## 22.

**PRINCIPAL NEUROTRANSMITTERS**

| Neurotransmitter | CNS Mechanism | Influence* |
|---|---|---|
| Acetylcholine (ACh) | Usually excitatory | Arousal; muscle movement; attention; memory; Alzheimer's Disease (low levels) |
| Dopamine (DA) | Inhibitory | Regulates behavior & emotions; Schizophrenia (High levels); Parkinson's Disease (Low Levels) |
| Endorphins & Enkephalins | Inhibitory | Natural pain killer; "Runner's High" |
| Gamma-aminobutyric Acid (GABA) | Inhibitory | Low levels associated with anxiety |
| Norepinephrine (NE) | Usually excitatory | Arousal; Depression (Low levels); Panic Disorder (High levels) |
| Serotonin (5-HT) | Inhibitory | Mood regulation; pleasure; sleep/wake cycle; eating behavior; Depression (Low Levels) |

## 17. MEASURES OF VARIABILITY

Distributions differ not only in terms of their central tendency, but also in variability. The simplest measure of variability is the **range**, the difference between the highest and lowest score in a distribution. The range is useful as a quick and rough estimate of variability. Its major drawback is that it may give undue weight to a single score. The **standard deviation (SD)** is a much more precise and stable measure of variability. It is computed by finding the difference of each score (X) from the mean (M), squaring those differences, adding ($\Sigma$) the squared differences, dividing by the number of measures (N), and finding the square root. In distributions where scores cluster very near the mean, the standard deviation will be small; if scores are well spread out on both sides of the mean, the standard deviation will be large. The following computations illustrate the range and standard deviation.

**Raw Data (X) =** 2, 4, 6, 8 **Range** = 8 - 2 = **6**

**Standard Deviation:**

| X (Raw Scores) | (X-M) | $(X-M)^2$ |
|---|---|---|
| 2 | (2-5) = -3 | 9 |
| 4 | (4-5) = -1 | 1 |
| 6 | (6-5) = 1 | 1 |
| 8 | (8-5) = 3 | 9 |
| M=$\Sigma$ (X)/N = 20/4=5 | | $\Sigma (X-M)^2 = 20$ |

$$SD = \sqrt{\frac{\Sigma (X-M)^2}{N}} = SD = \sqrt{\frac{20}{4}} = \sqrt{5} = 2.24$$

## 7. CONTEMPORARY PSYCHOLOGICAL VIEWPOINTS

1. Psychology as a **biological** science - From one perspective, psychology appears very clasely related to the biological sciences. The structural basis of behavior is biological, and psychology relies heavily on such biological sciences as neuroscience, genetics, and biochemistry for an understanding of the causes of behavior; ex.- neuropsychology, physiological psychology.

2. Psychology as a **social science** - Another view of the nature of psychology suggests that it properly belongs with the social sciences including sociology, anthropology, and political science, since the subject matter and goals of psychology overlap with these fields; ex.- social psychology, political psychology.

3. Psychology as a **cognitive science** - Contemporary psychology frequently employs information processing models of behavior that are strongly influenced by the field of computer science; ex.- psycholinguistics, information processing models of memory.

4. Psychology as a **behavioral science** - This extremely influentiol viewpoint argues that psychology is a science that deols with attempts to understand and control observable behavior; ex. - behavior modificatian, clossical conditioning.

5. Psychology as an **applied science** - In contrast to the preceding viewpoints, psychology may also be defined in terms of its *practical applicatians*. Specializations like clinical and industrial-organizational psychology apply bosic knowledge to real word problems and thus resemble such applied fields as medicine and engineering.

## 20. NEURONAL PHENOMENA

**Arrangement of neurons** - A *functionol* communication of dendrites and oxon terminal buttons of different neurons occurs at the *synapse* vio *neurotransmitters*.

**Characteristics of the Action Potential (nerve impulse)**

1. It is o brief (1 millisec.) change in the *direction* and *strength* of electrical charge fram the resting potential (- 70 millivolts) to obaut + 40 millivolts.

2. It is *unidirectionol* - movement is from cell body to axon terminal buttons.

3. *Speed* of impulse vories, up to 100 meters/sec.

4. The *frequency* of neuran firing is influenced by the strength of stimulation.

5. **All or none law** - The magnitude of the action potential is not offected by the strength of the stimulation of the neuron.

6. **Absolute Refractory Period** - Period following an action potential during which another action potential cannot take place.

7. **Inhibition** - Occurs when one chain of neural transmission is stopped by the activity of another chain. Can be *simultaneous* or *successive*.

8. **Temporal Summation** - Where twa or more *subthreshold* stimuli cause an action potential.

9. **Dendritic potential** - In addition to the operation of the all or nane principle in the neuran, dendrites also corry electrical potential in *graded* degrees.

## 14. EXPERIMENTAL DESIGN (Continued)

**7. Statistical Analysis** - Involves measurement procedures which will show the degree to which any differences between the experimental and control groups can be attributed to the influence of the independent variable rather than **chance** factors.

**8. Application of results** - Since the experiment was conducted in order to test the hypothesis, the results are now analyzed to determine their relationship to the original prediction regarding the phenomena being investigated. The results ore also analyzed for their general value and their implications for similar problem areas.

### EXPERIMENTAL DESIGN PROBLEMS

**Demand Characteristics (Orne effect)** - Any cues inadvertently given to the subjects in an experiment that allow them to know the purpose of the study.

**Experimenter Bias (Rosenthal effect)** - The unintentional tendency for a researcher's preferences or beliefs to influence the outcame of an experiment by either distorting the interpretation of the experiment's results or causing the subject's behavior to change.

**Acquiescence Bias** - A bias to agree with items on a questionnaire irrespective of the actual warding of the questions.

**Placebo effect** - Subject expectations that cause a measurable response to inert substances or treatments.

**Social Desirability Bias** - A bias to give socially desirable answers to questions about oneself; may occur in both experiments and psychological testing.

**Double Blind Procedure** - An experimental procedure designed to overcome experimenter bias and the placebo effect. In this type of design, the nature of the hypothesis and experimental procedures are hidden from both the subjects and the members of the research team who actually administer the experiment.

## 12. PSYCHOLOGICAL RESEARCH METHODS

The experiment represents the most powerful farm of psychological research. In situations where the use of the experimental method is impractical or unethical, other research techniques are employed. While these involve the *systematic* observation of variables, there is less contral over the variables.

**1. Naturalistic Observation** - Observation of animal or human behavior in naturol settings may provide rich information about real world behaviar and generate experimental hypotheses, but it is subject to *observer influence* and *bios*.

**2. Survey Study** - Utilizes a variety of techniques including *public opinion polls, attitude surveys, questionnoires*, and *consumer motivation surveys*. These methods require *representative samples*.

**3. Clinical or Case-Study** - Designed to study and explain *individuol behavior* but may alsa be used to generate experimental hypotheses or test generalizations about behavior. Utilizes *case histories, diagnostic interviews, objective personality tests, projective techniques, psychotherapeutic* and *behavior modificotion techniques*.

**4. Correlation Research** - Measures the degree of relationship between two variables, but *cannot* determine cause and effect relationships. It is employed where strict experimentol control is not feasible or ethical. Results are usually expressed in the form of a *correlation coefficient*; ex.- r = + .67.

**5. Experimental Method** - While the preceding research techniques are frequently employed to understand behavior, the science of psychology relies heavily on the experiment. An *experiment* refers to *systematic observations* of the *relationship between events under conditions of control and replicotion*. Only the experiment ollows for conclusions about **cause** and **effect** relationships between *independent* and *dependent* variables.

## 16. MEASURES OF CENTRAL TENDENCY

The following measures are commonly employed in psychology to compute the tendency of scores in a distribution to cluster around a central value: (1) the **mode** is the most frequently occurring score; (2) the **median** is the middle score in a group of measures when they have been ranked from low to high; (3) the **mean** is an arithmetical average.

The following computotions illustrate each measure af central tendency:

**Raw data (X)** = 2, 3, 3, 3, 4, 5, 6, 7, 8, 9, 12

***Mode computation*** 2, **3, 3, 3,** 4, 5, 6, 7, 8, 9, 12 ; **Mode = 3**

**Median computation** 2, 3, 3, 3, 4, **5,** 6, 7, 8, 9, 12; **Mode = 5**

**Mean Computation = $\Sigma$ (X)/N = 62/11= 5.64**

## 9. SCHOOLS OF PSYCHOLOGY (continued)

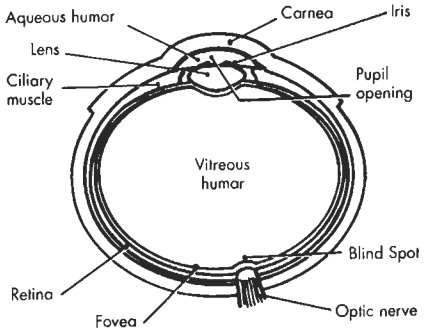
**1. Voluntarism** - Formulated by Wundt, who also established the first experimental psychology laboratory in Leipzig, **1879**. Wundt's approach was modified by **Titchener,** who later founded **Structuralism** in the US. Both theorists viewed the objective of psychology as the identification of the **elements of consciousness (sensations, images, feelings)**. Wundt, unlike Titchener, believed that the elements of consciousness could be meaningfully organized by the process of **apperception.** While criticized for both overemphasizing mental content and relying upon **introspection** in their laboratory research, Wundt and Titchener must be credited with helping to establish psychology as an experimental science.

**2. Functionalism** - Inspired by **Darwin.** Had its beginnings around **1900** under the influence of **Angell, Dewey,** and **Carr.** Psychology was seen as the study of **adaptation** to the environment. Mental phenomena were defined as **processes** or **functions** (thinking, feeling, perceiving) rather than mental content. These processes were viewed as legitimate sources of data. This school generated many areas of modern **applied** psychology.

**3. Psychoanalysis** - Created by Freud around **1900.** This approach emphasized the port ployed by **thoughts** and **motives** which are **unconscious** but nevertheless strongly influence behavior. While Freud's original theories have been the subject of extensive revisian by *neo-Freudians* and contemporory psychoanalysis, they have also been severely criticized by nan-psychoanalytic psychologists. Freud's theory of personolity dynamics hos been applied to development, obnormal behavior, and psychotherapy.

## 30. VISUAL SENSITIVITY

The ***stimulus*** for vision is composed of electromagnetic waves which enter the eye through the ***cornea,*** the amount of light controlled by the ***pupil*** (on opening in the ***iris***.) Then the ***lens*** focuses the light on the ***retina,*** the light-sensitive portian of the eye which contains ***rods*** (important cell mediating ***achromatic sensations***) and cones (other specialized cells mediating **chromatic** and acromatic sensations.) Nerve fibers connect rods and cones with ***optic nerve*** and ***brain.***



## 21. THE PERIPHERAL NERVOUS SYSTEM

**A. Functional Division:**

(1) *Sensory* or *afferent pathways* - conduct nerve impulses from *receptors* to the spinal cord and brain.

(2) *Motor* or *efferent pathways* - conduct nerve impulses from the brain and spinal cord to effectors (muscles and glands).

**B. Structural or Anatomical Division:**

(1) *Cranial Nerves* - 12 pairs, supplying mainly the head but also the neck muscles, heart, blood vessels, and certain viscera.

(2) *Spinal nerves* - the *sensory fibers* mediate sensitivity of major parts of body, except face. The *motor fibers* connect to all striated muscles of the body except the neck and head.

**C. Functional Division: The Autonomic Nervous System:**

Regulates majority of involuntary and automatic responses of organism; very important in *emotions* and *basic motivation* due to its regulatory influence on internal organs and endocrine glands.

(1) *Sympathetic Branch* - built for widespread discharge.

Serves to mobilize the resources of the body in stressful situations and emergencies; **"flight-or-fight" reaction;** discharges are generalized.

(2) *Parasympathetic Branch* - acts to conserve and to build up body resources; **"relaxation response."** Discharges are more specific than those of the sympathetic system.

## 18. MEASURES OF RELATIONSHIPS

The *correlation* coefficient is frequently used in non-experimental research involving human behavior. While it is computed in several different ways, the correlation coefficient is always a number between +1.00 and -1.00. The correlation coefficient expresses the **degree of relationship** existing between two sets of measurements, which are arranged in pairs. The numerical value expresses the *strength* of the relationship; the *positive* or *negative* sign indicates the *direction* of the relationship. In a **positive** correlation, both sets of measures tend to vary in the *same* direction; ex.- achievement motivation and academic grades; individuals with *high* achievement motivation tend to have *high* grades, while *low* levels of achievement motivation are associated with *low* grades. In a **negative** correlation, the measures tend to vary in an opposite direction; ex - anxiety and concentration; *higher* levels of anxiety are associated with *lower* levels of concentration. Squaring the correlation coefficient ($r^2$) gives a measure of how much of the variability in a distribution of scores is accounted for by the correlation between the two measures; ex- if the correlation between anxiety and concentration is $r = -.50$, the relationship between anxiety and correlation accounts for 25% of the variability of the scores in the study; $(-.50)^2 = .25 = 25\%$.

## 8. SCHOOLS OF PSYCHOLOGY

| System & Leaders | Main Topics of Study | Research Methods |
|---|---|---|
| **Voluntarism** (1879) Wundt<br>**Structuralism** (1896) Titchener | Elements of consciousness, attention, perception | Introspection<br>Experiment |
| **Functionalism** (1896) Angell, Dewey, Carr | Function of adaptive behavior | Introspection, Observation<br>Experimentation |
| **Psychoanalysis** (1900) Freud | Unconscious mental processes | Case Study<br>Observation |
| **Gestalt Psychology** (1912) Wertheimer, Köhler, & Koffka | Perception and thinking as organized wholes | Observation<br>Experiment |
| **Behaviorism** (1913) Watson | Observable behavior, S-R connections | Observation<br>Experiment |
| **Neobehaviorism** (1930) Tolman, Hull, Skinner | Learning models of animal and human behavior | Experiment<br>Theoretical Models |
| **Cognitive Psychology** (1960) G. Miller, Neisser, Bandura, Rotter | Information-processing, social-learning theory | Experiment<br>Computer Analogies |

## 19. THE NEURON: FUNCTION AND STRUCTURE

**Functions performed by the neuron:**

The **transmission of nerve impulses**, initiated at the various sensory receptors, to the *spinal cord* and *brain*, and then from these structures to the different organs of the body, particularly the *effectors* (muscles and glands). The neuron functions to *receive, integrate* and *transmit* information within the nervous system. Behavior and consciousness are ultimately dependent on the functioning of neurons.

**The anatomy of the neuron.**

The neuron is the basic unit of nervous system. A neuron is a single, specialized cell, while a *nerve* is a bundle of neuron fibers (axons).

The structure of the neuron includes:

(1) **dendrites:** tree-like branches that receive information.
(2) **cell body:** regulates life processes in neuron.
(3) **axon:** long fiber coming out of cell body; conducts action potential.
(4) **myelin sheath:** fatty tissue; insulates axon; accelerates nerve impulse.
(5) **axon terminal button:** found at end of axon; stores and releases neurotransmitters.
(6) **synapse:** space between axon of one neuron and dendrites of another neuron.

## 13. EXPERIMENTAL DESIGN

**1. The problem** - Statement and definition of the phenomena to be investigated.

**2. The hypothesis** - A testable prediction about behavior or mental processes.

**3. Independent variable** - Any factor or event deliberately introduced into the experiment and varied by design which produce a response in the organism. It is the effect of this variable on the organism which the experimenter studies. All other stimulus variables are controlled so that any change in the response of the organism can be attributed to the action of the independent variable.

**4. Dependent variable** - Refers to the reactions or changes occurring in the organism as a result of the introduction of the independent variables. Thus, the factor which the experimenter introduces is the independent variable, and its effect is referred to as the dependent variable. *Operational definitions*, which define variables in terms of the methods used to measure or create the variables, must be provided for both the independent and dependent variables.

**5. Experimental group** - *Participants* who will be subjected to the changed condition of the *independent variable.*

**6. Control Group** - Another group of participants who resembles the experimental group in every possible way, but who are not subjected to the influence of the independent variable. A *placebo* (condition or substance resembling the independent variable but which is inert and non-activating) is sometimes given to the *control* group as a further control safeguard. Both the experimental and control groups are created through **random assignment.**

## 11. AREAS OF PSYCHOLOGICAL SPECIALIZATION

| | |
|---|---|
| Clinical and Counseling Psychology | Assessment, treatment, research of emotional and adjustment problems in adults and children |
| School Psychology | Assessment and treatment of learning and behavioral problems in school-age children |
| Community Psychology | Prevention, intervention, and research at a community level; focuses on primary prevention |
| Industrial-Organizational Psychology | Assessment, application, and research dealing with consumer, employee, and management behavior |
| Experimental Psychology | Studies basic psychological processes in such areas as learning, perception, memory, thinking, and emotion |
| Social Psychology | Studies how individuals function in groups; interpersonal relationships, attitudes, and perceptions |
| Developmental Psychology | Studies changes in cognition, emotion, and social behavior from birth to death |
| Physiological Psychology | Studies the relationship between nervous system and behavior in humans and animals |

## 15. MEASUREMENT AND STATISTICS

**Kinds of Measurement** - Measurement is the assignment of numbers to phenomena on the basis of set rules. Data in psychology frequently requires specific types of measurement scales. Psychological research employs the following measurement scales:

**(1) Nominal measurement** - numbers used to place items into **mutually exclusive categories**. Can only generate decisions about same or different; ex.- male vs. female, numbers on athletic uniforms.

**(2) Ordinal measurement** - numbers used to **rank** or order items. Can make statements about more and less; ex.- hardness of rocks.

**(3) Interval measurement** - interval between one number and the next can be measured, but a true zero point is not present. Can make statements about **equal differences** but not ratios; ex.- temperature on a Fahrenheit scale.

**(4) Ratio scales** - each number can be thought of as a distance measured from a known zero point. Can generate statements using **ratios,** (2x 1/2, etc.) ex.- speed in seconds of a response to a stimulus.

Much psychological data does not allow the use of ratio scales. For example, an IQ of 120 is *not* twice as high as one of 60 because IQ scales do not have ratio properties. *Ordinal* and *Interval* measures are most commonly in use in psychology.

## 10. SCHOOLS OF PSYCHOLOGY (Continued)

**4. Behaviorism** - Originated around **1913,** primarily under the leadership of **J. B. Watson**. This school completely rejected states of consciousness or the analysis of the mind. Watson insisted that psychology must restrict itself to an **objective** investigation of **behavior** in a stimulus-response **(S-R)** framework. In his efforts to gain scientific stature for psychology, however, he not only rejected classical introspection and other less objective methods, but also ignored two important determinants of behavior: *cognitive processes and heredity.*

**5. Gestalt Psychology** - This system, a reaction both to the introspectionist and the behaviorist, was developed by **Wertheimer, Köhler,** and **Koffka** in 1912. In contrast to other approaches which described complex behavior as developing out of simple behaviors or sensations, the Gestalt psychologists argued that we must first consider the **whole, integrated experience** and then determine how this affects the **organization** of the parts. The whole experience or behavior was seen as **more than just the sum of its parts.**

**6. Neobehaviorism** - Founded about **1930,** this approach added **theoretical systems** and **operationism** in an attempt to increase the sophistication of the behavioristic approach. **Tolman, Hull, and Skinner** developed and tested general models of behavior based upon laboratory experimentation with animals.

**7. Cognitive Psychology** - Starting about **1960,** psychology began to seriously question the adequacy of behavioristic models. Led by **G. Miller, Neisser, Bandura,** and **Rotter,** cognitive psychology developed **information processing** models of behavior. Cognitive psychologists view humans as actively employing strategies to organize, choose, and utilize information.

## 29. THEORIES OF AUDITION

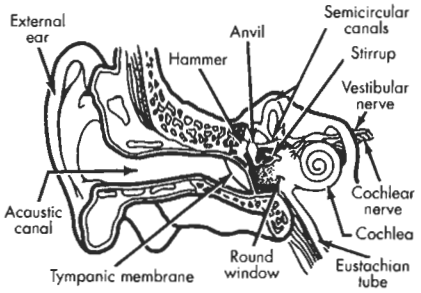
**Helmholtz's Resonance Theory** - Pitch is determined by that part of the organ of Corti (basilar membrane) stimulated by a given frequency. Particular hair cells resonate for each frequency; the more cells responding, the louder the sound. The wider portion of the basilar membrane resonates to low frequencies and the narrow section to high frequencies.

**Rutherford's Frequency Theory** - Draws an analogy between audition and the mechanism of a telephone. Distinctive auditory qualities (pitches) depend upon the rate (frequency) of vibration of the basilar membrane in response to the incoming sound. Loudness corresponds to the number of receptors and nerve fibers stimulated. The stronger the vibrations, the farther they travel and the more hair cells they stimulate in the ascending canal.

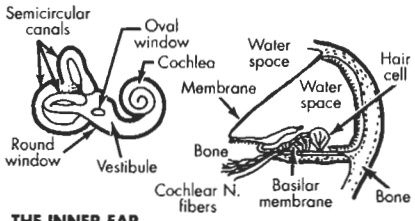
**Wever and Bray Volley Theory** - Hair cells fire in a sequence of rhythmic volleys analogous to muskets firing and then reloading; a rapid alternation of firing allows for the perception of high frequencies.

**Von Békésy's Place Theory** - Frequency perception depends upon the amount of displacement created by traveling waves in the cochlea; high frequency waves maximally displace the basilar membrane near the oval window; low frequency waves maximally displace the basilar membrane near the cochlea tip.

## 28. THE INNER EAR

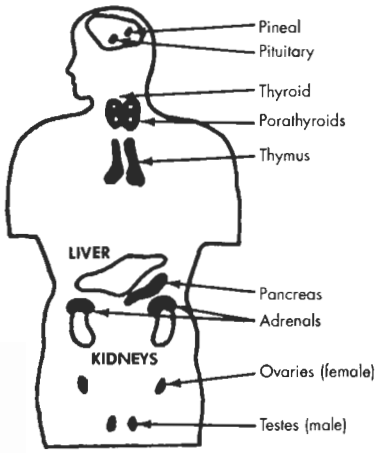



**CROSS SECTION OF THE EAR**

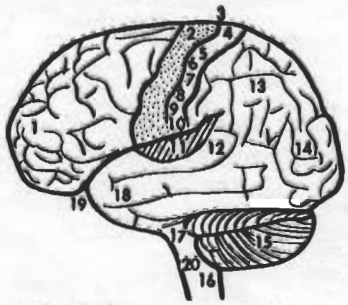



**THE INNER EAR** | **CROSS SECTION OF THE COCHLEA**

## 26. THE ENDOCRINE GLANDS




## 24. HUMAN BRAIN STRUCTURES



1. Frontal Lobe
2. Motor Region
3. Central (Rolandic) Fissure
4-10. Somaesthetic Area
5. Leg, Trunk
6. Arm
7. Hand
8. Face
9. Tongue
10. Mouth
11. Hearing
12. Speech
13. Parietal Lobe
14. Occipital Lobe
15. Cerebellum
16. Medulla
17. Pons
18. Temporal Lobe
19. Fissure of Sylvius
20. Reticular Formation

## 32. THEORIES OF COLOR VISION

**Tri-Chromatic or Young-Helmholtz** (1801) - hypothesizes that there are three different receptors in the retina, responding to *red, green,* and *blue-violet* (the primary colors). Each type of receptor responds to light, but maximally to its own wave length. *Color mixture:* every wave length stimulates all the receptors, therefore the perception of different colors is the result of different relative intensities of the wave lengths; *gray* results from equal stimulation; *yellow* from equal red and green; *white* results from equal amounts of the primaries.

**Opponent Process -** *Hering* (1878) - proposes there are three independent receptar pairs: *red-green, yellow-blue,* and *white-black.* Red-green and yellow-blue receptars influence chromatic perception, while the white-black receptor pair influences the brightness of calars. Current research indicates that, when combined, the Young-Helmhaltz and Opponent Process theories explain most color vision phenamena.

**Ladd-Franklin** (1892) - argues that there has been a progressive *evalutian* af the retinal mechanism for color, from *achramatic impressions,* to mechanisms for *blue* and *yellaw,* and ultimately to the development af *red* and *green* receptars.

**COLOR BLINDNESS** - inability ta distinguish calars an the part of a person wha atherwise may have narmal vision. Calar blindness may be *tatal (achramatism)* which is extremely rare, ar it may be *partial (dichramatic color vision).* Dichromats can discriminote only two colars - yellaw and blue ar green and red. It is a *sex-linked,* recessive trait, usually faund in males.

## 36. EXTRASENSORY PERCEPTION (ESP)

**Extrasensory perception (ESP)** - perception occurring without ony apparent sensory input or any apparent channels of sensory communication. Although lay persons are foscinated by ESP and often accept it as proven, most psychologists remain skeptical. Still, there have always been a small number of psychologists who actively investigate this area. The numerous critics of such ESP research point out that it is often flawed and frequently exploits *chance* factors. In most instances, positive findings in ESP research have proven to be extremely difficult to *replicate* (repeat). While recent ESP reseorch has attempted to address these problems, many psychologists still are dubious about the validity of ESP experiments.

**Types** of ESP phenomena include:

**Telepathy** - The ability to transfer thoughts between individuals. "Mind-readers" supposedly have this skill.

**Clairvoyance** - The ability to perceive events that are not in the present situation; ex.- being aware of a plane crash occurring on the other side of the warld.

**Precognition** - Having an awareness of events before they happen; ex- a specific, correct prediction about a future natural disoster.

**Psychokinesis** - The ability to physically influence inanimate objects; ex.- being able to mave a table by merely thinking about it.

## 40. DEVELOPMENTAL PSYCHOLOGY

**Development** refers to biologicol, cognitive, emotional, and social changes starting at conception and continuing throughout the individual's lifetime. **Continuity** theories of development propose that there is a gradual, continuous change in development over the individual's life-span. **Discontinuity** theories argue that distinct **stages** define **qualitative** changes in the course of development. Freud, Erikson, and Piaget are all discontinuity theorists.

**Longitudinal** studies follow the development of individuals in a group over time; **cross-sectional** studies research a representative sample of individuals at specific times or stages of development.

**Maturation** refers ta orderly and biologically-based changes in behavior that occur over time.

**Readiness** - While many behaviors, for example reading, are the result of **learning,** attempts to teach reading before readiness to read has matured will be highly ineffectual.

**Imprinting -** Learning taking place during a **critical period**; such learning usually involves an attachment to the first object seen or heard and tends to be **irreversible;** found in animals (esp. birds). Humans form an **emotional bond** with *caretakers* which is somewhat analogous to imprinting.

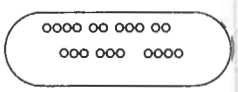
**Temperament** - The primarily biologically-based activity levels and emotional responsiveness of newborns and young children; ex.- active, tense.

**Nature/nurture controversy** - Debate over the relative contributions of heredity ("nature") versus the environment ("nurture") in influencing the development of the individual.

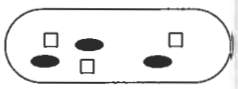
**Socialization** is the process that describes the learning of behaviors and attitudes that are appropriate to a child's family and culture; ex.- *gender identity.*

## 34. GESTALT PRINCIPLES OF PERCEPTUAL ORGANIZATION

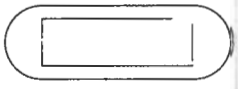
1. **Proximity** - Adjacent stimuli tend to be perceived together.



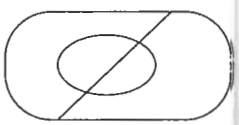
2. **Similarity** - Similar stimuli tend to be perceived as belanging together.



3. **Closure** - Incomplete stimuli tend to be perceived as complete.



4. **Continuity** - Stimulus patterns tend to perceived as continuous patterns. (Line is perceived as cutting the ellipse.)



5. **Figure-Ground** - The figure is perceived as standing out from the background and separated from it by a boundary or background.

## 38. BEHAVIOR GENETICS (Continued)

**Adoption Studies** - compare similority of traits passessed by children with their biological and adoptive parents.

**Family Histories** - detailed and accurate phenotypic dota on a number of generations of the same family.

**Population genetics** - uses data from very large samples and compares parent-child resemblance for a psychological trait.

**Chromosomal Mapping** - research technique that studies DNA in families possessing a particular phenotype (ex.- bipolar disorder).

**Concordance studies** - use correlation coefficient to investigate specific traits in individuals varying in their degree of family relationship.

Concordance studies of *IQ constancy* indicate that heredity plays an important role in intelligence. Hawever, this does **not** meon that IQ is simply inherited. *Temperament* seems to be strongly influenced by genetics, but is also influenced by the environment. *Adoption studies* suggest a significant genetic campanent for *schizophrenic* and *bi-polar* disorders. Some farms of retardation, such as **PKU,** have a clear genetic basis.

In general, it appears that heredity set limits on the potential upper boundaries of behavior, while environmental factors work to influence the degree to which the potential is realized. Behavior is ultimately the outcome of a complex interaction of genetic and environmental factors. It is erroneous ta argue that a given psychological trait is simply inherited ar entirely the result of environmental influence.

## 42. FREUD'S PSYCHOSEXUAL STAGES

**Freud** praposed that the first five years of life are critical in personality formation. He viewed personality development as resulting from the conflict between the child's need to discharge tensions associated with sexual and aggressive energies and pressures from the family for conformity to societal expectations. While some of Freud's ideas have been criticized for being unscientific and sexist, he has had a profound influence on Western thinking.

**Oral stage** - *1st year of life;* libido concentrated in the mouth; tensions relieved through sucking activities and biting activities when teeth emerge. Freud proposed that **oral fixation** resulted from premature weaning and was associated with *dependent personalities, depression, verbal sarcasm, alcoholism,* and *eating disorders.*

**Anal Stage** - *2nd year of life;* libido cancentrated in anal area; tensions relieved through bowel elimination. **Anal fixation** is caused by harsh and excessive toilet training. The resulting **Anal Personality** is characterized by an excessive concern with cleanliness, orderliness, and preciseness.

**Phallic Stage** - *3rd to 5th year of life;* libido concentrated in the genitol area. For males, this stage is associated with the **Oedipal complex** and **castration anxiety**; for females, the **Electra complex** and **penis envy**. Fixation results in *immature, seductive* behaviors or *excessive competitiveness.*

**Latency Stage** - *Approximately 6th year to puberty.* Sexual tensions are relatively dormant; during this stage child becomes less centered on family and typically is socialized in school and peer groups.

**Genital Stage** - Puberty onward; re-emergence of sexual energy in genital area. The healthy individual develops mature ways of coping with sexual and aggressive tensions.

## 27. FUNCTIONING OF THE ENDOCRINE GLANDS

**The Pituitary** - The "master gland" has some control over growth ond metabolism. Influences development and secretion of the other endocrines. Oversecretion - ***gigantism*** (before maturity), ***acromegaly*** (after moturity.) Undersecretion =***dwarfism.***

**The Thyroid** - Secretes thyroxin which regulates oxygen metabolism. Undersecretion during infancy cretinism. Hypothroidism leads to reduced, lethorgic behavior. Hyperthyroidism leads to hyperactivity.

**The Parathyroids** - Secretion is necessary to life; affects calcium and phosphorus metabolism.

**The Pancreas** - Isles of Langerhans secrete insulin which controls the formotion, storage and burning of sugar.

**The Adrenals** - The medulla secretes adrenalin while the individual is under stress, preparing the body for emergency action.

**The Ovaries (female)**
**The Testes (male)**
} Cantral the development and functioning of the secondory sex characteristics. Produce germ cells. Affects the sexual drive.

**The Pineal (body)** - Formerly thought to be a gland, but is not markedly glondulor in structure and probably does nat secrete.

**The Thymus** - Secretion has no known psychological significance; it is at its largest size during adolescence and atrophies thereafter.

## 25. NON-CORTICAL CENTRAL NERVOUS SYSTEM AREAS AND FUNCTIONS

| Area | Function |
|---|---|
| Spinal Cord | Transmission of messages from CNS to body; reflexes |
| Medulla | Regulation of life functions including breathing, blood pressure, heart rate |
| Reticular Formation | Attention & alertness; sleeping-waking cycle |
| Cerebellum | Motor coordination and bolance |
| Tholomus | Relay center for messages between upper brain centers, lower brain centers and sensory centers |
| Hypothalamus | Motivoted behavior including hunger, sex, and thirst centers |
| Limbic System | Emotions, learning, memory |

## 23.

**FUNCTIONAL DIVISIONS OF THE CEREBRAL CORTEX**

| Cortical Area | Function |
|---|---|
| prefrontal cortex | anticipate consequences of actions |
| motor association area | coordination of complex movement |
| primary motor cortex | initiation of voluntary movement |
| primary somatosensory cortex | receives tactile information from the body |
| sensory association area | processing of multisensory information |
| visual association area | complex processing of visual information |
| visual cortex | detection of simple visual stimuli |
| auditory cortex | detection of sound quality (tone, loudness) |
| Broca's area | speech production and articulation |

## 31.

**Visual Stimulation** - the psychological sensation of light occurs when an object emits or reflects radiant energy and the electric charges activate the visual receptors in the retina. The length af the radiant energy waves determines the color (hue) which will be perceived.

**Rods and Cones** - the retina is composed of two basic types of cells. There are upwords of 125 million ***rods,*** the cell mediating achramatic vision, in the general regian of the ***fovea,*** and oppraximately 6 1/2 million ***cones,*** the cell mediating chromatic sensation, mainly concentrated in the ***fovea.***

**Color** - each color quality is caused by a definite range of wavelengths as measured in nm's (ane nm is equal to one billionth of a meter.) The wave length is the stimulus, and the color is the sensation.

| Color quality | Wave Length (nm's ) |
|---|---|
| red | 760-647 |
| orange | 647-588 |
| yellow | 588-550 |
| green | 550-492 |
| blue | 492-433 |
| violet | 433-390 |

The dimensions of color ore ***Hue*** (the perceived hue, ex. we see red, not blue,) ***Saturation*** (the purity, the degree to which it is diluted by whiteness or grayness,) and ***Brightness*** (relative blackness-whiteness dimension, irrespective of hue.)

## 35. PSYCHOPHYSICS

**Psychophysics** is the branch of psychology that measures the relationship between stimulus volues and the corresponding conscious experience. The latter is usually visual, auditory, ar tactile. Research in psychophysics often deals with the measurement of **thresholds,** the dividing point between stimuli that do or do not have a detectable effect on sensory experience. The minimum volue of o stimulus that can be detected is called **absolute threshold**. The **just noticeable difference (JND)** is the minimum amount of change in a stimulus thot can be detected. Weber's law states thot the size of a JND is a constant proportion of the original stimulus ( $k = \Delta S/S$). The formulo for **Fechner's Law** ($S = k \log_{10} I$) indicotes that larger ond larger values in stimulus *intensity* (I) are required to result in the perception of corresponding constant changes in sensation magnitude (S).

**Signal Detection Theory** - proposes that the detection of stimuli and differences between stimuli is influenced by decision making processes. Depending on decision choice, four outcomes are possible: **true positive** or **hit** - the recognition of an actual signal; **false negative** the failure to identify on actual signal alarm; **false positive** - detecting a signal when none is present; **true negative** or **correct rejection** - not detecting a signal when it is absent.

**Subliminal perception** - The registration of sensary input without conscious awareness. This phenomenon is controversial within psychology ond generally finds little empirical support.

## 39. IQ CONCORDANCE RATES

| Relationship | Correlation Value |
|---|---|
| Identical Twins reared together | .86 |
| Identicol Twins reared apart | .73 |
| Fraternal Twins, same sex | .55 |
| Fraternal Twins, apposite sex | .48 |
| Siblings, reared together | .43 |
| Siblings, reared opart | .23 |
| Parent and child living together | .40 |
| Unrelated persons reared together | .24 |
| Unrelated persons reared apart | .00 |

## 33. VISUAL DEPTH PERCEPTION

n our everyday lives, more than one of the following depth cues is used, giving o full-bodied sensation af three-dimensional space.

**Monocular** Cues for Depth

**1. Interposition** - on object that partly covers onather object is seen as the closer of the two.

**2. Relative size, height, and clearness** - the larger, ower, or clearer af two objects tends to be seen as closer.

**3. Linear perspective** - the greoter the convergence of ines, the greoter the perception of depth.

**4. Light and shadow** - certain patterns of light and shodow influence depth perception.

**5. Accommodation as a cue** - kinesthetic sensotions due to eye muscle focusing activity.

**6. Movement Parallax as a cue** - *closer* objects seem to move in a direction that is *opposite* to the direction of the perceiver; *distant* objects appear to move in the *same* direction.

**Binocular** Cues for Depth (Stereoscopic Vision)

**1. Retinal disparity** - Each eye views the object from a slightly different angle, creating different imoges without head movement. The two images fuse into a third one creating depth.

**2. Convergence** - The eyes turn inward toward the nose as an object is brought closer to the viewer. Kinesthetic sensations from eye muscles provide o cue.

## 37. BEHAVIOR GENETICS

The field af **behavior genetics** investigates the influence of heredity on behavior. The great problems involved in isolating and measuring the impact of learning ond experience make it difficult to define precisely the relative contributions made by heredity and environment in the development of psychological troits. In addition, a given trait may be **polygenetic,** which means it is controlled by many gene-pair combinations.

**Important terms:**

**Chromosomes** - the structures within the nuclei of cells that contain genes; humans normally have 23 pairs of chromosomes.

**Genes** - structures made up of **DNA** - carry and transmit genetic codes. **Genotype** refers to the genetic makeup of the individual; **phenotype** refers to overt physical or psychological traits. Single **Dominant** genes, even when only one gene-pair is present, will be sufficient to produce a given phenotype (ex.- eye color); **recessive** genes require bath gene-poir members in order to produce the trait.

**Mutation** - a modificotion in the number or activity of genes or chromosomes which is passed on to later generations.

**Sex-linked traits** - refers to those traits (like *color-blindness*) which are more cammon in one sex than another. Such traits are controlled by the same chromosomes that determine gender.

## 41. DEVELOPMENTAL STAGE THEORIES

| Age | Erikson | Freud | Piaget |
|---|---|---|---|
| 1 | Basic Trust vs. Mistrust | Orol | Sensory-Motor |
| 2 | Autonomy vs. Shame & Doubt | Anal | Pre-Operational |
| 3 | | | |
| 4 | Initiative vs. Guilt | Phallic | |
| 5 | | | |
| 6-12 | Industry vs. Inferiority | Latency | Concrete Operations |
| 13-18 | Identity vs. Role Confusion | Genital | Formal Operations |
| 19-25 | Intimacy vs. Isolation | | |
| 26-59 | Generativity vs Stagnation | | |
| 60+ | Integrity vs. Despair | | |

## 44. ERIKSON'S EIGHT STAGES OF PSYCHOSOCIAL DEVELOPMENT

**1. Basic Trust vs. Mistrust** - 1st year of life; developing a trust in caretakers based on predictable, loving meeting of infant's needs vs. insecurity, fearfulness, and suspiciousness.

**2. Autonomy vs. Shame and Doubt** - 2nd and 3rd years; positive *sense* of developing independence and mastery of motor and social skills vs. feelings of shame and inadequacy.

**3. Initiative vs. Guilt** - approx. 3 to 6 years; increasing cognitive and social development allows child to explore new roles and take new initiatives vs. feelings of inadequacy and guilt resulting from ridicule and punishment.

**4. Industry vs. Inferiority** - approx. 6 to 12 years; development of positive intellectual, sociol, and interpersonal skills usually in a school setting vs. sense of being inferior and incapable.

**5. Identity vs. Role Confusion** - approx. 13-19; development of a *stable, positive identity* vs. the **identity crisis**, confusion about one's role in life.

**6. Intimacy vs. Isolation** - approx. early 20's ; ability to form close, intimate relationships with a significant other vs. feelings of loneliness and being incomplete.

**7. Generativity vs. Stagnation** - approx. 25-60 ; being productive in family, career, and community vs. sense of staleness, drabness, dullness.

**8. Integrity vs. Despair** - approx. 60-70+; acceptance of life's experience as meaningful and basically satisfactory vs. regret and sense of having failed in life.

## 45. THEORIES OF MORAL DEVELOPMENT

### L. Kohlberg's Levels of Moral Development

**Preconventional Level** - The child makes moral decisions in order to obtain rewards and avoid punishments.

**Conventional Level** - Moral decisions are made on the basis of people's opinions, especially important authority figures such as parents and teachers. Moral decisions are also based on widely-held rules and societal expectations; "good boy, good girl" stage.

**Postconventional Level** - Moral decisions are based on individually developed principles even if these differ from those held by society; individual is willing to confront society's conventional value system.

### C. Gilligan's Stage Theory of Moral Development

**Individual Survival Stage** - Individuals obey rules to obtain rewards and avoid punishment.

**Self-sacrifice Stage** - Individual believes that being good entails sacrificing their own needs in order to meet the needs of others; pleasing others at your own expense.

**Equality Stage** - All individuals are perceived as having equal needs. Moral decisions will be based upon the principle of which actions will result in the greatest benefit for all; self- sacrifice should be distributed among many individuals.

## 47. CLASSICAL CONDITIONING

**Classical Conditioning** - The great Russian physiologist *Ivan Pavlov* made the first systematic studies of conditioned responses. This type of learning is essentially a process in which a previously neutral stimulus (bell) is paired with a stimulus (food) which naturally **elicits** a response, the result being that *either* stimulus can now elicit the response. The stimulus which normally causes the response is the *unconditioned stimulus* **(US);** the normally elicited response is referred to as the *unconditioned response* **(UR).** The term *conditioned stimulus* **(CS)** refers to the previously neutral stimulus which is now capable of eliciting the *conditioned response* **(CR).** Conditioning phenomena include:

**Acquisition** - The pairing of the conditioned stimulus and unconditioned stimulus for a number of trials.

**Extinction** - The *elimination* of the conditioned response resulting from the *withholding* of the unconditioned stimulus.

**Reinforcement** - The association of the unconditioned stimulus with the conditioned stimulus.

**Spontaneous recovery** - Even though complete extinction appears to have occurred, the *conditioned response* will sometimes return upon presentation of the *conditioned stimulus. If* not reinforced, however, the conditioned response will again extinguish. This process may be repeated a number of times.

**Stimulus Generalization** - Stimuli resembling the original conditioned stimulus will also elicit a conditioned response. In **discrimination,** the conditioned response is only elicited by a **specific** conditioned stimulus.

## 49. OPERANT CONDITIONING

**Operant Conditioning** - This type of learning, originally investigated by *B.F. Skinner*, does not occur as a result of pairing stimuli but rather is learning which occurs because *the desired behavior was reinforced after it occurred.* Skinner made a distinction between *respondent* behavior and *operant* behavior. Behavior which is directly under the control of the stimulus - as in classical conditioning - is **respondent** *behavior.* A specific behavior is automatically *elicited* by the presentation of the stimulus. In contrast, **operant** *behavior* is reinforced *after* a specified voluntary behavior is *emitted.* Operant conditioning phenomena include:

**Positive Reinforcement** - a stimulus that *strengthens* the response that preceded it; ex.- an adolescent paid for doing yard work.

**Negative Reinforcement** - the *strengthening* of behavior (ex.- taking aspirin) that is associated with the elimination or avoidance of an **aversive** (unpleasant or painful) situation or stimulus (ex.- headache).

**Punishment** - behavior that is followed by an aversive stimulus will be suppressed but *not* extinguished; ex.- a child who is physically punished for smoking cigarettes will learn to smoke when the punishing agent (ex.- parent) is not present.

**Shaping** - the reinforcement of *successive* (gradual) *approximations* to a complex behavior; ex.- training a tiger to jump through a flaming hoop.

**Extinction** - elimination of behavior resulting from **withholding** reinforcement; ex.- if a child having a temper tantrum is ignored, the tantrums will eventually stop.

## 51. COGNITIVE LEARNING

**Cognitive Learning** - An approach to learning that emphasizes the role played by mental processes. Cognitive theories of learning include:

*Gestalt Psychology* proposed that learning takes place through **insight,** the sudden awareness of a reorganization of the perceptual field.

*Tolman* hypothesized that animals and humans learned *cognitive maps* representing spatial relationships in their environments. He argued that learning is basically a cognitive process that involves understanding relationships between environmental events. In his model, all learning is **latent** and only becomes overt when the organism is motivated to perform.

*Albert Bandura's* **social learning theory** states that learning may take place through **modeling** *(observational learning),* and emphasizes *person variables* including *expectancies* and *subjective* variables. A key concept in this theory is **reciprocal determinism,** the idea that the individual's behavior and the social environment continually influence one another. Individuals **self-regulate** their behavior by applying reinforcement or punishment to themselves.

## 53. FACTORS INFLUENCING HUMAN LEARNING

**Active vs. Passive Learning** - The learner's active involvement increases the efficiency of learning.

**Massed vs. Distributed practice** - Learning distributed over a number of trials is usually more effective than learning massed in one session.

**Motivation** - Affects perception, concentration, and the emotional state of the learner. Too high (or low) a level of motivation may interfere with the learning process.

**Maturation** - Attempts at learning prior to *maturational readiness* are very unlikely to succeed; ex.- attempting to toilet train a child at 3 months of age.

**Specific State** - Learning may be influenced by **physical** or **emotional states;** ex.- if the original learning took place during intense anxiety, a similar state may be required for successful recall.

**Cognitive Ability** - Learning may be influenced by individual differences in cognitive abilities; ex.- spatial, analytic, mathematical, linguistic reasoning. Weakness in one or more cognitive abilities may be associated with **learning disabilities.**

**Mastery Learning** - A task should be fully mastered before proceeding to a new one.

## 55. SLEEP PHENOMENA

**Insomnia** - common sleep disorder characterized by an interference with normal sleep patterns. **Sleep-onset** insomnia (difficulty falling asleep) may result from stress, excessive environmental stimulation, or stimulant drugs (ex.- caffeine). **Early-morning awakening** insomnia is characterized by awakening much earlier than is normal for the sleeper; it may be a symptom of clinical depression or anxiety. Insomnia is often a temporary problem in otherwise normal individuals.

**Sleepwalking** - complex motor behavior occurring during *non-REM* sleep; most common before puberty and during stressful periods.

**Night Terrors** - brief state of confused panic most frequently found in young children; *non-REM* sleep phenomenon; child usually rapidly recovers but is typically amnesic for the event; uncommon in adults.

**Nightmare** - anxious or unpleasant dream occurring during *REM* sleep.

**Sleep Apnea** - sudden and temporary cessation of breathing; more common in overweight males; frequent episodes may lead to irritability, fatigue.

**Narcolepsy** - sudden and unpredictable change from waking consciousness to REM sleep.

## 57. PSYCHOACTIVE DRUGS

| Drug | Category | Effects |
|---|---|---|
| Alcohol | Depressant | Relaxation, anxiety reduction, euphoria, slurred speech, impaired motor control, reduced inhibitions; Alcoholism, Cirrhosis of liver, Wernicke-Korsakoff Syndrome, Delirium Tremens ("DT's") |
| Morphine, Heroin | Depressant | Euphoric rush, pain-deadening; drowsiness; Withdrawal: sweating, chills, high blood pressure, heart palpitations |
| Barbiturates | Depressant | Anxiety reduction, pain reduction; relaxation, mild euphoria; drowsiness, slurred speech; sudden withdrawal: severe convulsions |
| Amphetamines | Stimulant | Energy, euphoric rush; sense of well-being; loss of appetite, insomnia; Withdrawal: paranoid symptoms, hallucinations |
| Cocaine | Stimulant | Euphoria, deadens pain, increases self-confidence; insomnia, restlessness, high blood pressure, hallucinations, violent behavior, paranoid delusions |
| Nicotine | Stimulant | Mood-enhancer, reduces stress, suppresses appetite; withdrawal: tension, lightheadedness, sweating, insomnia; associated with lung cancer, heart, and lung disease |
| Marijuana | Hallucinogenic | Euphoria, loss of identity, increased sexual sensations; self-absorption; social-withdrawal |
| LSD, PCP | Hallucinogenic | Visual hallucinations, dissociation; flashbacks |

## 59. MASLOW'S HIERARCHY OF NEEDS

Abraham Maslow proposed that human needs are arranged in a *hierarchical order* ranging from physiological to self-actualization needs. He hypothesized that needs lower in the hierarchy, such as physiological and safety needs, must be satisfied before higher needs emerge. Maslow used the term **"deficiency needs"** to describe needs that emerge before self-actualization is possible. For example, hunger and safety motives involve the *avoidance of negative* or painful experiences. In contrast, self-actualization requires *positive* and fulfilling experiences.

| Need | Examples |
|---|---|
| Self-Actualization | Cognitive need (understanding, knowledge)<br>Aesthetic need (order, beauty) |
| Self-Esteem | status, achievement, recognition |
| Love & Belongingness | intimate relationships, friendships, avoiding loneliness |
| Safety | housing, clothing, protection from crime |
| Physiological needs | food, water, pain avoidance, reducing sexual tensions |

## 43. PIAGET'S THEORY OF COGNITIVE DEVELOPMENT

**Jean Piaget** depicted the child's cognitive development as moving through a set of distinct stages. At each stage the processes of **accommodation** (internalizing new patterns of behavior) and **assimilation** (modifying patterns of behavior based on pre-existing cognitions) interact to produce new **schemata** or information processing structures. Piaget viewed the infant and child as actively testing and experimenting with reality. Despite widespread criticism of his methods and theories, his ideas have been very influential in psychology and education.

**Sensory-Motor Stage** - approximately first two years of life; characterized by stimulus-bound thinking. Major accomplishment is **object permanence**, the ability to create a mental representation of an object that is not in view.

**Pre-Operational Stage** - approximately 2-7 years; begins with the development of language; child is depicted as **egocentric,** i.e., unable to take the cognitive perspective of others. While the thinking of the child at this stage superficially resembles adult thinking, the child is unable to manipulate ideas internally following rules **(operations);** thus, the child at this age does not show **conservation.**

**Concrete Operations Stage** - approximately 7-12 years; characterized by the development of *number, shape* and *size conservation.* While the child at this stage may understand that adding 1 to an odd number makes it even, they are unable to understand the *formal* mathematical rule for this operation.

**Formal Operations Stage** - ages 13+ ; characterized by the ability to comprehend and process abstract, formal mental operations such as those involved in algebra; ability to employ general rules, theories, and procedures.

## 46. LEARNING

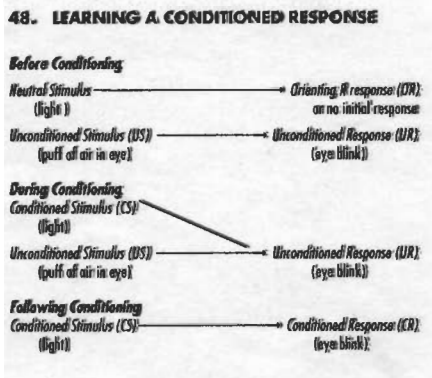
**Def.** - *Learning is a relatively permanent change in behavior that results from practice or experience.* Learning is defined as relatively permanent because what has been learned can be unlearned. The definition of learning includes practice or experience because other factors, for example *maturation* and disease, may result in changes in behavior. Since learning is involved in almost all forms of behavior, it is one of the most investigated topics in psychology.

**Range of Learning:** Learning encompasses much more than traditional classroom education. For example, psychologists have employed learning concepts to understand the development of gender-specific behavior, phobias, prejudice, and personality. Learning concepts have also been used to modify abnormal behavior.

**Criteria of Learning:** Empirical criteria for learning include: the amount learned, the time required, number of errors, and the number of trials required to relearn material. With learning, the amount learned *increases,* while there is a *decrease* in time, errors, and number of trials for relearning.

**Major Theories of Learning:** *Classical Conditioning, Operant Conditioning,* and *Cognitive Learning.*

## 48. LEARNING A CONDITIONED RESPONSE




## 50. SCHEDULES OF REINFORCEMENT

**Continuous** reinforcement, or reinforcement following every emitted response, is uncommon in real life situations. In most instances, reinforcement is **partial** or **intermittent,** i.e., occurring less than 100 percent of the time. Partial reinforcement may be applied using the following **schedules of reinforcement:**

**A. Fixed Interval** - Reinforcement takes place on a predictable time schedule. Characteristically, there is a low rate of behavior prior to and following the reinforcement; ex.- college students typically cram immediately before an exam but do not study at other times.

**B. Variable Interval** - Reinforcement takes place on an unpredictable time schedule. Behavior tends to be moderate and steady; ex.- student behavior in response to unannounced exams given at unpredictable intervals; students will study steadily throughout the semester.

**C. Fixed ratio** - Reinforcement takes place after a constant number of responses are made; characterized by steady, high rate of responding; ex.- factory piece work, paid $2.00 for every 100 envelopes stuffed and sealed.

**D. Variable Ratio** - Reinforcement follows an unpredictable, *non-constant number* of responses; results in a very high rate of response with little or no pause between responses; very resistant to extinction. Only an occasional reinforcement is required to maintain behavior reinforced by this schedule; ex.- gambling behavior on a slot machine.

## 52. OBSERVATIONAL LEARNING (MODELING) PROCESSES

| | |
|---|---|
| **Attention** | Focusing on the behavior of the model; powerful, charismatic, unusual, or popular individuals are more likely to be noticed; ex- adolescents attending to pop culture figures. |
| **Retention** | Information gained from attending to the model must be encoded into long-term memory for later retrieval. Vivid imagery assists retention. |
| **Motor Reproduction** | The individual must possess the necessary motor skills to reproduce the observed behavior; ex.- a young child may not have the motor skills to ride a bicycle. |
| **Reinforcement and Incentive Conditions** | Observed behavior may not be reproduced if the individual has not been or will not be reinforced for engaging in the behavior; ex.- observing someone successfully shoplifting but recognizing that such actions frequently result in punishment. |
| **Applications** | Treatment of specific phobias, medical/dental anxiety in adults and children. Also involved in social learning such as gender roles and aggressive behaviors. |

## 54. STATES OF CONSCIOUSNESS

**Consciousness** - An awareness of cognitive processes including perception, thinking, attention, hypnosis, daydreaming, and sleeping. *Waking or normal consciousness* refers to cognitive processes occurring during periods of normal alertness and arousal. *Altered states of consciousness* (ASC) are associated with sleep, daydreaming, meditation, hypnosis, drugs, and sensory deprivation.

**Sleeping** - The five stages of sleep consist of **NREM** (stages 1-4) and **REM** periods. During REM *(rapid eye movement)* awakened laboratory subjects report dreaming about 80-85% of the time. REM sleep accounts for about 25% of the average adult's sleep time. Explanations for dreams include: wish-fulfillment (Freud), elimination of irrelevant cognitive material, random firing of nerve cells, and neuronal restoration.

**Daydreaming** - Although some view daydreaming as an escape from reality that serves no useful purpose, J. Singer stresses its positive problem solving and cognitive reorganizing functions. Psychoanalysts argue that daydreams also may provide a **safety valve** for pent-up frustrations, especially those relating to sex and anger.

**Meditation** - An ASC characterized by an expansion of consciousness and feelings of intense well being, and/or relaxation produced through various combinations of active concentration including *mantras,* breathing exercises, or passive observation. It is frequently associated with Eastern philosophies and religions. The **Relaxation Response** is a procedure that attempts to distill the essential procedures and benefits of meditation while eliminating religious-mystical elements.

**Sensory Deprivation** - An ASC caused by *prolonged low levels of stimulation;* resulting disturbances in behavior may include hallucinations, changes in body image, impaired problem solving ability, and out of body experiences.

## 56. HYPNOSIS

**Hypnosis: def.** - A state of consciousness characterized by increased *suggestibility* and associated changes in thinking, perception, and behavior. Hypnotic ability appears to be normally distributed and age sensitive. Approximately 10% of the population has very high hypnotic capacity, while about 10% does not exhibit hypnotic behaviors. Children tend to be good hypnotic subjects while older adults (60+) tend to be poor subjects. Hypnotic phenomena include *post-hypnotic suggestion, regression, repression,* and *hypernesia* (heightened memory).

**Stage Hypnosis** - Hypnosis performed in an entertainment setting conducted by non-professionals. Hypnotic behaviors in this context are highly distorted and exaggerated in comparison to hypnosis occurring in a clinical or laboratory setting.

**Clinical Hypnosis** - Hypnosis is employed by many clinical psychologists and psychiatrists in treating anxiety, phobias, depression, and habit disorders. It is usually combined with other treatment approaches. Some physicians and dentists use hypnosis to reduce the pain and anxiety associated with medical procedures. Hypnosis is also used by sports psychologists to enhance performance.

**Experimental Hypnosis** - Research investigating the nature of hypnosis. Researchers have also employed hypnosis to gain a better understanding of perception, memory, and learning.

**Hypnotic Theories** - **Trance** or **special state** theories argue that hypnosis is a true ASC. **Neo-dissociation** theory proposes that hypnosis involves *multiple levels of consciousness* and information processing. According to **Role theory,** hypnotic behaviors depend upon the willingness of a subject to behave like a hypnotized person.

## 58. MOTIVATIONAL CONCEPTS

**Drive** - A state of aroused, goal-directed behavior.

**Primary Drive** - Basic physiological drives such as hunger, thirst, sex.

**Secondary Drive** - Drives that are learned; psychological and social in nature.

**Intrinsic Motivation** - Motivation which is inherently rewarding and does not appear to satisfy any primary or secondary drive; ex.- climbing a mountain "because it is there." Allport's *Functional Autonomy* is a related concept.

**Achievement Motivation** - A secondary, social drive involving the attainment of success or excellence; researched by *D. McClelland* using *TAT* test; high achievement motivation is associated with a high level of accomplishment in competitive environments.

**Affiliation Motivation** - A secondary, social drive involving the need to be with others; investigated by S. Schachter; may be aroused by anxiety.

**Stimulus Drives** - The need to maintain an optimal level of stimulation; *stimulus seekers* are individuals who require a high level of stimulation.

**Yerkes-Dodson Law** - The optimal level of arousal is lower for complex tasks than it is for simple tasks.

**Instinct** - A distinctive, inborn, and complex behavior pattern associated with a particular non-human species; many consider the instinct concept to be obsolete and instead prefer the term **species specific behavior.**

## 60. EMOTION

**Def.** - A subjective conscious experience (cognitive component) accompanied by bodily arousal (physiological component) and specific nonverbal expressions (behavioral component).

**Plutchik's Basic Emotions** - Anger, sadness, fear, enjoyment, love, surprise, disgust, and shame. Cross-cultural research suggests that these emotions may be universal.

**Theories of Emotion:**

**1. James-Lange Theory** - Hypothesizes that the perception of the stimulus object is accompanied by certain physiological and behavioral responses and that the *conscious awareness of these responses is the emotion;* ex.- person sees a bear, runs, becomes **conscious** of running, heartbeat, breathing, etc., and then **experiences** fear.

**2. Cannon-Bard Theory** - Perceptions of stimuli result in **both autonomic-physiological changes** (ex.- elevated heartbeat) and the **conscious experience** of the emotion in the **cerebral cortex.** These processes are **simultaneous.**

**3. Cognitive Theory** - Cognitive **interpretation** of physiological arousal based upon an appraisal of the environmental cues present. The experienced emotion may vary with different interpretations of the physiological arousal pattern.

**4. Facial Feedback Theory** - The experience of an emotion is influenced by CNS's interpretation of *feedback from the facial muscles,* e.g., smiling → happiness. This theory argues that cognition is not necessary for the experience of emotion.

**5. Opponent-Process Theory** - Stimuli cause both a **primary response** in the autonomic nervous system and a **secondary opponent process** in the central nervous system.

## 61. PHYSIOLOGICAL CORRELATES OF STRONG EMOTION

| Autonomic Activity | Results |
|---|---|
| *Sugar* released by liver. | Provides extra sugar (energy) to voluntary muscles. |
| *Heart Rate* increase. | Blood circulates through system at faster rate. |
| *Respiration* increases in depth and rate. | Provides more oxygen: removes carbon dioxide. |
| *Red Blood corpuscles* released by spleen. | Provides more oxygen-corrying cells. |
| *Dilation of blood vessels* to voluntary muscles. | Allows redirection of blood where needed. |
| *Constriction of blood vessels* to involuntary muscles. | Conserves blood where not needed. |
| *Digestive* movements are inhibited. | Saving on energy where not needed. |
| *Voluntary muscles* tense. | Readies muscles for action. |
| *Pupillary* response: dilation or constriction. | Better vision, or visual protection. |
| *Adrenalin* secretion. | Initiates and prolongs mony of the above actions. |

Other physical changes are: changes in *salivation* rate, *pilomotor response ("goosepimples")*, and *galvanic skin response*.

## 67. REPRESENTATIVE PERSONALITY THEORIES

**Psychoanalysis:** Developed by **S. Freud.** Emphasizes unconscious motivation as the major determinant of personality; proposes a set of interacting personality structures that include: **Id** - inborn, biological sexual and oggressive drives; entirely unconscious, irrational, operates according to *pleasure principle*. **Ego** - develops through learning; partly conscious; unconscious section includes defense mechanisms; operates according to *reality principle*. **Super-Ego** - develops after resolution of Oedipal or Electra complex at about ages 5-6; mostly unconscious; source of morality, shame, and guilt.

**Big Five Trait Theory** - The "Big Five" trait model includes: ***extroversion*** (outgoing, talkative, sociable), ***agreeableness*** (cooperative, fair, sympathetic), **conscientiousness** (organized, efficient, reliable), **emotional stability** (even-tempered, good-natured, calm), and **culture/openness to experience** (intelligent, artistic, sophisticated).

**Humanistic Theory** - Developed by **Maslow** and **Rogers.** Emphasizes **self-actualization** or the realization of human potential. Humanistic psychologists reject what they view as dehumanizing in both psychoanalysis and behaviorism. They stress human freedom and the ability to make rational, conscious choices; the *self-concept* and its possible distortions are central to the humanist theory.

**Rotter's Social Learning Theory** - Individuals develop a generalized expectancy or ***locus of control***. Persons with an *internal* locus of control believe that they are masters of their own fate, those with an *external* locus of control believe in fate, chance, and luck.

## 69. MMPI-2 HIGH SCALE SCORE INTERPRETATIONS

| Validity Scale | Interpretation |
|---|---|
| L | naive lying; "faking good" |
| F | unusual or deviant responses; may be faking "bad" |
| K | denial of problems |

| Clinical Scales | Interpretation |
|---|---|
| Hs | physical complaints, whiny, "sour" attitudes |
| D | depressed, sad, anxious |
| Hy | superficially social and charming but shallow and naive |
| Pd | anti-social behavior and attitudes; hostile |
| Mf | unconventional gender behaviors |
| Pa | suspicious, distrusting, irritable |
| Pt | worry, tension, obsessions, compulsions |
| Sc | unusual or bizarre behavior; deviant thought patterns |
| Ma | high energy level, impulsive, thrill-seeking behaviors |
| Si | socially introverted, shy |

## 63. COGNITIVE PSYCHOLOGY

**Def. -** The branch of psychology that deals with such mental processes as attention, imagery, concept formation, problem solving, memory, and language.

Cognitive psychologists frequently use an **information processing** model in which cognitive data is transformed and manipulated as it passes through a series of steps or stages that are analogous to a computer program.

**Attention** - The selection of incoming information to be used for later, additional processing. *Selective attention* ("cocktail party effect" ) screens out irrelevant information; *divided attention* occurs when two sources of information are *simultaneously* processed. The *Reticular Activating System* (RAS) is a lower brain structure that plays an important role in attention.

**Heuristics** - General strategies that involve "rules of thumb" employed in *problem solving* activities. In the **means-end** heuristic, a solution is developed after an analysis of the discrepancy between the goal and current progress towards achieving a goal. In the **subgoal strategy,** intermediate goals are developed as a way of moving toward the final goal. In contrast to heuristics, **algorithms** employ specific procedures to reach a goal; ex.- following the directions in a cook book.

**Functional Fixedness** - The failure to solve a problem due to an inability to go beyond the usual functions of an object; ex.- unable to recognize that a brick could be used as a hammer.

**Metacognition** - Techniques that involve monitoring and evaluating one's thought processes; employed as a cognitive strategy to improve performance in such areas as problem solving and reading education.

## 71. CONFLICT AND FRUSTRATION

**Frustration** refers to a state which results from the interference with or blocking of motivated, goal seeking behavior. While **the Frustration-Aggression hypothesis** predicts that aggression usually follows frustration, other possible outcomes include withdrawal, anxiety, or direct coping. *Conflict*, a common type of frustration, results from the arousal of ***mutually opposing*** drives, motives, or incentives that interfere with goal-seeking behavior.

**Approach-approach** conflicts involve the presence of two or more desirable alternatives; accepting the one desired alternative also means losing another desired alternative; ex.- choosing between two possible roommates. **Avoidance-avoidance** conflicts entail a choice between two undesirable alternatives; ex.- choosing between enduring a toothache or overcoming a dental phobia. In **approach-avoidance** conflicts we are motivated by both positive and negative features in the same object or action; ex.- wanting to ask someone for a date but fearing rejection. This is the most difficult type of conflict to resolve because it contains both attracting and repelling forces. If conflicts are severe, the individual may resort to defense mechanisms to maintain psychological equilibrium.

## 75. GENERAL CRITERIA OF ABNORMALITY

Just as there is no universally accepted definition of normality, the question of what is abnormal probably cannot be answered with complete certainty. Nevertheless, *working definitions* of abnormality have been developed. A popular example of this approach are the three "D's": *Deviance, Distress,* and *Dysfunction*.

**Deviance** - Behavior that runs counter to *norms*, society's explicit and implicit rules about acceptable or appropriate behavior; ex.- walking nude in public. Norms are culture-specific, and behavior not tolerated in one society may be encouraged in another society; ex.- auditory hallucinations may be interpreted as a symptom of serious mental disease or as actual communications from the spirit world.

**Distress** - The subjective *suffering* or *discomfort* of the individual; ex.- anxiety, panic, sadness. While personal suffering is fundamental to many forms of abnormal behavior, some individuals may exhibit no obvious personal distress but still be viewed as abnormal using other criteria; ex.- mania.

**Dysfunction** - The inability to deal with daily role demands at home, work, school or community; ex.- an individual unable to get up in the morning to go to work and unable to complete household chores. Some authorities would add **danger** as a fourth "D." However, while a *relatively small number* of abnormal individuals are dangerous, *most* dangerous individuals are *not* psychologically abnormal.

## 65. LANGUAGE

**Language Development - Babbling** - repetitive consonant-vowel combinations (ex.- "mamamamo") that start at 3-4 months; **Intonation** - raising and lowering of pitch starts at about 4-6 months. **Holophrases** - one word sentences (ex.- go!, eat!) that begin about 12 months. **Telegraphic Speech** - Two word phrases (Baby go!) that start about the 2nd year.

**Morpheme** - The smallest *meaningful* sound pattern in any language.

**Phonemes** - The smallest *distinguishable* sound pattern in any language.

**Semantics** - Study of the meanings of words, phroses, and sentences.

**Syntax** - The arrangement of words and phrases into meaningful patterns.

**Theories of Language Development - Behavioral** (Skinner) - Language develops through the *reinforcement* of sound patterns that resemble adult speech.

**Psycholinguistic theory** (N. Chomsky) - All humans possess an internal *language acquisition device* that allows the child to cognitively process speech by following a set of inborn grammatical rules.

**Aphasia** - Loss of the ability to speak and/or understand language; may result from damage to *Broca's* or *Wernicke's* areas of the brain.

**Gestural System of Language** - Language without sounds; ex.- *American Sign Language*.

**Linguistic Relativity Hypothesis** - (Whorf) - Language determines how we think and perceive the world.

## 73. DEFENSE MECHANISMS (Continued)

**Identification** - The individual manages feelings of vulnerability by identifying with a person or institution having desirable or powerful characteristics. In **identification with the aggressor**, individuals will identify with powerful, threatening figures. An example is the "Stockholm Syndrome," where hostages identify with their kidnappers.

**Sublimation** - Socially acceptable activities are substituted for socially disapproved behaviors; ex.- a surgeon sublimates aggression when cutting into tissue.

**Evaluation - Positive** - To the extent that they reduce excessive tension, anxiety, and mental conflicts, defense mechanisms help the individual to adapt. **Negative** - They encourage self-deceptive distortions of reality and discourage confrontation of the **actual causes** of anxiety and stress. In contrast, **direct coping mechanisms,** including logical analysis, non-defensive humor, and conflict resolution, provide more effective ways of dealing with stress and conflict.

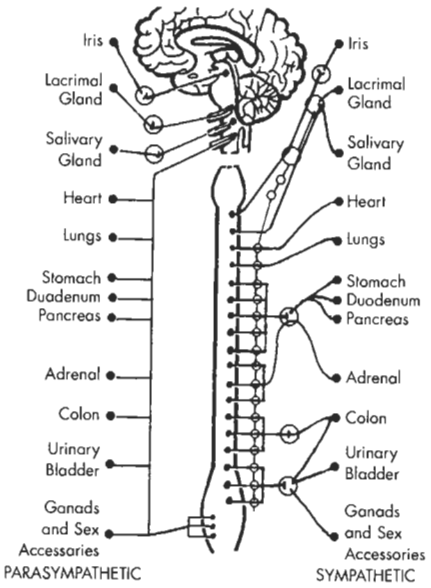
## 77. DSM-IV CLASSIFICATION OF PSYCHOLOGICAL ABNORMALITY

1. **Schizophrenic and other psychotic disorders** - disorders involving significant impairment in reality testing and severe personality disorganization: delusions, hallucinations, bizarre behaviors; usually require treatment with anti-psychotic medication and/or hospitalization. A number of cases resist treatment, resulting in a chronic condition. Schizophrenia should not be confused with the "split-personality," a type of *dissociative* disorder. Sub-categories: **Paranoid, Disorganized, Catatonic, Undifferentiated,** and **Residual types**.

2. **Mood Disorders** - disturbances in mood, emotional expression, and associated changes in energy levels, sexual drive, eating behaviors, and sleeping patterns. Suicidal ideation and/or behavior frequently accompanies depressed mood. Treatments include mood stabilizing medication, antidepressant medication, cognitive therapy, and *electroconvulsive therapy* (ECT). Severe cases require hospitalization, but this category has a better prognosis (outcome) than schizophrenic disorders. Sub-categories include: **Major Depression, Bipolar Disorders** (mania or alternating mania/depression), **Cyclothymic Disorder** (less severe, chronic alternating manic-depression), and **Dysthymic Disorder** (less severe, chronic depression).

3. **Anxiety Disorders** - irrational or excessive fears manifested by such symptoms as trembling, rapid breathing, fear of dying, phobic avoidance of objects or situations, recurrent thoughts, and ritualistic behaviors. Sub-categories include: **Panic Disorder, Generalized Anxiety Disorder, Specific Phobia, Agoraphobia, Obsessive-Compulsive Disorder,** and **Post-Traumatic Stress Disorder**. Treatments include cognitive-behavioral therapy and anti-anxiety medication.

## 62. AUTONOMIC NERVOUS SYSTEM




## 64. HUMAN MEMORY

**Def. -** The retention of information, including the processes of *encoding, storage,* and *retrieval* of information.

**Memory systems:**

**Sensory Memory** - takes and very briefly holds a visual (iconic) or auditory (echaic) "snapshot" of situation. Information must be transferred to working memory for retention.

**Working or Short-term memory (STM)** retains information for about 30 secands and has a capocity of seven pieces of information. **Chunking** (grouping information) and **maintenance rehearsal** (active repetition) enhance working memory.

**Long Term Memory( LTM)** - huge storage capocity, retains information for very long periods; orgonizes infarmation in a hierarchical "filing" system using **elaborative rehearsal** (associotion of meaningful material). Long term memory is susceptible to interference effects including: **retroactive interference** - new information interfering with old information in LTM; **proactive interference** - old material in LTM interfering with retention of new information.

**Eidetic memory (imagery)** - memory bosed upon a clear, detailed visual imoge; more developed in children.

**Flashbulb memory** - memory based on events associated with a dramotic incident (ex.- presidential assassination).

**Mnemonics** - Any mental technique that improves memary.

**Repressed memories** - motivated forgetting based upon intense emations, often traumatic in nature. The recovery of repressed memories frequently occurs when adults with a *history of child abuse* are treoted. Critics of this concept point out that the recovered material may sometimes actually be **false memories.**

## 66. PERSONALITY

**Def.** - Personality is the distinctive and stable pattern of behaviar, thinking, and feeling that charocterizes the individual.

**The field of Personality Psychology** - Personality psychologists ore interested in describing and explaining human differences. In addition to their interest in why people differ, personality psychologists often develop theories about personality that employ data from many areas of psychology. Traditionally, most of these theories viewed personality os being the stable, core characteristics of the person. More recently, it has been proposed that the stability of personality is actually the result of complex interactions between the individual and social situations.

**Varieties of Personality Theory** - *Psychodynamic theories* (ex.- Freud, Jung) emphosize internal and hidden causes of personality, focus on drives and needs, and frequently stress irrational aspects of behavior. *Type theories* place individuals into distinct categories; ex.- introvert vs. extrovert. *Trait theories* (ex.- Cattell, Eysenck) describe individuals as possessing distinct patterns falling along a continuum; ex.- anxious↔calm. *Social Learning theories* emphasize the interaction of cognitive and learning variables; ex.- expectancies, values, self-efficacy. Social learning theories also view the individual and the environment as having reciprocal influence. *Humanistic theories* focus on self-concept, conscious awareness, and personal growth.

## 68. PERSONALITY ASSESSMENT

**Uses** - Personality tests are used to diagnose psychological disorders, to select personnel, to measure psychatherapy outcames, to counsel individuals about marital and vocational choices, and to measure variables in personality research.

**Types of Personality tests:**

**Self-Report inventories:** usually require answers to a series of true-false statements presented in a paper and pencil farmat They are sometimes also called *objective* tests. **The Minnesota Multiphasic Personality Inventory (MMPI** and **MMPI-2)** is the best known self-repart inventory. It consists of four validity scales that measure test taking behavior and ten clinical scales that measure personality characteristics. The **NEO Personality Inventory** is designed to measure the "Big Five" set of personality traits. The **16PF** is based upan Cattell's factor-analytic theory of personality traits. Camputers are widely emplayed to scare and interpret objective personality tests.

**Projective tests** - usually present ambiguous ar unfamiliar stimuli and require a verbal response. They utilize the "projective hypothesis" which stotes individuals unconsciausly reveal significant aspects of their personality when responding to ambiguous stimuli. The **Rorschach test**, consisting af 10 inkblots, is the most widely used projective test. Personolity interpretatians are based upon the amaunt of blot used, quality of response, perceptian af movement, shading, color, and content. The **Thematic Apperception Test (TAT)** is anather popular projective test. It consists af 30 pictures and requires the testee to make up stories in response to the pictures. While projective tests have been widely criticized for their low reliability and validity, they are still used by many clinical and school psychalagists.

## 70. HEALTH PSYCHOLOGY

**Def.** - Health Psychalagy investigates relatianships between psychological factors and the treatment and prevention of physical disorders.

**Stress** - The changes in mental processes and behavior associated with attempts to adapt to a demanding situation. A **stressor** is a stimulus that produces stress. **Changes** in life (ex.- divorce, retirement, relocation), frustration, and conflict are cammon stressors and are measured by the **Social Readjustment Rating Scale** (SRRS). Selye's **general adaptation syndrome (GAS)** describes how organisms move through three stages of stress: (1) **alarm reaction**, (2) **resistance,** and (3) **exhaustion.** Symptoms of high levels of stress include: anxiety, depression, fatigue, difficulty sleeping, restlessness, and impaired concentration. The term *psychosomatic disease* is sometimes still used to describe stress reloted diseases like asthma and esse*ntial hypertension* (high blood pressure of unknown etiology). Another consequence of prolonged stress is **burnout,** a pattern of emotional exhaustian, demoralizotion, and lowered productivity.

Current research indicates that individuals differ significantly in how they appraise and cope with stress. **Type A personalities** (driven, impatient, competitive, angry) tend to be vulnerable to cardiac disease compared to **Type B personalities** (mare relaxed, less impatient). Sensitizers actively think about and seek aut information dealing with sources of stress. **Repressors** deny and avoid knowledge about sources of stress. The trait of **Hardiness** characterizes those individuals wha are better able to deal with stressars. Hardiness includes a sense of control, high levels of commitment, and a willingness to face challenges.

## 72. DEFENSE MECHANISMS

**Def.** - Any mental mechanism and/or behavior that maintains self-esteem by protecting the individual from excessive anxiety, guilt, or shame. Freudian theory proposes that defense mechonisms operate unconsciously and influence both normal and abnormal behavior.

**Repression** - Painful or dangerous ideas are excluded from consciousness and become port of the individual's unconscious mental processes.

**Displacement** - Pent-up feelings, usually of hostility, are discharged against abjects less dangerous than those which initially aroused the emations.

**Regression** - A retreat to an earlier developmental level involving less mature and less socially acceptable responses.

**Reaction Formation** - Defending against threatening unconscious needs and impulses by consciously expressing opposite desires and feelings.

**Rationalization** - Reducing anxiety by reinterpreting or justifying threatening needs or feelings.

**Projection** - Blame is placed on others, or one's own unacceptable desires are attributed to others.

**Denial** - The individual maintains psychological equilibrium by refusing to face reality, often through escapist activities and fantasy behavior.

## 74. MENTAL HEALTH DEFINITIONS

The Problem af *defining normality* - Since the distinction between normal and abnormal is to a great extent *quantitative* rather than *qualitative*, there is no universally accepted definition of normality. Commonly used criteria include: (1) *Clinical Method,* (2) *Statistical Approach,* and (3) *Healthy Personolity Traits;* all three approaches are only partial answers to the question of "what is normal?"

(1) **Clinical Method** - A particular behaviar is anolyzed and then compared with a diagnostic classification system (ex.- DSM-IV) to determine what is normal and acceptable; this approach emphasizes lack af *symptoms* and *syndromes* and may ignore positive personality troits and individual strengths.

(2) **Statistical Approach** - The behaviar is analyzed and classified into a definite class: the relative frequency of the behavior in that specific class allows a quantitative judgment as to the "cammonness ar "normality" of the behaviar; rare behaviors are usuolly judged abnarmal. However, some rare behaviors may be positive; ex.- musical genius.

(3) **Healthy Personality Traits** - This approach argues thot mental health is more than the absence of abnormality and includes: maturity, positive feelings toward self and athers, clear personal values, a non-hostile sense of humar, personal responsibility, and self-reliance.

## 76.

**DSM-IV SYSTEM OF PSYCHIATRIC DIAGNOSIS**

| Axis | Category | Examples |
|---|---|---|
| I | Clinical Disorders | Mood Disorders<br>Anxiety Disorders<br>Schizophrenic Disorders |
| II | Personality Disorders & Mental Retardation | Paranoid Personality Disorder; Borderline Personality Disorder |
| III | General Medical Conditions | Diseases of the Digestive System |
| IV | Psychosocial and Environmental Problems | Problems with primary support group, social environment |
| V | Global Assessment of Functioning (GAF) Scale (0 to 100 scale) | ex.70: some mild symptoms (depressed mood and insomnia) |

* The DSM-IV is o **"multi-axial"** system. All five **axes** are employed in diagnosing a given individual. The DSM-IV is based upon the premise that individuals suffer from **"mental disorders."** Unlike earlier psychiatric classification systems, it would describe an individual as **suffering** from a **"schizophrenic disorder"** instead of labeling someone as "a **schizophrenic."**

## 78. DSM-IV CLASSIFICATION OF PSYCHOLOGICAL ABNORMALITY (Continued)

4. **Somatoform Disorders** - preoccupation with physical symptoms that have no clear medical basis or exaggerated complaints about bodily functioning; associated with significant distress or impairment in social and occupationol functioning. Sub-categories include: **Somatization Disorder, Conversion Disorder,** and **Hypochondriasis.**

5. **Factitious Disorders** - intentional production of physical ar psychological symptoms in order to assume the sick role. Sub-categories include: **Predominantly Psychological and/or Physical Signs or Symptoms;** also called **"Münchausen Syndrome."** (The term **"Proxy"** is added when the symptoms are deliberately caused in another individual.) This category of disorders is very difficult to treat.

6. **Dissociative Disorders** - essential feature is a disruption in the normal integration of consciousness, including memory, identity, and perception of the environment. Sub-categories include **Dissociative Identity Disorder,** (formerly multiple personality), **Dissociative Amnesia,** and **Dissociative Fugue;** treatment includes psychodynamic and hypnotic therapy. These disorders may be more prevolent than previously believed, but are still relatively uncommon.

7. **Personality Disorders** - rigid and stable patterns of experience and behavior that characterize an individual across a broad range of personal and social situations. The patterns interfere with the individual's adaptation and/or create problems for others. Treatments include cognitive-behaviorol and pychodynamic therapy. Sub-categories include: **Paranoid, Schizoid, Antisocial, Borderline,** and **Histrionic Personality Disorders.**

## 79. SCHIZOPHRENIC DISORDER SUBTYPES

**Disorganized** - inappropriate silliness and laughter, disorganized delusions (false beliefs) and hallucinations (false perceptions), disorganized speech, grimacing, peculiar mannerisms, poor personal hygiene.

**Catatonic** - motor disturbances that range from maintaining the same bizarre posture for long periods of time to excessive motor behavior without any apparent purpose; may appear stuporous; relatively uncommon.

**Paranoid** - delusions of persecution and/or grandeur; auditory hallucinations (usually voices); may be angry, argumentative, or violent; often preoccupied with religious or bodily delusions.

**Schizophrenoform** - symptoms are identical to those of the schizophrenic disorder, but the duration of the disorder is *less than the 6 months* required for a full-blown schizophrenic disorder diagnosis.

**Schizoaffective disorder** - a *mixture* of mood disorder and schizophrenic disorder symptoms; there is a bipolar and a depressive type.

**Undifferentiated** - mixed symptom pattern that does not clearly fit into any of the other categories.

**Residual** - individual is in less active stage of disorder; absence of praminent symptoms involving hallucinations, delusions, disorganized speech, but still presents odd beliefs, unusual perceptual experiences.

## 86. THEORIES OF INTELLIGENCE

**Single-factor theory** - proposes the existence of one *general capacity* which is employed in all situations requiring intelligent behaviar. For example, Binet viewed intelligence as a *general cognitive ability* that was employed in problem solving, goal-directed behavior.

**Two factor theory** - as postulated by Speorman, intelligence consists of a *general mental energy* or *ability* **(g)** common to all intellectual tasks, and a *series of specific factors* **(s)** comman to a *particular* graup of tasks. Cattell proposed a distinction between **fluid intelligence** (ability to deal with new problems) and **crystallized intelligence** (capacity to apply acquired knowledge and skills to solve problems).

**Multiple-factor theories** - developed by Thurstone, Guilfard, and athers, such theories deny the existence af "general intelligence" and instead posit *many factors* of varying degrees af generality. Thurstone's original **primary mental abilities (PMA) were:** (1) *number ability,* (2) *memory,* (3) *word fluency,* (4) *verbal meaning,* (5) *spatial relations,* (6) *reasoning,* and (7) *perceptual speed.*

**Multiple Intelligences Theory** - Gordner proposes that intelligence is multi-faceted in noture and includes: (1) *logical-mathematical,* (2) *linguistic,* (3) *musical,* (4) *spatial,* (5) *bodily-kinesthetic,* (6) *interpersanal,* and (7) *intrapersanal.*

**Triorchic Theory** - developed by Sternberg; argues that intelligence consists of three distinct cognitive skills: **contextual** (matching intelligence strengths to a specific context); **experiential** (creatively apply intelligence to new tasks); and **componentiol** (cognitive processes that underlie intelligent behavior).

## 92. SOCIAL PSYCHOLOGY CONCEPTS (Continued)

**Person Perception** - Impressions of others - influenced by *implicit personality theory,* the lay person's belief about which personality traits go together in athers; *primacy effect* - the tendency to be influenced by first impressions; *stereotypes* - overly simplified or shared *schemas* about groups of people.

**Persuasion** - Written ar verbal cammunications that attempt to change attitudes; influenced by the sender's apparent expertise, credibility, and style of delivery.

**Social Exchange Theory** - Partners in a social relationship assume *reciprocity;* ex.- their giving will result in receiving something from the other partner.

## 31. CENTRAL NERVOUS SYSTEM DISORDERS

**Central Nervous System Disorders (CNS-D)** have many causes including genetics, infectious diseases, physical trauma (head injury), and diet. Symptams af CNS-D include: impairment of recent memory, emotional overreactions or apathy, confusion about self-identity, confusion about time (date, year) or space (home, town), poor motor coordination, language difficulties, and impaired learning and judgment. *Delirium* and *Dementia* are the two most common CNS-D types.

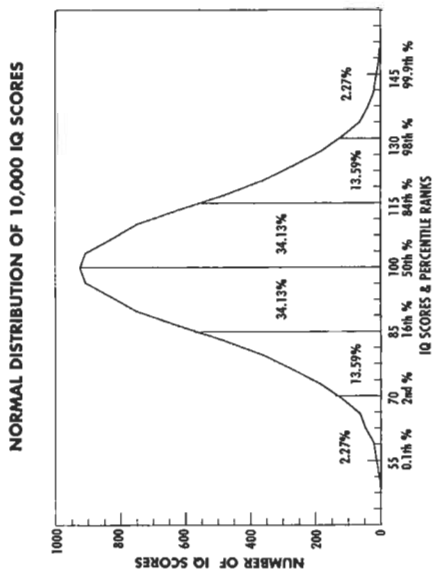
**Delirium** - rapid deteriaration of mental functioning resulting in confusion, hallucinations, wild motor behaviar, and a general impairment of cognitive functioning; may lead to coma and death; associated with alcohol, drugs, infectious diseases, oxygen deprivatian ta CNS.

**Dementia** - progressive deterioration of brain functioning occurring after childhood. Symptoms may include impairment in recent memary, loss of ability to think abstractly, personality changes, diminished motivatian, periods of confusion, and poor personal hygiene; usually occurs in alder individuals. Dementia can be caused by diseases (syphilis, AIDS), tumors, head injuries, and strokes. **Alzheimer's Disease, Pick's Disease,** and **Huntington's Disease** are dementias that are currently *incurable.*

**AIDS Dementia Complex** - general loss of cognitive abilities that may occur in individuals suffering from AIDS.

**Amnestic Syndrome** - significant loss of ability to remember events minutes after they have taken place; most commonly associated with pralanged alcohol or barbiturate abuse.

## 88.




## 94. CLASSIC STUDIES IN PSYCHOLOGY

**"Principles of Psychology"** (1890) - *William James's* text presented the classic analysis and description of consciousness as a *stream;* greatly influenced *functionalism* and the develapment of psychology in US.

**"Interpretation of Dreams"** (1900) - *S. Freud's* famous investigatian af the meaning af dreams and their relationship to unconscious mental structures and conflicts.

**"Little Albert"** (1920) - *J. B. Watson & R. Rayner* classically conditioned a fear response to a white rat in a nine month old child. This study demonstrated that behavioristic principles could be applied to abnormal behavior.

**"Peter"** (1924) - *Mary Cover Jones* eliminated a naturally occurring fear of rabbits in a three year old using a combination of desensitization-like procedures and modeling. Her pioneering efforts led her to be called the "Mother af Behavior Therapy."

**"Mentality of Apes"** (1925) - *W. Köhler's* study of *insight* learning in higher apes played an important role in the development of Gestalt psychology.

**"The Magic Number Seven Plus or Minus Two"** (1956) - *G. A. Miller's* pioneering article on the information processing approach to understanding memory.

**"Behavioral Study of Obedience"** (1963) - *S. Milgram's* research demonstrated the power of authority in fostering compliance with demands to treat others in an aggressive and sadistic manner. The study also raised ethical concerns, leading to a reevaluation of the rights af human subjects in psychological experiments.

## 83. VARIETIES OF PSYCHOTHERAPY

**Insight Oriented Therapies** - *Classical Psychoanalysis* employs *free association, transference,* and *interpretation* to help the patient gain *insight* into the origins and meanings of symptoms. Contemporary *Interpersonal Psychodynamic Psychotherapy,* while employing psychoanalytic principles, is briefer and places more emphasis on current problems and correcting distortions in interpersonal relations. *Client-Centered (Rogerian) Therapy* - utilizes an atmosphere af *nonjudgmental reflection* of the *client's* feelings and *unconditional positive regard* to help the client develop less defensiveness and a more realistic positive self-concept.

**Learning-Based Therapies (Behavior Therapies)** - *Systematic Desensitization,* based upon classical conditioning principles, gradually exposes the individual to fear eliciting stimuli while inducing relaxation. It is widely employed in the treatment of *phobias. Flooding* is also a classical conditioning procedure, but involves a sudden exposure to intense fear stimuli. *Aversion* therapy pairs an *aversive* stimulus (ex.- electric shock) with an undesirable behavior (ex.- severe head bonging). *Modeling* therapies attempt to eliminate undesirable behaviors by observing live or recorded models who engage in desirable behaviors. *Behavior Modification* utilizes operant conditioning principles, including reinforcement and extinction, to change undesirable behaviors.

**Cognitive Therapies** - Attempt to modify negative and self-destructive beliefs that are posited to be the cause of psychological disorders. *Beck's Cognitive Therapy* and *Ellis' Rational Emotive Therapy (RET)* are twa popular forms of cognitive therapy.

**Cognitive-Behavior Therapy** combines the features af learning-based and cognitive therapies. Both cognitive and cognitive-behavior therapies frequently utilize *treatment manuals* that provide specific treatment instructions and recommendations.

## 90. DISTRIBUTION OF IQS BASED UPON THE WECHSLER ADULT INTELLIGENCE SCALE (WAIS-R)

| IQ | Classification | Percent of Adults |
|---|---|---|
| 130 and above | Very Superior | 2.2 |
| 120-129 | Superior | 6.7 |
| 110-119 | High Average | 16.1 |
| 90-109 | Average | 50.0 |
| 80-89 | Low Average | 16.1 |
| 70-79 | Borderline | 6.7 |
| 69 and below | Mentally Retarded | 2.2 |

### DSM-IV CLASSIFICATION OF MENTAL RETARDATION

| Classification | IQ Range* | Description |
|---|---|---|
| Mild | 50-55 to 70 | Educable |
| Moderate | 35-40 to 50-55 | Trainable |
| Severe | 20-25 to 35-40 | Rudimentary social skills |
| Profound | below 20-25 | Neurological impairments |

* In addition to the IQ, the diagnasis af mental retardation includes deficits in the following areas of adaptive functioning: communication, home living, self-care, self-direction, social/interpersanal skills, academic performance, and job functioning.

## 96. BASIC VOCABULARY FOR PSYCHOLOGY (Continued)

**Behavior** - Activities of an organism that can be observed or recorded by instruments.

**Behavior Modification** - The practical application of operant conditioning principles to abnormal behavior.

**Biopsychology** - The branch of biology emphasizing evolutionary explanations of behavior.

**CAT scan** - An imaging technique that provides a picture of the structure af the brain.

**Catharsis** - Releasing emotional energy associated with unconscious conflicts or memories.

**Central nervous system (CNS)** - The brain and spinal card, as distinct from peripheral structures.

**Circadian Rhythm** - Biological waking/sleeping cycle that regulates timing and duration af sleep.

**Classical conditioning** - Learning that results from pairing of neutral conditioned stimulus with unconditioned stimulus.

**Cognition** - The mental processes that store, transform, and retrieve information.

**Conditioned response** - The acquired response to a conditioned stimulus.

**Conflict** - The simultaneous presence af opposing desires or tendencies.

**Constancy** - Tendency of objects to be perceived as the same shape, color, brightness, size, etc. despite wide variations in stimulus information.

## 79. SCHIZOPHRENIC DISORDER SUBTYPES

**Disorganized** - inappropriate silliness and laughter, disorganized delusions (false beliefs) and hallucinations (false perceptions), disarganized speech, grimacing, peculiar mannerisms, poor personol hygiene.

**Catatonic** - matar disturbonces that range from maintaining the same bizarre posture for long periods of time to excessive mator behavior without any apparent purpose; may oppear stuporous; relatively uncommon.

**Paranoid** - delusians af persecution and/or grandeur; auditory hallucinotians (usually voices); may be angry, argumentative, or violent; often preoccupied with religious or badily delusions.

**Schizophrenoform** - symptams are identical ta those af the schizaphrenic disorder, but the duration of the disorder is *less than the 6 months* required for a full-blown schizophrenic disorder diagnosis.

**Schizoaffective disorder** - a *mixture* af mood disorder and schizophrenic disorder symptoms; there is a bipolar and a depressive type.

**Undifferentiated** - mixed symptom pattern that does not clearly fit into any of the other categories.

**Residual** - individual is in less active stage of disorder; absence of prominent symptoms involving hallucinations, delusions, disorganized speech, but still presents odd beliefs, unusual perceptual experiences.

## 85. TESTS AND MEASUREMENTS

**Psychological Test** - a standardized instrument that systematically and objectively measures a sample of individual behavior. Psychological test construction includes the creation of **norms** based upon meosurement of the **standardization sample,** the initial large sample used in developing the test.

**Characteristics of Mental Measurements:**

**Reliability** refers to the consistency of test measurement. Reliability is usually expressed in the form of a *correlation coefficient* and may use **test-retest, alternate forms, split-half** techniques, or **Cronbach's Alpha.** Good test reliability is in the .80 to .90 range.

**Validity** is the extent to which a test measures what it claims to measure. Types of validity include: **content** - evaluated by whether the test adequately samples what it claims to measure; **criterion-** evaluated against o current or future measure of behavior that is independent of the test; **construct** - evaluates a test agoinst predictions from psychological theory. Validity coefficients are usually in the .50 to .60 range.

**Classification of Tests** - *Intelligence* ("IQ") tests attempt to measure the complex set of cognitive skills and operations that are believed to underlie successful adaptation to the environment. *Aptitude tests,* such as the SAT, make predictions about an individual's *future* performance in a specific area; ex.- college grades. *Achievement tests* measure *current* knowledge or competency in a specific area; ex.- French achievement test. *Personality tests,* such as the MMPI-2, meosure broad individual traits or characteristics; ex.- anxiety level.

## 91. SOCIAL PSYCHOLOGY CONCEPTS

**Asch Effect** - Socially conforming behavior which results from group pressures.

**Attitudes** - Generalized evaluations about issues, people, or objects. Attitudes have *emotional, cognitive,* and *behavioral* components.

**Attraction** - Positive feelings between individuals; influenced by *propinquity* (physical closeness), physical attractiveness, similarity in appearance, attitudes, interests, and reciprocity (liking others wha like you).

**Attribution** - Process through which individuals give explanations for behovior. The *fundamental attribution error* or *actor-observer bias* describes the tendency to overestimate internal causes of behavior in others (ex.- *lack of ability*), while exaggerating external causes in exploining one's own behavior (ex.- *bad-luck*).

**Cognitive Dissonance** - An uncomfortoble emotional state associated with observed inconsistencies between beliefs ond behaviors.

**False Consensus Effect** - The tendency to assume that others think and feel the way we do.

**Interpersonal Leadership Theories** - *Great Person theory* - emphasizes special personol qualities (dominant, energetic, persuosive, etc.). In contrast, the *situational theory of leadership* focuses on the group's specific needs for a leader at a particular point in time.

## 82. THE NATURE OF PSYCHOTHERAPY

**Def.** - The systematic application of treotment techniques derived from psychological theories and findings.

Psychotherapy is conducted in the context of a *theropeutic relationship* between the patient and the therapist. There are mony varieties af psychatherapy including: psychoanalysis, interpersonal therapy, client-centered therapy, behaviar therapy, cognitive therapy, cognitive-behavior therapy, existential therapy, and hypnatherapy. Current research suggests that oll forms of psychotherapy may be equally effective. However, some forms may be more effective for a specific disorder; ex.- cognitive therapy or interpersonal therapy for depression.

**General Goals of Psychotherapy:**

**1. Removing existing symptoms or maladaptive habits** (onxiety, phobias, depression)

**2. Modifying existing symptoms** (comboting poar self-esteem, low ego-strength)

**3. Retarding existing symptoms** (providing support in cases of progressive brain disease)

**4. Modifying disturbed patterns of interpersonal behavior** (shyness, overly aggressive)

**5. Promoting personality growth and development** (encouraging creativity, achievement, maturity) (After Wolberg, 1988)

## 87. TRADITIONAL COMPUTATION OF THE IQ

The **IQ** or **intelligence quotient** was introduced by the Germon psychologist William Stern in 1912. Stern's goal was to provide a *relative* measure of a child's intelligence. He built upon *Binet's* concept of **mental age (MA),** the level of performance on an intelligence test for children of a given **chronological age (CA).** By definition, an average child would have the same chronological and mental age. Stern reasoned that a ratio of the child's mental and chronological ages would provide a more accurate measure of intelligence than the mental age alone. The IQ formula is:

$$IQ = \frac{MA}{CA} \times 100$$

Thus, a child with an MA of 10 and a CA of 8 would have an IQ of 125 (10/8 X 100) While tests af intelligence na longer employ these calculatians, the IQ continues to be an impartant concept in intelligence testing. Contemporary IQ tests such as the **WAIS-R** and the **WISC-III,** compute a *deviation IQ* which uses a *percentile rank* derived from the narmal distribution. In this appraach, the 50th percentile is defined os an IQ of 100.

## 93. INDUSTRIAL-ORGANIZATIONAL (I—O) PSYCHOLOGY

**Leadership Styles:**

**Task-oriented leaders** - focus on the goals and tasks of the group, even to the paint af neglecting relationships within the group. **Relationship-oriented** leaders emphasize harmony and group cohesiveness.

**Managerial styles: Top down** manogement style - Decisions are made by ane or a small number of organizational leaders with little ar no input from subordinates. **Participative management** - Members at every level af the organization participate in decision-making processes.

**Organizational Theories** - various proposols for the ideal type of organizotionol structure include: **Bureaucratic** - highly structured, formal, rule driven; **Human-relations** - structure is campatible with needs af workers; **Theory Y** (McGregar) - organizational gools shauld be consistent with worker goals.

**Contingency theory** - a broad-based theory that holds that organizational structure should take into account worker needs and goals, organizationol goals, and economic climate.

**Personnel selection** - central task is ta match worker characteristics with job demands; utilizes *job analysis, psychological assessment including psychological tests* and *performance evaluation.*

**Human factors engineering** - focuses on designing machines that are compotible with workers' skills and needs; concerned with making the occupational enviranment safer and more efficient.

**Hawthorne effect** - research finding that worker motivation increases simply because of attention given to them by experimenters.

## 84. MENTAL HEALTH PROFESSIONALS

**Clinical Psychologist** - Ph.D. or Psy.D. in psychology plus internship training in mental hospital or clinic. Trained in assessment, psychological treatment, and research techniques. Practices psychotherapy, administers and interprets psychological tests, conducts research on psychological disorders and treatment approoches. **Counseling Psychologists** have similar training but tend to deal with adjustment and vocationol issues.

**Neurologist** - M.D. - specialized residency training in assessment and treatment of nervous system disorders.

**Psychiatric Social Worker** - M.S.W. or D.S.W. plus supervised experience in social work. Deals with social aspects of patients' problems; may also conduct psychotherapy with individuals and families.

**Psychiatrist** - M.D. - speciolized residency training in assessment and treatment of psychiatric disorders. Uses various forms of physicol treotment (ex.- drugs, shock therapy) as well as psychotherapy.

**Psychoanalyst** - M.D. - sometimes Ph.D., Psy.D., or M.S.W. - has additional extensive training in psychoanalytic theory and technique. Practices psychotherapy based on *Psychoanalytic* theory.

In the clinic or hospital setting, a psychiotrist, clinicol psychologist, and psychiatric social worker aften function as a *psychiatric team* in assessing and treating patients.

## 89. WECHSLER ADULT INTELLIGENCE SCALE (WAIS-R) SUBTEST CATEGORIES AND INTERPRETATION

| Verbal subtests | Abilities measured |
|---|---|
| Information | General knowledge and awareness of environment |
| Similarities | Verbal concept formation and reasoning |
| Arithmetic | Arithmetic reasoning/concentration |
| Vocabulary | Word knowledge |
| Comprehension | Practical judgment of everyday situations |
| **Performance subtests** | **Abilities measured** |
| Picture Completion | Non-verbal attention |
| Picture Arrangement | Visual sequencing; non-verbal social judgment |
| Block Design | Non-verbal concept formation; visual organization |
| Object Assembly | Psychomotor organization and perception |
| Coding | Visual-motor speed and accuracy |

## 95. BASIC VOCABULARY FOR PSYCHOLOGY

**Absolute Threshold** - The point at which a stimulus is just barely perceived.

**Achievement** - Acquired motive to excel; researched by Murray and McClelland.

**Adrenaline (Epinephrine)** - A neurotransmitter that increoses heart rate.

**Affect** - The conscious experience of an emotion.

**Affective neuron** - Transmits impulses from sensory organs to the CNS.

**After-image** - Sensory experience remaining when stimulus is withdrawn; usually visual.

**Aphasia** - Closs of language disorders caused by damage to specific cortical areas.

**Aptitude** - Rate and extent of capacity to learn in a specific orea.

**Association areas** - Portions of cerebral cortex that integrate complex mental processes.

**Attention** - A heightened awareness of o limited range of stimuli.

**Attitude** - A mental set or readiness to respond in o predetermined way to an object, concept, or situation.

**Audition** - The sense of hearing.

**Autonomic nervous system (ANS)** - Division of nervous system serving smooth muscles and endocrines; involved in emotional behaviors; sympathetic and parasympathetic branches.

## 98. BASIC VOCABULARY FOR PSYCHOLOGY (Continued)

**Etiology** - The study of the causes of diseases.

**Extra-sensory perception (ESP)** - Perception occurring without any apparent sensory input or any apparent channels of sensory communication.

**Factor Analysis** - A statistical technique that isolates a small number of factors underlying a large number of correlations.

**Forebrain** - Portion of brain consisting of cerebrum, thalamus, hypothalamus, and complementary structures.

**Frontal lobe** - The portion of both cerebral hemispheres lying in front of the central fissures.

**Frustration** - The blocking of goal-directed activity or the experience resulting from such interference.

**Gender Identity** - The subjective belief that one is male or female.

**GSR (Galvanic Skin Response)** - A measure of lowered electrical resistance on the skin; associated with emotionality.

**Habit** - An acquired stimulus-response pattern.

**Hallucination** - A false perception that distorts reality.

**Heuristics** - Mental rules of thumb employed in problem solving.

**Hindbrain** - Portion of brain consisting of the cerebellum, medulla, and complementary structures.

**Homeostasis** - The bodily process that maintains an internal physical balance.

## 104. IMPORTANT FIGURES IN PSYCHOLOGY

**Adler, A.** - neo-Freudian personality theorist; *individual psychology; inferiority complex.*

**Allport, G.** - authority on *personality theory* and *prejudice; functional autonomy.*

**Anastasi, A.** - tests & measurements; individual differences.

**Binet, A.** - French experimental psychologist; developed 1st practical *intelligence test.*

**Bandura, A.** - founder of *social learning theory; modeling; self-efficacy.*

**Boring, E.** - authority on *experimental psychology* and *history* of psychology.

**Bruner, J.** - influential cognitive researcher.

**Cajal, S. R.** - Spanish neuroscientist; discovered *synapse.*

**Cannon, W.** - physiologist; research on *homeostasis;* Connon-Bord *theory of emotion.*

**Cattell, J.** - research on reaction time; testing; individual differences.

**Cattell, R. B.** - personality theorist; *16PF test; factor analysis.*

**Chomsky, N.** - psycholinguistics; *deep* vs *surface* structure of language.

**Clark, K. B.** - social psychologist; research on racial prejudice.

**Dewey, J.** - eminent philosopher and educator; a founder of *functional psychology.*

## 109. IMPORTANT FIGURES IN PSYCHOLOGY (Continued)

**Wolpe, J.** - founder of behavior therapy; *Systematic Desensitization.*

**Wundt, W.** - German physiologist-psychologist; given credit for establishing 1st experimental psychology lab in 1879 (Leipzig, Ger.)

## 100. BASIC VOCABULARY FOR PSYCHOLOGY (Continued)

**Medical Model** - A theory that assumes abnormal behavior is caused by physical disease.

**Meta-Analysis** - A statistical technique that combines and interprets the results of a large number of related studies.

**Motivation** - Generic term related to need arousal and goal-seeking behavior.

**Neurotransmitters** - Chemicals released by axons that transmit messages across the synapse.

**Occipital lobe** - The portion of the cerebral hemisphere involved in vision; located behind the parietal and temporal lobes.

**Oedipus complex** - Intense emotional attachment to parent of the opposite sex; jealousy and rivalry with same-sex parent.

**Perception** - Mental process leading to awareness and organization of objects, qualities or relations.

**Object permanence** - Cognitive ability to maintain an image of an object not in the visual field (Piaget).

**Peripheral nervous system** - The neural structures outside of brain and spinal cord.

**Personality** - The distinctive and stable pattern of behavior, thinking, and feeling that characterizes the individual.

**PET Scan** - Radioactive imaging technique that supplies a picture of functional brain activity.

## 106. IMPORTANT FIGURES IN PSYCHOLOGY (Continued)

**Helmoltz, H.** - great 19th century physiologist; classic studies on vision, hearing, reaction time.

**Harlow, H.** - animal researcher; *contact comfort and learning sets in monkeys.*

**Hilgard, E.** - hypnosis; *neo-dissociation theory;* learning theory; history of psychology

**Horney, K.** - neo-Freudian personality theorist; *basic anxiety.*

**Hull, C.** - learning theorist; drive concept; also studies on *hypnosis* and *suggestibility.*

**James, W.** - probably greatest of early figures in US psychology; habit; *stream of consciousness;* instinct; *James-Lange* theory of emotion.

**Jones, M. C.** - *"Mother of Behavior Therapy; " Peter "* study.

**Jung, C.** - neo-Freudian; developed system of *Analytical Psychology; Introvert-Extrovert* classification.

**Kohlberg, L.** - developer of *moral* stage theory.

**Koffka, K., Köhler, W., and Wertheimer, M.** - founders of *Gestalt psychology.*

**Kuo, Z. Y.** - Chinese experimental psychologist; anti-instinct research.

**Lashley, K.** - learning research; *localization of brain function.*

**Lazarus, A.** - founder of *multi-modal behavior therapy.*

**Lewin, K.** - *field theory;* social psychology.

## 102. BASIC VOCABULARY FOR PSYCHOLOGY (Continued)

**Recognition** - A measure of memory requiring subjects to identify material learned earlier.

**Reliability** - The consistency of measurement of a test.

**Rote memorization** - Memorization where there is little or no comprehension.

**Savings Method** - Memory measured by the time or trials saved in relearning material.

**Self -Actualization** - In humanistic theory, the need for individuals to realize all of their potential.

**Self** - The center of awareness and identity in humanistic personality theory.

**Set** - A preparatory readiness to respond to a particular stimulus.

**Stimulus** - Physical energy that activates a receptor.

**Stimulants** - Drugs that speed up CNS activity.

**Superego** - Freudian personality structure that controls conscience and morality.

**Sympathetic nervous system** - The division of the autonomic nervous system activated by emergency situations and emotional stimuli.

**Syndrome** - A cluster of symptoms used to diagnose a disease.

**Temperament** - Largely innate pattern of emotional disposition.

## 108. IMPORTANT FIGURES IN PSYCHOLOGY (Continued)

**Skinner, B.F.** - developed *operant* conditioning and *behavior modification* movement.

**Spearman, C.** - *general-factor* (g) theory of intelligence.

**Sperry, R.** - neuropsychologist; *split brain research.*

**Sullivan, H. S.** - eminent psychiatrist; *interpersonal* theory of psychiatry.

**Taylor, J. S.** - learning theory; *Manifest Anxiety Scale.*

**Terman, L.** - author of *Stanford-Binet IQ* test; classic long-term study of gifted children.

**Thorndike, E.** - pioneering learning theorist and educational psychologist; *puzzle box; law of effect.*

**Thurstone, L.** - factor analytic studies of intelligence; *PMA.*

**Titchener, E.** - experimental psychologist; founder of *structuralism.*

**Tolman, E.** - *behavioral-cognitive* theory of learning; cognitive map; latent learning.

**Vygotsky, L.** - Russian cognitive psychologist; *sociocultural context* of learning.

**Watson, J. B.** - extremely influential experimental psychologist; founder of *behaviorism; Little Albert study.*

**97. BASIC VOCABULARY FOR PSYCHOLOGY (Continued)**

**Coping** - Rotional ottempts to deal with stressors ond stress.

**Dark Adaptation** - Greater light sensitivity after the organism is subjected to reduced illumination.

**Delusion** - A false belief that denies reality.

**Dependent variable** - The response of the subject to the independent variable.

**Depressants** - Drugs that slow the activity of the CNS.

**Dopamine** - A neurotransmitter involved in schizophrenia and Parkinson's disease.

**Down Syndrome** - A form of mental retardation resulting from an abnormal division of chromosome poir number 21.

**Drive** - An aroused state of the organism resulting from need deprivation.

**Effector** - Muscle or gland activoted by motor nerve.

**EEG** - A recording of brain activity based upon the sum of cortical octivity.

**Efferent Neurons** - Tronsmit impulses from CNS to muscles ond glands.

**Ego** - In Freudian theory, the rational part of the personality that attempts to influence irrational Id impulses.

**Ethology** - The study of imprinting and species specific behavior.

**Experimental Group** - Group subjected to the changed condition of the independent variable whose effect is under study.

**99. BASIC VOCABULARY FOR PSYCHOLOGY (Continued)**

**Hypothalamus** - Structure at base of brain. Significant in sleep, emotional ond motivational behavior.

**Hypothesis** - A testable prediction derived from a psychological theory.

**Id** - In Freudian theory, the unconscious, irrational personality structure associated with sexual and aggressive drives.

**Illusion** - A distorted interpretation of on actual stimulus.

**Interneurons** - Neurons that function to receive and transmit information to other neurons.

**Independent variable** - An experimental factor monipulated by a researcher.

**Insane** - The legal term for mentally ill people who are not responsible for their behavior.

**Learning** - Relatively permanent change in behavior resulting from practice or experience.

**Lateralization** - The dominance of the left or right hemisphere in specific psychological processes.

**Light adaptation** - Reduction of light sensitivity after exposure to high levels of illumination.

**Limbic System** - Brain system involved in emotions ond memory; includes amygdala, hippocampus, ond septal areas.

**Maturation** - Orderly changes in behaviar resulting from innately determined growth processes.

**101. BASIC VOCABULARY FOR PSYCHOLOGY (Continued)**

**Phi Phenomenon** - The apparent movement generated by two or more successively presented stationary stimuli.

**Phenothiazines** - A class of drugs used to treat schizophrenic disorders.

**Phobia** - A specific fear which is intense and irrational.

**Post Traumatic Stress Disorder (PTSD)** - Psychological disorder resulting from a highly disturbing event; includes anxiety, nightmares, flashbacks.

**Psychometric** - Relating to psychological tests or other quantitative methods.

**Psychopath (anti-social personality)** - Individual who is impulsive, indifferent to the rights of others, exhibits little remorse, and is unconcerned about the future.

**Proactive inhibition** - Interference of earlier learning with acquisition and recall of new material.

**Psychotropic drug** - A medication that influences mental processes and behavior.

**Psychophysical methods** - Procedures that measure the relationship between physical stimuli and conscious experience.

**Psychosis** - Severe disturbance of emotional and cognitive processes; usually requires hospitalization.

**Psychosomatic disorder** - Actual physical disease strongly influenced by stressors.

**Recall** - Memory measured by the ability to repeat material learned earlier.

**103. BASIC VOCABULARY FOR PSYCHOLOGY (Continued)**

**Trait** - A relatively consistent behaviar pattern exhibited in a broad range of situations.

**Trial and Error** - Problem solving based an random solutions.

**Type** - A class of individuals possessing several major traits in common.

**Validity** - The extent to which a test measures what it claims to measure.

**105. IMPORTANT FIGURES IN PSYCHOLOGY (Continued)**

**Dunlap, K.** - experimental and social psychology; *negative practice.*

**Ebbinghaus, H.** - German experimental psychologist; classic studies of *memory.*

**Ellis, A.** - creator of *Rational Emotive Therapy (RET);* sex therapy.

**Erikson, E. H.** - *psychasocial* stages of development; *psychohistory.*

**Eysenck, H.** - British experimental personality theorist and researcher; biological basis of personality.

**Fechner, G.** - German philosopher-physicist; founder and developer of *psychophysics.*

**Festinger, L.** - social psychologist; originator of *cognitive dissonance* theory.

**Freud, S.** - Austrian neurologist who refined the idea of the *unconscious* and founded *psychoanalysis.*

**Galton, F.** - individual differences; devised statistical methods; studied heredity and genius; originated *"nature vs nurture"* concept.

**Gilligan, C.** - gender research; moral development.

**Guilford, J.** - experimental and individual differences studies; *structure of intellect.*

**Hall, G. S.** - founded 1st psychology lab in US; 1st psychology journal in US; child, adolescent studies.

**107. IMPORTANT FIGURES IN PSYCHOLOGY (Continued)**

**Loftus, E. F.** - eyewitness and repressed memories.

**Maslow, A.** - important motivational and personality theorist; developed *hierarchy of needs; self-actualization.*

**McClelland, D.** - developed *achievement motivation theory.*

**Miller, G.** - cognitive theorist; information processing.

**Miller, N.** - learning interpretations of Freudian theory; biofeedback research.

**Murray, H.** - personality theorist; developed *TAT* test.

**Pavlov, I.** - Russian physiologist; discovered and investigated nature of *conditioned reflex.*

**Piaget, J.** - eminent Swiss psychologist-philosopher; *cognitive stage* model of child development; *conservation; object permanence.*

**Rodin, J.** - health psychology; obesity research.

**Rogers, C.** - developed *Client-Centered* counseling.

**Rorschach, H.** - Swiss psychiatrist; developed *Rorschach test.*

**Seligman, M.** - *learned helplessness; preparedness* in classical conditioning.

**Selye, H.** - Czech-Canadian physiologist; invented modern *stress* concept.

## 6. THE NATURE OF SCIENTIFIC PSYCHOLOGY

### Definition of Psychology:

Psychology is the scientific study of *behavior* and *mental processes* in humans and animals. The goals of psychology include *description, explanation, prediction,* and *control.*

**Behavior** refers to those *overt* activities of an organism which can be directly observed or recorded. Behavior that takes the form of highly specific glandular or muscular movements, ex.- knee jerk, is called *molecular.* Integrated and meaningful patterns of complex behavior, ex.- avoiding high places, are called *molar.* Psychology is principally interested in molar behavior.

**Mental processes** refer to cognitive operations which can be directly known only by the experiencing person; ex.- thinking, perceiving, dreaming. Since these *internal* and *covert* activities cannot be directly observed and measured by others or by instruments, the individual may be asked to make their inner experiences overt through verbal reports. In some instances, the inner experience is *inferred* through the observation of behavior which is believed to reflect mental processes.

Some mental processes appear to operate outside of conscious awareness and are termed *non-conscious* or *unconscious.* These may range from abstract problem solving operations to intense repressed emotional material.

## 80. REPRESENTATIVE DRUGS FOR TREATING PSYCHIATRIC DISORDERS

| Drug Action | Brand Name® | Generic Name |
|---|---|---|
| **Anti-Anxiety** | Ativan<br>BuSpar<br>Xanax | Lorazepam<br>Buspirone<br>Alprazolam |
| **Antidepressant** | Elavil<br>Prozac<br>Zoloft | Amitriptyline<br>Fluoxetine<br>Sertraline |
| **Anti-Obsessional** | Anafranil<br>Luvox | Clomipramine<br>Fluvoxamine |
| **Anti-Panic** | Tofranil<br>Inderol | Imipramine<br>Propronolol |
| **Antipsychotic** | Clozaril<br>Haldol<br>Thorazine | Clozapine<br>Haloperidol<br>Chlorpromazine |
| **Mood Stabilizer** | Eskalith<br>Depakote<br>Tegretol | Lithium Carbonate<br>Valproic Acid<br>Carbamazepine |

- Study a few cards at a time. Research suggests that it is more effective to study small amounts of material over time than to attempt to digest a large amount of material at one time.
- We also know from psychological research that active learning is more efficient than passive learning. You should do more than merely memorize the cards. Consider rephrasing the material as questions or rehearsing it aloud.
- The small size of the cards makes it easy for you to carry them for study at convenient times.
- Do not rely exclusively on these cards when preparing for examinations! Remember, the cards are meant to supplement textbook and lecture material and are not a substitute for them.