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INTRODUCTION TO PSYCHOLOGY

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At the end of this Chapter you should be able to:

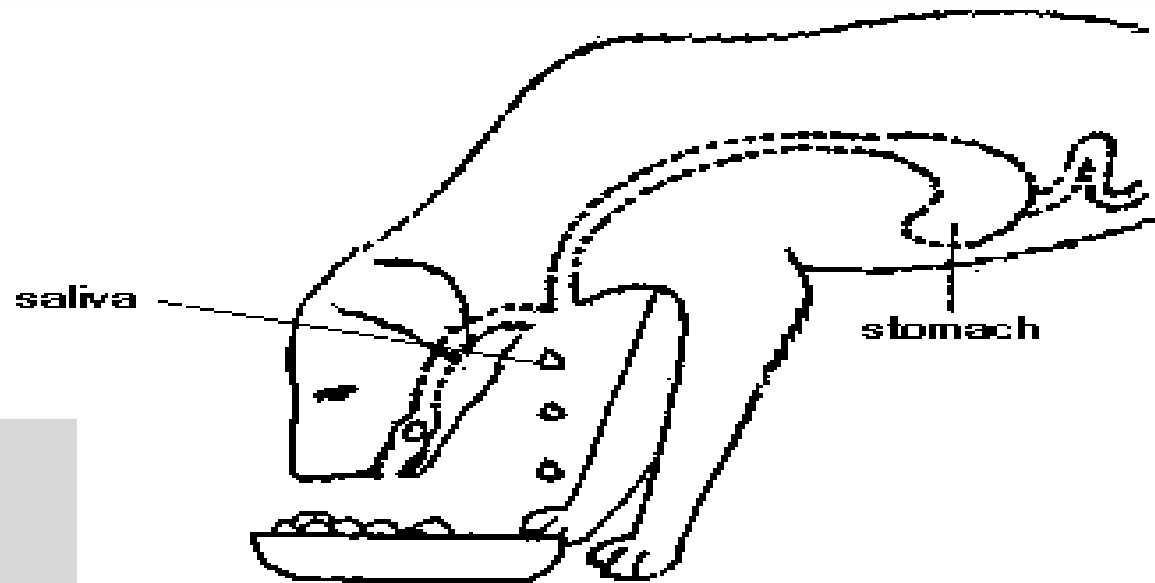
- Understand the scope of psychology
- Different perspectives in psychology
- The scientific research method in psychology

Different Approaches in Psychology

- Psychology is the scientific study of our thoughts, feelings and behaviors.
- An approach or perspective in psychology is a particular view as to why, and how, it is we think, feel, and behave as we do.

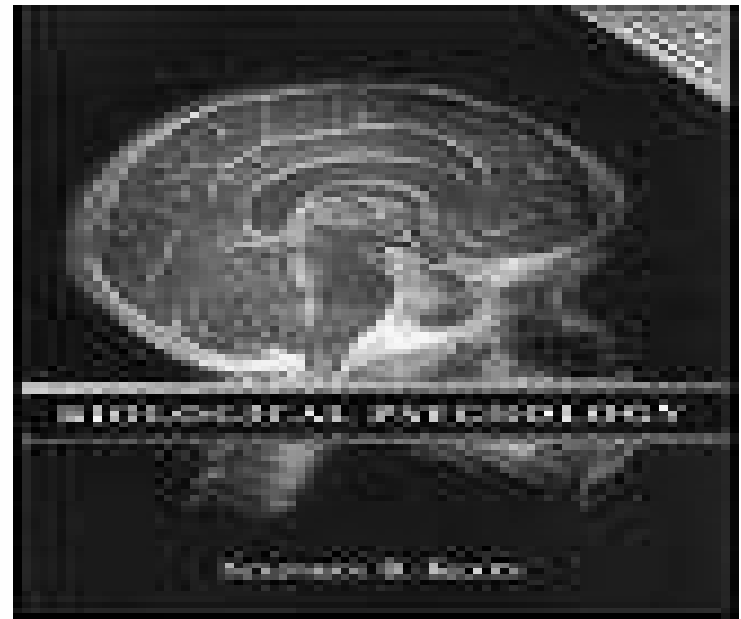
Behavioral

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



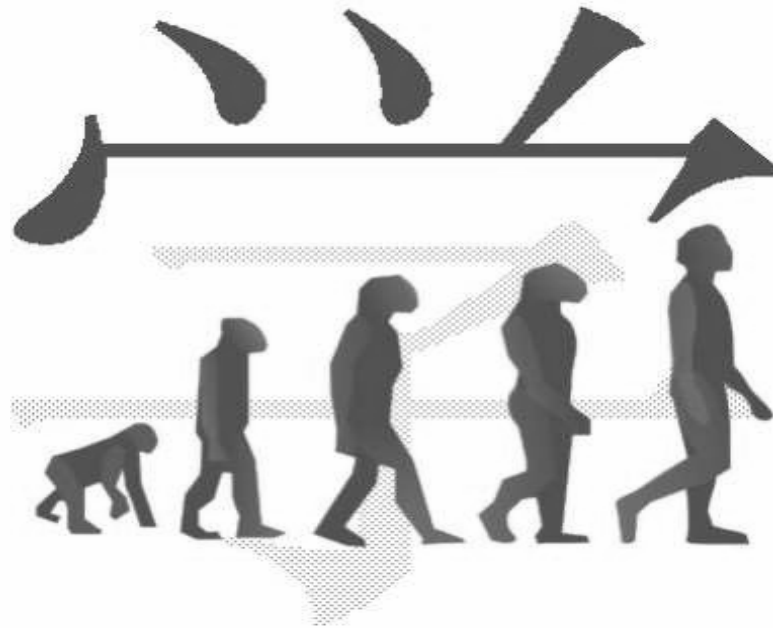
Biological

- **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.



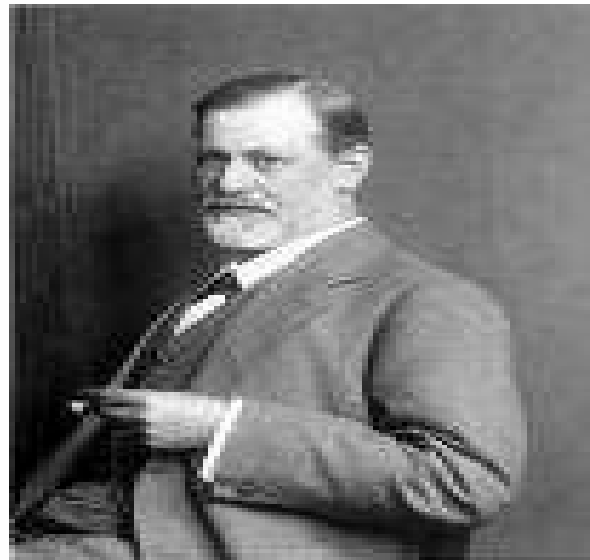
Developmental

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



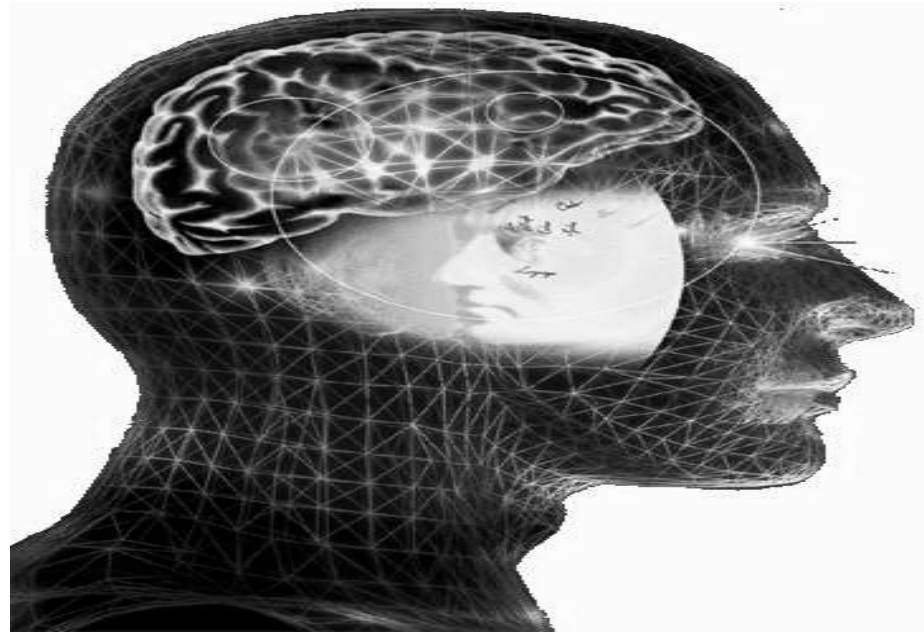
Psychodynamic

- **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.**





Breadth of Content

Psychology: the study of ..

- why we do what we do;
- why we feel the way we feel;
- why we think as we think;



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:

- How do we act when we are alone?
- How do we act when we are with one other person?
- How do we act when we are in a group?



Breadth of Content, cont.

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 (!)**



Breadth of Content, cont.

“Eye witness memory”



Breadth of Content, cont.

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)**

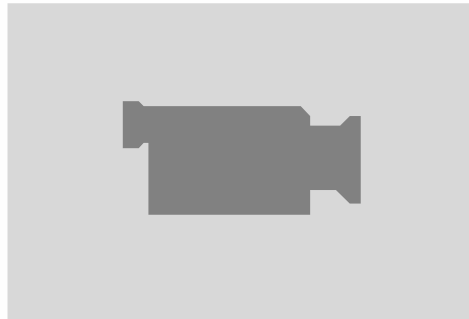
Breadth of Content, cont.

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)**

Breadth of Content, cont.

- Why does social behavior change so much under these circumstances?
- Good question for psychology



Diversity of Perspectives

- Many perspectives used to study the breadth of psychology's content
- Example: Different perspectives that can be brought to bear on a single phenomena: 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



INTRODUCTION TO PSYCHOLOGY

The Scientific Method



What is it That Unites Psychology?

Two themes give the field coherence:

- The **TYPES** of **QUESTIONS** psychologists ask
- 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.

Research 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



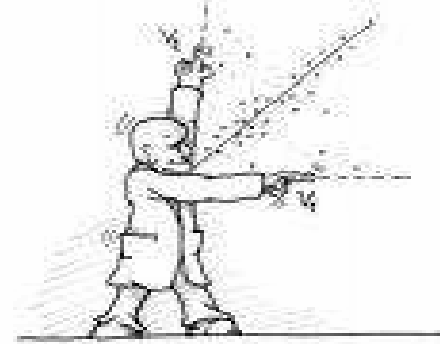
- Perhaps the simplest form of research is **(Naturalistic) Observation**.
- It means, observing behavior in their natural environment. It often involves counting behaviors, such as number of aggressive acts, number of smiles, etc.

Observation



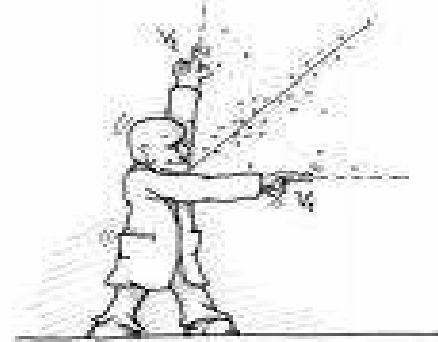
- Useful for describing behaviour and for suggesting causal hypotheses that could be tested in experiments

Correlational Studies



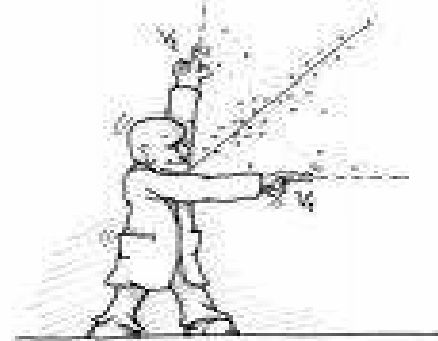
- Correlation means relationship, so the purpose of a correlational study is to determine if a relationship exists, what direction the relationship is, and how strong it is. It can not make any assumptions of cause and effect (no causation).

Correlational Studies



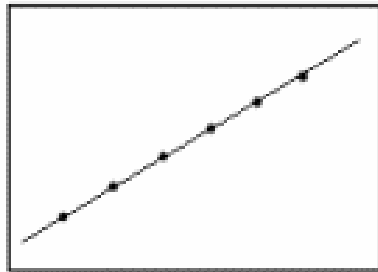
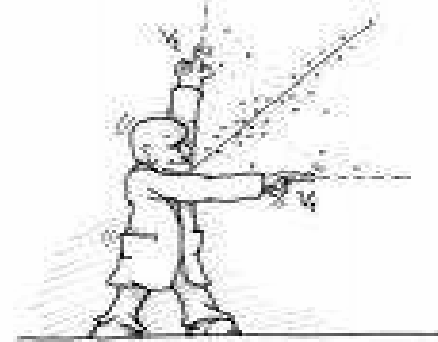
- In Correlational Studies, the relationship is between two variables. There are three possible results of a correlational study: a positive correlation, a negative correlation, and no correlation. These are usually shown in graphs.
- The correlation coefficient is a measure of correlation strength and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

Correlational Studies

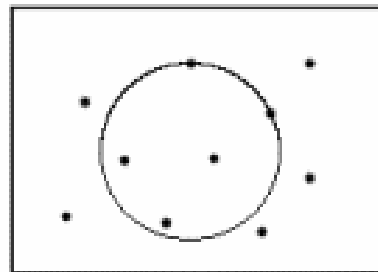


- **Positive Correlations:** Both variables increase or decrease at the same time. A correlation coefficient close to $+1.00$ indicates a strong positive correlation.
- **Negative Correlations:** Indicates that as the amount of one variable increases, the other decreases (and vice versa). A correlation coefficient close to -1.00 indicates a strong negative correlation.
- **No Correlation:** Indicates no relationship between the two variables.

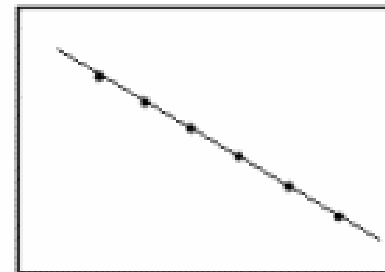
Correlational Studies



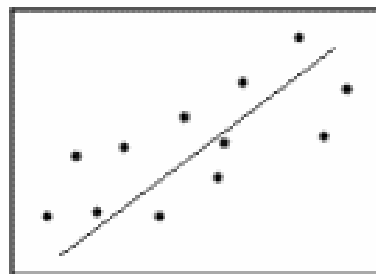
$r = +1.0$



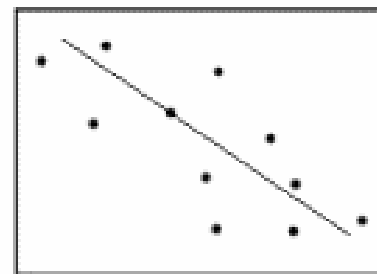
$r = 0.0$



$r = -1.0$

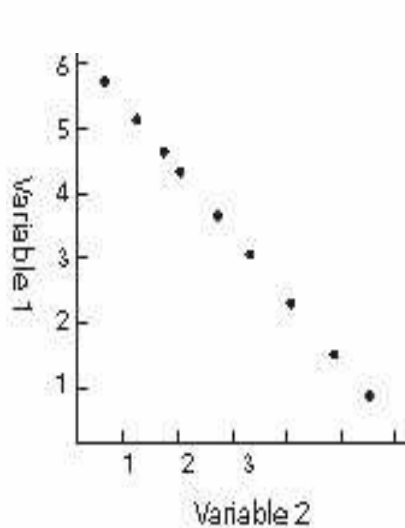


$r \approx +0.6$

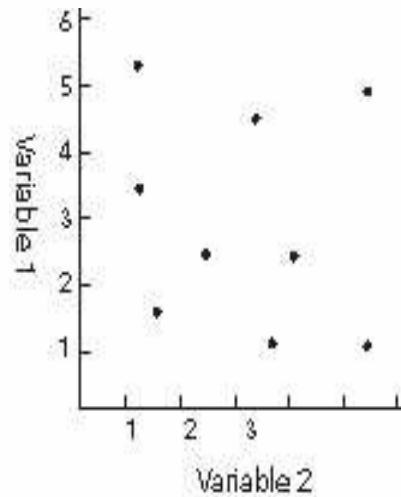


$r \approx -0.6$

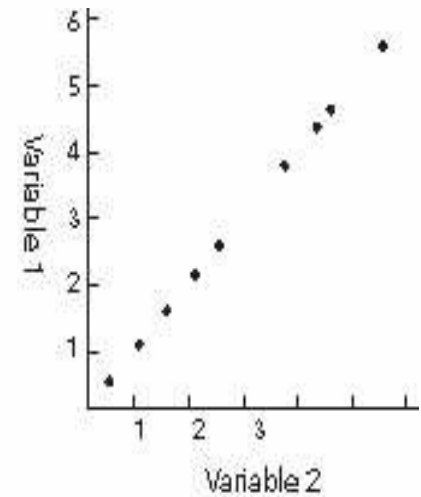
Correlational Studies



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.

Experimental Studies



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

Experimental Studies



- **Variable:** 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.

Experimental Studies



- **The control group:** 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:** 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 Studies



- **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 guess about the possible relationship between two or more variables.

Experimental Studies



- 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.

Nothing you do affects me
- I'm independent.



Independent variable

Some things you do affect me.



Dependent variable

Example

- **Hypothesis:** The success of students in Mathematics course can be increased, by the use of praisal motivation technique.



Example cont'd...

- 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

Example cont'd...

- Then, the same instructor, teaches the same Math topics to each group, with the same method.



Example cont'd...

- 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...



Example cont'd...

- 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:

- Dependant variable is
- The success level of students
- Independant variable is
- Praisal
- The Experimental group is...
- Group A; which was motivated by praisal
- The Control group is...
- Group B; which did not receive any praisal

Comparison

OBSERVATION



- Advantages
 - high degree of realism because are in natural environments
 - data on large number of variables can be collected at the same time
 - researcher doesn't have as great an impact on the study as he/she may in other strategies
- Disadvantages
 - variables not manipulated by the researcher
 - unable to infer causality
 - measurement of variables less precise than in laboratory

Comparison



CORRELATIONAL STUDIES

- **Advantages**

- shows if two or more variables are related
- allows general predictions
- used both in natural and laboratory settings

- **Disadvantages**

- Does not permit identification of cause and effect

Comparison

EXPERIMENTAL STUDIES



- **Advantages**

- allows researcher to control the situation
- Permits researcher to identify cause and effect

- **Disadvantages**

- situation is artificial and can not be always generalised to the real world
- sometimes difficult to avoid experimenter effects