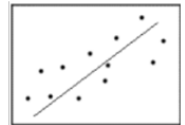
Both variables increase or decrease at the same time. A correlation coefficient close to  $+1.00$  indicates a strong positive correlation.

Negative Correlations:

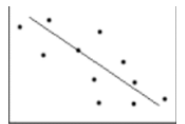
Indicates that as the amount of one variable increases, the other decreases (and vice versa). A correlation coefficient close to  $-1.00$  indicates a strong negative correlation.

No Correlation:

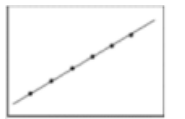
This indicates no relationship between the two variables.



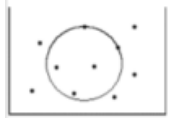
$r \approx +0.6$



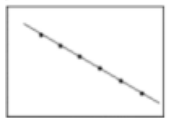
$r \approx -0.6$



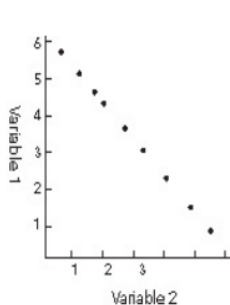
$r = +1.0$



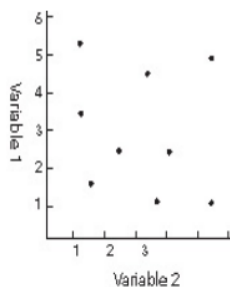
$r = 0.0$



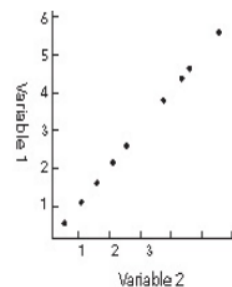
$r = -1.0$



Perfect negative correlation  
Correlation coefficient =  $-1$



No correlation  
Correlation coefficient =  $0$



Perfect positive correlation  
Correlation coefficient =  $+1$

**The more hours a high school student works during the week, the fewer F's he or she gets in class.**

**The more years of education a person receives, the higher his or her yearly income is.**

## **Experimental Studies**

Unlike correlational research methods or psychological tests, experiments can provide information about *cause-and-effect relationships* between variables.

In an experiment, a researcher manipulates or changes a particular variable under controlled conditions while observing resulting changes in another variable or variables.

### Variable

The variable is a factor or element that can change in observable and measurable ways.

– Independent Variable (IV): the variable that is manipulated by the experimenter (*input variable*) -effects the experimenter wishes to examine.

– Dependent Variable (DV): the outcome variable (*results of the experiment*) -experimenter wants to find out if this variable depends on some other factor.

### The control group

The control group is made up of individuals who are randomly assigned to a group but do not receive the treatment. The measures taken from the control group are then compared to those in the experimental group to determine if the treatment had an effect.

### The experimental group

The experimental group is made up of individuals who are randomly assigned to the group and then receive the treatment. The scores of these participants are compared to those in the control group to determine if the treatment had an effect.



## Experimental Hypothesis

By defining our variables that we will use to test our theory we derive at our hypothesis, which is a testable form of a theory that guesses about the possible relationship between two or more variables.

The researcher manipulates the independent variable and observes the dependent variable. The dependent variable may be affected by changes in the independent variable. In other words, the dependent variable depends (or is thought to depend) on the independent variable.

### **Example**

Hypothesis: The success of students in Mathematics course can be increased, by praising them and using motivation technique.

- First, two groups should be formed, which are equal to each other in terms of age, intelligence, education and math competence; Group A and Group B.
- Then, the same instructor teaches the same Math topics to each group, with the same method.
- The students in Group A are praised for their work, whereas the students in Group B do not receive any words of motivation at all.
- A couple of days later the same test is given to both groups, and the results show that students in Group A (praised) are more successful than the students in group B (not praised).

For this example:

- Dependent variable: the success level of students.
- Independent variable: praising the students.
- The Experimental group: group A; which was motivated by praise.
- The Control group: group B; which did not receive any praise.



## Comparison Between Scientific Approaches

Approach	Advantage	Disadvantage
Observation	<ol style="list-style-type: none"> <li>1. high degree of realism because are in natural environments</li> <li>2. data on large number of variables can be collected at the same time</li> <li>3. researcher doesn't have as great an impact on the study as he/she may in other strategies</li> </ol>	<ol style="list-style-type: none"> <li>1. variables not manipulated by the researche</li> <li>2. unable to infer causality</li> <li>3. measurement of variables less precise than in laboratory</li> </ol>
Correlation studies	<ol style="list-style-type: none"> <li>1. shows if two or more variables are related</li> <li>2. allows general predictions</li> <li>3. used both in natural and laboratory settings</li> </ol>	Does not permit identification of cause and effect
Experimental studies	<ol style="list-style-type: none"> <li>1. allows researcher to control the situation</li> <li>2. Permits researcher to identify cause and effect</li> </ol>	<ol style="list-style-type: none"> <li>1. situation is artificial and cannot be always generalized to the real world</li> <li>2. sometimes difficult to avoid experimenter effects</li> </ol>

### Past Papers; Collected Questions

2012:

Midterm:

29. the theory of sigmund freud about psychoanalysis was centered around:

a- cognition

b- >>>unconscious

c- .....

41. Reductionism is a term used by scientists of which of the following perspectives:  
>>> biological perspective

43. the consolidation of memory begins at the age of 3 when the hippocampus gets mature (sht like) ... this represents which of the following perspectives: >>> the biological perspective

Final:

2. all are nonverbal forms of communication except:

a-car

b- clothing

c- .... (forget the answer)

6. which of the following suggested that childhood amnesia is developmental issue due to major increase in our language ability after 3 yo: cognitive perspective

7. which of the following proposed that behavior is unconscious: psychoanalytic

8. which of the following adopted the reductionism view: biological

9. which says that knowledge is acquired through experiences: empiricism

2016

Midterm:

37- Psychology is the study of – behavioral and mental processes

38- The personality theory that focused on unconscious – psychoanalytic

39- Understanding crossing the road as the plan to reach a goal is a – cognitive perspective

Final:

20- A school that focused on the unconscious – psychoanalytic

34- True about nonverbal communication – nonverbal is better to express emotions than verbal

Unknown

12 – Paralanguage in verbal communication includes the following EXCEPT

A – The Tone

B – The volume

C – The words\*

D – The emphasis

E – The pitch

**THE END**

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