Feldman's Psychology

Chap#1 introduction:

Psychology is the scientific study of behavior and mental processes.it encompasses not just what people do but also their thoughts, emotions, perceptions, reasoning processes,memories, and even the biological activities that maintain bodily functioning.

1-the subfields of psychology:

Behavioral genetics studies the inheritance of traits related to behavior.

Behavioral neuroscience examines the biological basis of behavior.

Clinical psychology deals with the study, diagnosis, and treatment of psychological disorders.

Clinical neuropsychology unites the areas of biopsychology and clinical psychology, focusing on the relationship between biological factors and psychological disorders.

Cognitive psychology focuses on the study of higher mental processes.

Counseling psychology focuses primarily on educational, social, and career adjustment problems.

Cross-cultural psychology investigates the similarities and differences in psychological functioning in and across various cultures and ethnic groups.

Developmental psychology examines how people grow and change from the moment of conception through death.

Educational psychology is concerned with teaching and learning processes, such as the relationship between motivation and school performance.

Environmental psychology considers the relationship between people and their physical environment.

Evolutionary psychology considers how behavior is influenced by our genetic inheritance from our ancestors.

Experimental psychology studies the processes of sensing, perceiving, learning, and thinking about the world.

Forensic psychology focuses on legal issues, such as determining the accuracy of witness memories.

Health psychology explores the relationship between psychological factors and physical ailments or disease.

Industrial/organizational psychology is concerned with the psychology of the workplace.

Personality psychology focuses on the consistency in people's behavior over time and the traits that differentiate one person from another.program evaluation *program evaluation* focuses on

assessing large-scale programs, such as the head start preschool program, to determine whether they are effective in meeting their goals.

Psychology of women focuses on issues such as discrimination against women and the causes of violence against women.

School psychology is devoted to counseling children in elementary and secondary schools who have academic or emotional problems.

Social psychology is the study of how people's thoughts, feelings, and actions are affected by others.

Sport psychology applies psychology to athletic activity and exercise.psychology.

2-The roots of psychology

Structuralism wundt's (1879)approach,which focuses on uncovering the fundamental mental components of consciousness, thinking, and other kinds of mental states and activities.

Introspection a procedure used to study the structure of the mind in which subjects are asked to describe in detail what they are experiencing when they are exposed to a stimulus.

Functionalism (william james)an early approach to psychology that concentrated on what the mind does—the functions of mental activity—and the role of behavior in allowing people to adapt to their environments..

Gestalt psychology an approach to psychology that focuses on the organization of perception and thinking in a "whole" sense rather than on the individual elements of perception.

3-Today's perspectives

Neuroscience perspective(*blood, sweat, and fears)**the*** approach that views behavior from the perspective of the brain, the nervous system, and other biological functions.neuroscience perspective considers how people and nonhumans function biologically:how individual nerve cells are joined together, how the inheritance of certain characteristics from parents and other ancestors influences behavior, how the functioning of the body affects hopes and fears, which behaviors are instinctual, and so forth.

Psychodynamic *perspective(understanding the inner person)*the approach based on the view that behavior is motivated by unconscious inner forces over which the individual has little control. They view dreams and slips of the tongue as indications of what a person is truly feeling. (sigmund freud was a viennese physician 1900s)

Behavioral perspective (*observing the outer person*)the approach that suggests that observable, measurable behavior should be the focus of study.(watson 1920s)

Cognitive perspective(identifying the roots of understanding)the approach that focuses on how people think, understand, and know about the world. The emphasis is on learning how people

comprehend and represent the outside world within themselves and how our ways of thinking about the world influence our behavior.

Humanistic perspective (the unique qualities of the human species)the approach that suggests that all individuals naturally strive to grow, develop, and be in control of their lives and behavior. Humanistic psychologists maintain that each of us has the capacity to seek and reach fulfillment. The humanistic perspective assumes that people have the ability to make their own choices about their behavior rather than relying on societal standards. (k.rogers.maslow).

Chap#2 scientific research:

1-scientific method the approach through which psychologists systematically acquire

knowledge and understanding about behavior and other phenomena of interest. It consists of four main steps: (1) identifying questions of

Interest, (2) formulating an explanation, (3) carrying out research designed to support Or refute the explanation, and (4) communicating the findings..

Theories broad explanations and predictions concerning phenomena of interest.

Hypothesis a prediction, stemming from a theory, stated in a way that allows it to be tested.

Operational definition the translation of a hypothesis into specific, testable procedures that can be measured and observed.

2-conducting psychological research:

Archival research: research in which existing data, such as census documents, college records, and newspaper clippings, are examined to test a hypothesis.

Naturalistic observation :research in which an investigator simply observes some naturally occurring behavior and does not make a change in the situation.

Survey research: research in which people chosen to represent a larger population are asked a series of questions about their behavior, thoughts, or attitudes.

Case study: an in-depth, intensive investigation of an individual or small group of people.

Co relational research :research in which the relationship between two sets of variables is examined to determine whether they are associated, or "correlated." A *positive correlation* indicates that as the value of one variable increases, we can predict that the value of the other variable will also increase in contrast, a *negative correlation* tells us that as the value of one variable increases, the value of the other decreases .a *variables* behaviors, events, or other characteristics that can change, or vary, in some way.. *Independent* variable the variable that is manipulated by an experimenter..*dependent variable* the variable that is measured and is

expected to change as a result of changes caused by the experimenter's manipulation of the independent variable.

Experimental research:

Experimental manipulation the change that an experimenter deliberately produces in a situation. *An experiment* the investigation of the relationship between two (or more)variables by deliberately producing a change in one variable in a situation and observing the effects of that change on other aspects of the situation.

Experimental group any group participating in an experiment that receives a treatment.

Control group a group participating in an experiment that receives no treatment.

Treatment the manipulation implemented by the experimenter**.**

Random assignment to condition. A procedure in which participants are assigned to different experimental groups or "conditions" on the basis of chance and chance alone.(example monkeys drugs effect on book)

Replicated research: research that is repeated, sometimes using other procedures, settings, and groups of participants, to increase confidence in prior findings. A procedure called *meta-analysis* permits psychologists to combine the results of many separate studies into one overall conclusion. **3-**

critical research issues

The ethics of research

• protection of participants from physical and mental harm.

• the right of participants to privacy regarding their behavior.

• the assurance that participation in research is completely voluntary.

• the necessity of informing participants about the nature of procedures before their participation in the experiment..

One of psychologists' key ethical principles is **informed consent.** Before participating in an experiment, the participants must sign a document affirming that they have been told the basic outlines of the study and are aware of what their

Participation will involve, what risks the experiment may hold, and the fact that their participation is purely voluntary and they may terminate it at any time..

Experimental bias factors that distort how the independent variable affects the dependent variable in an experiment.

Placebo a false treatment, such as a pill, "drug," or other substance, without any significant chemical properties or active ingredient.

C h a p# 3 neuroscience and behavior

Behavioral neuroscientists (or biopsychologists) psychologists who specialize in considering the ways in which the biological structures and functions of the body affect behavior.

1.Neurons: the basic elements of behavior:

The structure of the neuron

Neurons nerve cells, the basic elements of the nervous system.

Dendrite a cluster of fibers at one end of a neuron that receives messages from other neurons.

Axon the part of the neuron that carries messages destined for other neurons.

Terminal buttons small bulges at the end of axons that send messages to other neurons.

Myelin sheath a protective coat of fat and protein that wraps around the axon.

How neurons fire

All-or-none law the rule that neurons are either on or off.

Resting state the state in which there is a negative electrical charge of about -70 millivolts within a neuron.

Action potential an electric nerve impulse that travels through a neuron's axon when it is set off by a "trigger," changing the neuron's charge from negative to positive.

Mirror neurons specialized neurons that fire not only when a person enacts a particular behavior, but also when a person simply observes *another* individual carrying out the same Behavior.

Where neurons meet:bridging the gap

Synapse the space between two neurons where the axon of a sending neuron communicates with the dendrites of a receiving neuron by using chemical messages.

Neurotransmitters chemicals that carry messages across the synapse to the dendrite (and sometimes the cell body) of a receiver neuron.

Excitatory message a chemical message that makes it more likely that a receiving neuron will fi re and an action potential will travel down its axon.

Inhibitory message a chemical message that prevents or decreases the likelihood that a receiving neuron will fire.

Reuptake the reabsorption of neurotransmitters by a terminal button.

Neurotransmitters: multitalented chemical couriers

Acetylcholine (or *ach ,* its chemical symbol), which is found throughout the nervous system. Ach is involved in our every move, another common excitatory neurotransmitter,

Glutamate , plays a role in memory.

Gamma-amino butyric acid (gaba) moderates a variety of behaviors, ranging from eating to aggression. Several common substances, such as the tranquilizer valium and alcohol, are effective because they permit gaba to operate more efficiently.

Dopamine (da) is involved in movement, attention, and learning.

Serotonin , is associated with the regulation of sleep, eating, mood, and pain.

Endorphins , are similar in structure to painkilling drugs such as morphine. The production of endorphins refl ects the brain's effort to deal with pain as well as to elevate mood.

2-The nervous and the endocrine system: communicating within the body:

The nervous system: linking neurons

Central nervous system (cns) the part of the nervous system that includes the brain and spinal cord.

Peripheral nervous system the part of the nervous system that includes the autonomic and somatic subdivisions; made up of neurons with long axons and dendrites, it branches out from the spinal cord and brain and reaches the extremities of the body.

Spinal cord a bundle of neurons that leaves the brain and runs down the length of the back and is the main means for transmitting messages between the brain and the body.

Refl ex an automatic, involuntary response to an incoming stimulus.

Sensory (afferent) neurons neurons that transmit information from the perimeter of the body to the central nervous system.

Motor (efferent) neurons neurons that communicate information from the nervous system to muscles and glands.

Interneurons neurons that connect sensory and motor neurons, carrying messages between the two.

Somatic division the part of the peripheral nervous system that specializes in the control of voluntary movements and the communication of information to and from the sense organs.

Autonomic division the part of the peripheral nervous system that controls involuntary movement of the heart, glands, lungs, and other organs.

Activating the divisions of the autonomic nervous system

Sympathetic division the part of the autonomic division of the nervous system that acts to prepare the body for action in stressful situations, engaging all the organism's resources to respond to a threat.

Parasympathetic division the part of the autonomic division of the nervous system that acts to calm the body after an emergency has ended.

The evolutionary foundations of the nervous system

Evolutionary psychology the branch of psychology that seeks to identify behavior patterns that are a result of our genetic inheritance from our ancestors. Today, the nervous system is *hierarchically organized ,* meaning that relatively newer (from an evolutionary point of view) and more sophisticated regions of the brain regulate the older, and more primitive, parts of the nervous system.

Behavioral genetics

Behavioral genetics the study of the effects of heredity on behavior.

Molecular genetics and psychological disorders

Behavioral genetics, gene therapy, and genetic counseling

The endocrine system:of chemicals and glands:

Endocrine system a chemical communication network that sends messages throughout the body via the bloodstream.

Hormones chemicals that circulate through the blood and regulate the functioning or growth of the body

Pituitary gland the major component of the endocrine system, or "master gland," which secretes hormones that control growth and other parts of the endocrine system.

Heart:makes atrial natriuretic peptide,which lowers blood sodium.

Adrenal glands

*Medulla:*makes epinephrine and norepinephrin which mediate the "fight-or-flight"response.

*Cortex:*makes aldosterone, which regulates sodium and potassium balance in the blood; also makes glucocorticoids (such as cortisol), which regulate growth, metabolism, development, immune function, and the body's response to stress.

Thyroid:regulates metabolic rate and growth.

Pineal:makes melatonin, which regulates daily rhythms.

Parathyroids (behind the thyroid)**:** make parathyroid hormone, which increases blood calcium.

Pancreas:makes insulin.

Stomach and small intestine:secrete hormones that facilitate digestion and regulate pancreatic activity.

Adipose tissue:produces adipokines (for example, leptin),which regulate appetite and metabolic rate.

Liver and kidneys:secrete erythropoietin, which regulates production of red blood cells.

Ovaries:produce estrogens such as *progesterone*, which control reproduction in females.

Anterior pituitary gland: produces 6 hormones with diverse actions.

Posterior pituitary gland: secretes oxytocin, which stimulates uterine contractions during birth; also secretes antidiuretic hormone, which increases water retention in the kidney.

Hypothalamus: secretes several neurohormones that stimulate or inhibit anterior pituitary function.

Testes:produce androgens, such as testosterone, which control reproduction in males.

3-**The brain**

The central core: our "old brain

Central core the "old brain," which controls basic functions such as eating and sleeping and is common to all vertebrates.

Hindbrain, contains the medulla, pons, and cerebellum

Medulla controls breathing and heartbeat.

Pons joining the two halves of the cerebellum, acts as a transmitter of motor information, coordinating muscles and integrating movement between the right and left halves of the body. It is also involved in regulating sleep.

Cerebellum is found just above the medulla and behind the pons. Without cerebellum we enable to walk a straight line so it control bodily balance. It coordinates placement, movement, and tension of muscles. Drinking too much alcohol seems to depress the activity of the cerebellum,. The cerebellum is also involved in several intellectual functions, ranging from the analysis and coordination of sensory information to problem solving.

Reticular formation extends from the medulla through the pons, passing through the middle. Section of the brain—or ***midbrain*** —and into the front-most part of the brain, called the ***forebrain*** like an ever-vigilant guard, the reticular formation is made up of groups of nerve cells that can activate other parts of the brain immediately to produce general bodily arousal. The reticular formation serves a different function when we are sleeping, seeming to filter out background stimuli to allow us to sleep undisturbed.

Thalamus the part of the brain located in the middle of the central core that acts primarily to relay information about the senses.

Hypothalamus a tiny part of the brain, located below the thalamus, that maintains homeostasis and produces and regulates vital behavior, such as eating, drinking, and sexual behavior.

The limbic system: beyond the central core

Limbic system the part of the brain that controls eating, aggression, and reproduction. It include the *amygdala* and *hippocampus*

The cerebral cortex:our "new brain"

Cerebral cortex the "new brain,"responsible for the most sophisticated information processing in the brain; contains four lobes.

Lobes the four major sections of the cerebral cortex: frontal, parietal, temporal, and occipital.

Motor area the part of the cortex that is largely responsible for the body's voluntary movement **.**

Sensory area the site in the brain of the tissue that corresponds to each of the senses, with the degree of sensitivity related to the amount of tissue.

Neuroplasticity changes in the brain that occurs throughout the life span relating to the addition of new neurons, new interconnections between neurons, and the reorganization of informationprocessing areas.

Neurogenesis the creation of new neurons.

Chap#4 sensation and perception

1.Sensing the world around us

Sensation the activation of the sense organs by a source of physical energy.

Perception the sorting out, interpretation, analysis, and integration of stimuli by the sense organs and brain.

Stimulus energy that produces a response in a sense organ.

Psychophysics is the study of the relationship between the physical aspects of stimuli and our psychological experience of them.

Absolute thresholds:detecting what's out there

Absolute threshold the smallest intensity of a stimulus that must be present for the stimulus to be detected.

Diff erence thresholds: noticing distinctions between stimuli

Difference threshold (just noticeable difference) the smallest level of added or reduced stimulation required to sense that a change in stimulation has occurred.

Weber's law a basic law of psychophysics stating that a just noticeable difference is a constant proportion to the intensity of an initial stimulus (rather than a constant amount).

Sensory adaptation: turning down our responses

Adaptation an adjustment in sensorycapacity after prolonged exposure to unchanging stimuli.

2. Vision: shedding light on the eye

The range of wavelengths that humans are sensitive to—called the *visual spectrum* —is relatively small.

Illuminating the structure of the eye

Retina the part of the eye that converts the electromagnetic energy of light to electrical impulses for transmission to the brain.

Rods thin, cylindrical receptor cells in the retina that are highly sensitive to light. Rods contain *rhodopsin ,* a complex reddish-purple substance whose composition changes chemically when energized by light.

Cones cone-shaped, light-sensitive receptor cells in the retina that are

Responsible for sharp focus and color perception, particularly in bright light. *Dark adaptation ,* the phenomenon of adjusting to dim light after being in brighter light.

Sending the message from the eye to the brain .

Optic nerve a bundle of ganglion axons that carry visual information to the brain.

Stimulation of the nerve cells in the eye triggers a neural response that is transmitted to other nerve cells in the retina called *bipolar cells* and *ganglion cells***.**

Processing the visual message

Feature detection the activation of neurons in the cortex by visual stimuli of specific shapes or patterns

Color vision and color blindness: the 7-million-color spectrum

Opponent-process theory of color vision the theory that receptor cells for color are linked in pairs, working in opposition to each other.

3.Hearing and the other senses

Sound localization , the process by which we identify the direction from which a sound is coming.

Sound the movement of air molecules brought about by a source of vibration.

Eardrum the part of the ear that vibrates when sound waves hit it.

Auditory canal , a tubelike passage that leads to the eardrum. Oval window, a thin membrane leading to the inner ear..

Cochlea (koke-lee-uh) a coiled tube in the ear fi lled with fl uid that vibrates in response to sound.

Basilar membrane a vibrating structure that runs through the center of the cochlea, dividing it into an upper chamber and a lower chamber and containing sense receptors for sound.

Hair cells tiny cells covering the basilar membrane that, when bent by vibrations entering the cochlea, transmit neural messages to the brain.

Semicircular canals three tubelike structures of the inner ear containing fluid that sloshes through them when the head moves, signaling rotational or angular movement to the brain.

The physical aspects of sound

Amplitude is a feature of wave patterns that allows us to distinguish between loud and soft sounds. When sounds get higher than 120 decibels, they become painful to the human ear.

Sorting out theories of sound

Place theory of hearing the theory that different areas of the basilar membrane respond to different frequencies.

Frequency theory of hearing suggests that the entire basilar membrane acts as a microphone, vibrating as a whole in response to a sound. According to this explanation, the nerve receptors send out signals that are tied directly to the frequency (the number of wave crests per second) of the sounds to which we are exposed, with the number of nerve impulses being a direct function of a sound's frequency

Smell and taste

Smell:the sense of smell is sparked when the molecules of a substance enter the nasal Passages and meet *olfactory cells*

Taste :the sense of taste (*gustation*) involves receptor cells that respond to four basic Stimulus qualities: sweet, sour, salty, and bitter. A fi fth category also exists, a fl avor Called *umami*

The skin senses: touch, pressure, temperature, and pain

Skin senses the senses of touch, pressure, temperature, and pain.

According to the **gate-control theory of pain ,** particular nerve receptors in the spinal cord lead to specific areas of the brain related to pain.

4. Perceptual organization:

Constructing our view of the world

Gestalt laws of organization a seriesof principles that describe how we organize bits and pieces of information into meaningful wholes.

Top-down and bottom-up processing

Top-down processing perception that is guided by higher-level knowledge, experience, expectations, and motivations.

Bottom-up processing perception that consists of the progression of recognizing and processing information from individual components of a stimuli and moving to the perception of the whole.

Depth perception: translating 2-d to 3-d

The ability to view the world in three dimensions and to perceive distance—a skill known as **depth perception**

The difference in the images seen by the left eye and the right eye is known as *binocular disparity.* In some cases, certain cues permit us to obtain a sense of depth and distance with just one eye. These cues are known as *monocular cues* . One monocular cue—*motion parallax* —is the change in position of an object on the retina caused by movement of your body relative to the object

People use *linear perspective* as a monocular cue in estimating distance, allowing the two-dimensional image on the retina to record the three-dimensional world perceptual constancy

Perceptual constancy the phenomenon in which physical objects are perceived as unvarying and consistent despite changes in their appearance or in the physical environment .

Motion perception:as the world turns

Apparent movement is the perception that a stationary object is moving

Perceptual illusions:the deceptions of perceptions

Visual illusions physical stimuli that consistently produce errors in perception.

Subliminal perception

Subliminal perception refers to the perception of messages about which we have no awareness.

Extrasensory perception (esp)

Perception that does not involve our known senses.

C h a p #5 states of consciousness

1.Sleep and dreams

The stages of sleep

Stage 1 sleep the state of transition between wakefulness and sleep, characterized by relatively rapid, low-amplitude brain waves.

Stage 2 sleep a sleep deeper than that of stage 1, characterized by a slower, more regular wave pattern, along with momentary interruptions of “sleep spindles.”

Stage 3 sleep a sleep characterized by slow brain waves, with greater peaks and valleys in the wave pattern than in stage 2 sleep.

Stage 4 sleep the deepest stage of sleep, during which we are least responsive to outside stimulation.

Rapid eye movement (rem) sleep sleep occupying 20% of an adult’s sleeping time, characterized by increased heart rate, blood pressure, and breathing rate; erections; eye movements; and the experience of dreaming.

The function and meaning of dreaming

Unconscious wish fulfillment theory sigmund freud’s theory that dreams represent unconscious wishes that dreamers desire to see fulfilled.

Latent content of dreams according to freud, the “disguised” meanings of dreams, hidden by more obvious subjects.

Manifest content of dreams according to freud, the apparent story line of dreams.

Dreams-for-survival theory the theory suggesting that dreams permit information that is critical for our daily survival to be reconsidered and reprocessed during sleep..

Activation-synthesis theory hobson's theory that the brain produces random electrical energy during rem sleep that stimulates memories stored in the brain.

Circadian rhythms: life cycles

Circadian rhythms biological processes that occur regularly on approximately a 24-hour cycle.

Daydreams: dreams without sleep

Daydreams fantasies that people construct while awake.

2. Hypnosis and meditation

Hypnosis: a trance-forming experience?

People under **hypnosis** are in a trancelike state of heightened susceptibility to the suggestions of others ,it has been applied to a number of areas, including the following:

• *controlling pain* .

• *reducing smoking* .

• *treating psychological disorders*

• *assisting in law enforcement* .

• *improving athletic performance* .

Meditation: regulating our own state of consciousness

Meditation is a learned technique for refocusing attention that brings about an altered state of consciousness. Meditation typically consists of the repetition of a *mantra* —a sound, word, or syllable—over and over.

3.Drug use: the highs and lows of consciousness

Psychoactive drugs drugs that infl uence a person's emotions, perceptions, and behavior.

Addictive drugs drugs that produce a biological or psychological dependence in the user so that withdrawal

From them leads to a craving for the drug that, in some cases, may be nearly irresistible.

Stimulants drugs that have an arousal effect on the central nervous system, causing a rise in heart rate, blood pressure, and muscular tension. *Amphetamines* such as dexedrine and benzedrine, popularly known as speed, are strong stimulants.

Depressants drugs that slow down the nervous system. The most common depressant is alcohol

Narcotics drugs that increase relaxation and relieve pain and anxiety

Hallucinogens: psychedelic drugs

Hallucinogen a drug that is capable of producing hallucinations, or changes in the perceptual process.

C h a p #6 learning

Learning is a relatively permanent change in behavior that is brought about by experience

1. Classical conditioning(pavolve)

Classical conditioning is a type of learning in which a neutral stimulus (such as the experimenter's footsteps) comes to elicit a response after being paired with a stimulus (such as food) that naturally brings about that response.

The basics of classical conditioning

Neutral stimulus a stimulus that, before conditioning, does not naturally bring about the response of interest.

Unconditioned stimulus (ucs) a stimulus that naturally brings about a particular response without having been learned.

Unconditioned response (ucr) a response that is natural and needs no training (e.g., salivation at the smell of food).

Conditioned stimulus (cs) a once neutral stimulus that has been paired with an unconditioned stimulus to bring about a response formerly caused only by the unconditioned stimulus.

Conditioned response (cr) a response that, after conditioning, follows a previously neutral stimulus (e.g., salivation at the ringing of a bell).

Extinction a basic phenomenon of learning that occurs when a previously conditioned response decreases in frequency and eventually disappears.

Spontaneous recovery the reemergence of an extinguished conditioned response after a period of rest and with no further conditioning.

Stimulus generalization

Is a process in which, after a stimulus has been conditioned to produce a particular response, stimuli that are similar to the original stimulus produce the same response

Stimulus discrimination, in contrast, occurs if two stimuli are sufficiently distinct from each other that one evokes a conditioned response but the other does not.stimulus discrimination provides the ability to differentiate between stimuli.

2.Operant conditioning.(thordike and skinner)

Operant conditioning is learning in which a voluntary response is strengthened or weakened, depending on its favorable or unfavorable consequences. When we say that a response has been strengthened or weakened, we mean that it has been made more or less likely to recur regularly.

Thorndike's law of effect

Reinforcement: the central concept of operant conditioning

Reinforcement is the process by which a stimulus increases the probability that a preceding behavior will be repeated. In other words, pressing the lever is more likely to occur again because of the stimulus of food.

A **reinforcer** is any stimulus that increases the probability that a preceding behavior will occur again.hence, food is a reinforcer,

Positive reinforcers, negative reinforcers, and punishment

A **positive reinforcer** is a stimulus *added* to the environment that brings about an increase in a preceding response.

Negative reinforcer refers to an unpleasant stimulus whose removal leads to an increase in the probability that a preceding response will be repeated in the future. If your ipod volume is so loud that it hurts your ears when you first turn it on, you are likely to reduce the volume level. Lowering the volume is negatively reinforcing

Punishment refers to a stimulus that *decreases* the probability that a prior behavior will occur again. *Positive punishment* weakens a response through the application of an unpleasant stimulus .*negative punishment* consists of the removal of something pleasant

• reinforcement *increases* the frequency of the behavior preceding it; punishment *decreases* the frequency of the behavior preceding it.

• the *application* of a *positive* stimulus brings about an increase in the frequency of behavior and is referred to as positive reinforcement; the *application* of a *negative* stimulus decreases or reduces the frequency of behavior and is called punishment.

• the *removal* of a *negative* stimulus that results in an increase in the frequency of behavior is negative reinforcement; the *removal* of a *positive* stimulus that decreases the frequency of behavior is negative punishment.

The pros and cons of punishment:why reinforcement beats punishment

Schedules of reinforcement: timing life's rewards

Schedules of reinforcement different patterns of frequency and timing of reinforcement following desired behavior.

Continuous reinforcement schedule reinforcing of a behavior every time it occurs.

Partial (or intermittent) reinforcement schedule reinforcing of a behavior some but not all of the time.

Fixed-ratio schedule a schedule by which reinforcement is given only after a specific number of responses are made.

Variable-ratio schedule a schedule by which reinforcement occurs after a varying number of responses rather than after a fixed number.

Fixed-interval schedule a schedule that provides reinforcement for a response only if a fi xed time period has elapsed, making overall rates of response relatively low.

Variable-interval schedule a schedule by which the time between reinforcements varies around some average rather than being fixed.

Discrimination and generalization in operant conditioning

In *stimulus control training ,* a behavior is reinforced in the presence of a specific stimulus, but not in its absence **.**a *discriminative stimulus* signals the likelihood that reinforcement will follow a response. Generalization, in which an organism learns a response to one stimulus and then exhibits the same response to slightly different stimuli, occurs in operant conditioning.

Shaping: reinforcing what doesn't come naturally.

Shaping is the process of teaching a complex behavior by rewarding closer and closer approximations of the desired behavior..

Biological constraints on learning: you can't teach an old dog just any trick

Comparing classical and operant conditioning

Behavior modification

A formalized technique for promoting the frequency of desirable behaviors and decreasing the incidence of unwanted ones .

Steps:

•*identifying goals and target behaviors* .

• *designing a data-recording system and recording preliminary data* .

• *selecting a behavior-change strategy* .

• *implementing the program*

• *keeping careful records after the program is implemented* .

• *evaluating and altering the ongoing program*

3. Cognitive approaches to learning

Cognitive learning theory an approach to the study of learning that focuses on the thought processes that underlie learning.

Latent learning learning in which a new behavior is acquired but is not demonstrated until some incentive is provided for displaying it..

Observational learning (bandura)learning by observing the behavior of another person, or model.

Violence in television and video games:does the media's message matter?

Chap#7 Memory

1-Foundations of memory

Memory the process by which we encode, store, and retrieve information.

Sensory memory the initial, momentary storage of information, lasting only an instant.

Short-term memory memory that holds information for 15 to 25 seconds.

Long-term memory memory that stores information on a relatively

Permanent basis, although it may be diffi cult to retrieve.e

Rehearsal the repetition of information that has entered short-term memory.

Working memory a set of active, temporary memory stores that actively manipulate and rehearse information.

Long-term memory modules

Declarative memory memory for factual information: names, faces, dates, and the like.

Procedural memory memory for skills and habits, such as riding a bike or hitting a baseball; sometimes referred to as *nondeclarative memory*.

Episodic memory memory for events that occur in a particular time, place, or context.

Semantic memory memory for general knowledge and facts about the world, as well as memory for the rules of logic that are used to deduce other facts.

Semantic networks mental representations of clusters of interconnected information.

Memory at the level of neurons

The neuroscience of memory the *hippocampus,* a part of the brain's limbic system

Plays a central role in the consolidation of memories.the *amygdala* , another part of the limbic system, also plays an important role.in memory. The amygdala is especially involved with memories involving emotion

2. Recalling long-term memories

Tip-of-the-tongue phenomenon the inability to recall information that one realizes one knows—a result of the difficulty of retrieving information from long-term memory.

Retrieval clues

Recall memory task in which specific information must be retrieved.

Recognition memory task in which individuals are presented with a stimulus and asked whether they have been exposed to it in the past or to identify it from a list of alternatives

Levels of processing explicit and implicit memory

Explicit memory intentional or conscious recollection of information.

Implicit memory memories of which people are not consciously aware but that can affect subsequent performance and behavior.

Priming a phenomenon in which exposure to a word or concept (called a prime) later makes it easier to recall related information, even when there is no conscious memory of the word or Concept.

Flashbulb memories

Flashbulb memories memories centered on a specifi c, important, or surprising event that are so vivid it is as if they represented a snapshot of the event.

Constructive processes in memory: rebuilding the past

Constructive processes processes in which memories are infl uenced by the meaning we give to events.

Schemas organized bodies of information stored in memory that bias the way new information is Interpreted, stored, and recalled.

Memory in the courtroom: the eyewitness of trial

Autobiographical memories our recollections of circumstances and episodes from our own lives.

3. Forgetting: when memory fails

Why we forget

Decay the loss of information in memory through its nonuse.

Interference the phenomenon by which information in memory disrupts the recall of other information.

Cue-dependent forgetting forgetting that occurs when there are insufficient retrieval cues to rekindle information that is in memory.

Proactive and retroactive interference: the before and after of forgetting

Proactive interference interference in which information learned earlier disrupts the recall of newer material.

Retroactive interference interference in which there is diffi culty in the recall of information learned earlier because of later exposure to different material. Memory dysfunctions:

Afflictions of forgetting

Alzheimer's disease an illness characterized in part by severe memory problems.

Amnesia memory loss that occurs without other mental diffi culties.

Retrograde amnesia amnesia in which memory is lost for occurrences prior to a certain event.

Anterograde amnesia amnesia in which memory is lost for events that follow an injury.

Korsakoff's syndrome a disease that afflicts long-term alcoholics, leaving some abilities intact but including hallucinations and a tendency to repeat the same story. The effective strategies for studying and remembering course material:

• *use the keyword technique*

• *rely on organization cues* .

• *take effective notes* .

• *practice and rehearse* .

• *don't believe claims about drugs that improve memory* .

C h a p #8 Cognition and language

1. Thinking and reasoning

Thinking the manipulation of mental representations of information.

Mental images:examining the mind's eye

Mental images representations in the mind of an object or event..

Concepts: categorizing the world

Concepts a mental grouping of similar objects, events, or people.

Prototypes typical, highly representative examples of a concept.

Syllogistic reasoning formal reasoning in which people draw a conclusion from a set of assumptions.

Algorithms and heuristics

Algorithm a rule that, if applied appropriately, guarantees a solution to a problem.

Heuristic a thinking strategy that may lead us to a solution to a problem or
Decision, but—unlike algorithms—
May sometimes lead to errors.

2. Problem solving

Means-ends analysis involves repeated tests for differences between the desired outcome and what currently exists.

Insight a sudden awareness of the relationships among various elements that had previously appeared to be independent of one another.

Functional fi xedness the tendency to think of an object only in terms of its typical use.

Mental set the tendency for old patterns of problem solving to persist.

Confi rmation bias the tendency to seek out and weight more heavily information that supports one's initial hypotheses and to ignore contradictory information that supports alternative hypotheses or solutions..

Creativity the ability to generate original ideas or solve problems in novel ways.

Divergent thinking the ability to generate unusual, yet nonetheless appropriate, responses to problems or questions.

Convergent thinking the ability to produce responses that are based primarily on knowledge and logic.

3. Language

Language the communication of information through symbols arranged according to systematic rules.

Grammar the system of rules that determine how our thoughts can be expressed.

Phonology the study of the smallest units of speech, called phonemes.

Phonemes the smallest units of speech.

Syntax ways in which words and phrases can be combined to form sentences.

Semantics the rules governing the meaning of words and sentences.

Babble meaningless speech like sounds made by children from around the age of 3 months through 1 year.

Telegraphic speech sentences in which words not critical to the message are left out.

Overgeneralization the phenomenon by which children apply language rules even when the application results in an error.

Learning-theory approach (to language development) the theory that language acquisition follows the principles of reinforcement and conditioning.

Nativist approach (to language development) the theory that a genetically determined, innate mechanism directs language development.

Universal grammar noam chomsky's theory that all the world's languages share a common underlying structure.

Language-acquisition device a neural system of the brain hypothesized by noam chomsky to permit understanding of language.

Interactionist approach (to language development) the view that language development is produced through a combination of genetically determined predispositions and environmental Circumstances that help teach language.

Linguistic-relativity hypothesis

The notion that language shapes and may determine the way people in a particular culture perceive and understand the world.

C h a p #9 Intelligence

1. What is intelligence?

What does the trukese people's method of navigation—which is done without maps or instruments—tell us about the nature of intelligence?

Intelligence the capacity to understand the world, think rationally, and use resources effectively when faced with challenges.

Theories of intelligence: are there diff erent kinds of intelligence?

***Gorg* -factor** the single, general factor for mental ability assumed to underlie intelligence in some early theories of intelligence.

Fl uid intelligence intelligence that reflects information-processing capabilities, reasoning, and memory.

Gardner's multiple intelligences:

The many ways of showing intelligence

Crystallized intelligence the accumulation of information, skills, and strategies that are learned through experience and can be applied in problem-solving situations.

Theory of multiple intelligences gardner's intelligence theory that proposes that there are eight distinct spheres of intelligence.

Is information processing intelligence?

1. Musical intelligence (skills in tasks involving music).

2. Bodily kinesthetic intelligence (skills in using the whole body or various portions of it in the solution of problems or in the construction of products or displays, exemplified by dancers, athletes,actors, and surgeons).

3.logical-mathematical intelligence (skills in problem solving and scientific thinking)

4. Linguistic intelligence (skills involved in the production and use of language)

5.spatial intelligence (skills involving spatial configurations, such as those used by artists and architects).

6.interpersonal intelligence (skills in interacting with others,such as sensitivity to the moods, Temperaments, motivations, and intentions of others).

7.intrapersonal intelligence (knowledge of the internal aspects of oneself; access to one's own feelings and emotions)

8. Naturalist intelligence (ability to identify and classify patterns in nature)

The biological basis of intelligence

Practical and emotional intelligence: toward a more intelligent view

Practical intelligence according to sternberg, intelligence related to overall success in living.

Emotional intelligence the set of skills that underlie the accurate assessment, evaluation, expression, and regulation of emotions.

Assessing intelligence

Intelligence tests tests devised to quantify a person's level of intelligence.

Binet and the development of iq tests

Mental age the age for which a given level of performance is average or typical.

Intelligence quotient (iq) a score that takes into account an individual's mental and chronological ages.

Contemporary iq tests: gauging intelligence

Stanford-binet intelligence scale

Reliability and validity: taking the measure of tests

Reliability the property by which tests measure consistently what they are trying to measure.

Validity the property by which tests actually measure what they are supposed to measure.

Norms standards of test performance that permit the comparison of one person's score on a test with the scores of other individuals who have taken the same test.

1. Mental retardation (intellectual disabilities)

Mental retardation (or intellectual disability) a condition characterized by significant limitations both in intellectual functioning and in conceptual, social, and practical adaptive skills. With greater degrees of intellectual deficit— *moderate retardation*,

Severe retardation and *profound retardation.*

Identifying the roots of mental retardation

Fetal alcohol syndrome the most common cause of mental retardation in newborns, occurring when the mother uses alcohol during pregnancy.

Familial retardation mental retardation in which no apparent biological defect exists but there is a history of retardation in the family.

The intellectually gifted

Intellectually gifted the 2%-4% segment of the population who have iq scores greater than 130.

3. Group differences in intelligence: genetic and environmental determinant

Culture-fair iq test a test that does not discriminate against the members of any minority group. **Iq and heritability**

Heritability a measure of the degree to which a characteristic is related to genetic, inherited factors.

C h a p #1 0 motivation and emotion

1. Explaining motivation

Instinct approaches:born to be motivated

Motivation the factors that direct and energize the behavior of humans and other organisms.

Instincts inborn patterns of behavior that are biologically determined rather than learned.

Drive-reduction approaches: Satisfying our needs

Drive-reduction approaches to motivation theories suggesting that a lack of a basic biological requirement such as water produces a drive to obtain that requirement (in this case, the thirst drive).

Drive motivational tension, or arousal, that energizes behavior to fulfill a need.

Homeostasis

Homeostasis the body's tendency to maintain a steady internal state.

Arousal approaches: beyond drive reduction

Arousal approaches to motivation

The belief that we try to maintain Certain levels of stimulation and Activity increasing or reducing them As necessary.

Incentive approaches: Motivation's pull

Cognitive approaches: the thoughts behind motivation

Cognitive approaches to motivation Theories suggesting that motivation Is a product of people's thoughts, expectations, And goals—their cognitions.

Maslow's hierarchy: ordering Motivational needs

Self-actualization a state of self-fulfillment in which people realize Their highest potential in their own Unique way.

Physiological needs The primary drives: needs for water, food, sleep, and sex

Safety needs The need for a safe and secure environment

Love and belongingness The need to obtain and give affection

Esteem The need to develop a sense Of self-worth

Selfactualization A state of Self-fulfillment

Applying the different Approaches to motivation

Instinct People and animals Are born with Preprogrammed Sets of behaviors Essential to their Survival.

Drive reduction When some basic Biological Requirement is Lacking, a drive is Produced.

Arousal People seek an optimal Level of stimulation. If the Level of stimulation is too High, they act to reduce It; if it is too low, they act To increase it.

Incentive External stimuli Direct and energize Behavior.

Cognitive Thoughts, Expectations, and Understanding of The world direct Motivation.

Hierarchy of needs Needs form a Hierarchy; before Higher-order needs Are met, lowerorder Needs must Be fulfilled.

2. Human needs and motivation:

The motivation behind Hunger and eating

Obesity body weight that is more than 20% above the average weight for a Person of a particular height. The most widely used measure of obesity is *body mass index (bmi),* which is based On a ratio of weight to height.

Biological factors in The regulation of hunger

Finally, the hormone *ghrelin* communicates to the brain feelings of hunger. The The brain's *hypothalamus* monitors glucose levels.

Weight set point the particular level Of weight that the body strives to Maintain.

Metabolism the rate at which food is Converted to energy and expended by The body.

Eating disorders

Anorexia nervosa a severe eating Disorder in which people may refuse to Eat while denying that their behavior And appearance—which can become Skeleton-like—are unusual.

Bulimia a disorder in which a person Binges on large quantities of food, Followed by efforts to purge the food Through vomiting or other means.

You should keep several things in mind when trying to lose Weight .

• *there is no easy route to weight control* . The most obvious strategy— Cutting down on the amount of food you eat

• *keep track of what you eat and what you weigh* .

• *cut out television* .

• *exercise* .

• *decrease the influence of external social stimuli on your eating behavior* .

• *avoid fad diets* .

• *avoid taking any of the numerous diet pills advertised on television that promise quick And easy results.*

• *maintain good eating habits* .

• *set reasonable goals* .

The need for achievement:Striving for success

Need for achievement a stable, Learned characteristic in which a Person obtains satisfaction by striving For and attaining a level of excellence.

The need for affiliation: Striving for friendship

Need for affiliation an interest in Establishing and maintaining relationships With other people.

The need for power: striving For impact on others

Need for power a tendency to seek Impact, control, or influence over Others and to be seen as a powerful Individual.

3. Understanding emotional Experiences

Emotions feelings that generally have Both physiological and cognitive Elements and that influence behavior.

The functions of emotions

Preparing us for action .

• *shaping our future behavior* .

• *helping us interact more effectively with others* .

Determining the range of Emotions: labeling our feelings

The james-lange theory: do gut Reactions equal emotions?

James-lange theory of emotion The belief that emotional experience is A reaction to bodily events occurring As a result of an external situation (“I Feel sad because i am crying”).

The cannon-bard theory: physiological Reactions as the result of emotions

Cannon-bard theory of emotion The belief that both physiological Arousal and emotional experience are Produced simultaneously by the same Nerve stimulus.

Schachter-singer theory of emotion The belief that emotions are determined Jointly by a nonspecific kind of Physiological arousal and its interpretation, Based on environmental cues

Contemporary perspectives on The neuroscience of emotions

Making sense of the multiple perspectives on emotion

Facial-affect program activation of a Set of nerve impulses that make the Face display the appropriate Expression.

Facial-feedback hypothesis

The hypothesis that facial expressions Not only refl ect emotional experience But also help determine how people Experience and label emotions.

C h a p #11 Sexuality and gender

1.gender and sex

Gender the perception of being male Or female.

Gender roles the set of expectations,Defined by a particular society, that Indicate what is appropriate behavior For men and women.

Sexism negative attitudes and Behavior toward a person based on That person’s gende

Sources of gender differences: Where biology and society meet

The social environment

Gender schema a mental framework That organizes and guides a child's Understanding of information relevant To gender.

2. Understanding human sexual Response: the facts of life

The basic biology Of sexual behavior

Androgens male sex hormones Secreted by the testes.

Genitals the male and female sex Organs.

Estrogens class of female sex Hormones.

Progesterone a female sex hormone Secreted by the ovaries.

Ovulation the point at which an egg Is released from the ovaries.

Erogenous zones areas of the body That are particularly sensitive because Of the presence of an unusually rich Array of nerve receptors.

The phases of sexual Response: the ups And downs of sex

Excitement phase the period in Which an arousing stimulus begins a Sequence that prepares the genitals for Sexual intercourse.

Plateau phase the period in which the Maximum level of arousal is attained, The penis and clitoris swell with blood, And the body prepares for orgasm.

Orgasm the peak of sexual excitement, During which rhythmic muscular Contractions occur in the genitals.

Resolution stage the interval after Orgasm in which the body returns to Its unaroused state, reversing the Changes brought about by arousal.

Refractory period a temporary period That follows the resolution stage and During which the male cannot develop An erection again.

3. The diversity of sexual behavior

Masturbation sexual self-stimulation

Heterosexuality sexual attraction and Behavior directed to the other sex.

Double standard the view that premarital Sex is permissible for males but Not for females.

Extramarital sex sexual activity Between a married person and Someone who is not his or her spouse.

Homosexuals persons who are Sexually attracted to members of Their own sex.

Bisexuals persons who are sexually Attracted to people of the same sex And the other sex.

Transsexuals people who believe they Were born with the body of the other Gender.

Rape the act by which one person Forces another person to submit to Sexual activity.

Sexually transmitted infection (sti) a disease acquired through Sexual contact.

Acquired immune deficiency

Syndrome (aids) a sexuallytransmitted infection caused by A virus that destroys the body's Immune system. These are the major stis:

• *chlamydia.* The most widespread sti is *chlamydia,* a disease that in women Initially produces no symptoms and in men causes a burning sensation During urination and a discharge from the penis. If it is left untreated, Chlamydia can lead to pelvic infl ammation, urethral damage, arthritis, and Even sterility. There are almost 3 million new cases each year in the united States.

• *genital herpes* . *Genital herpes* is a virus related to the cold sores that sometimes Appear around the mouth.

• *trichomoniasis. Trichomoniasis* is an infection in the vagina or penis. Treated with antibiotics.

• *gonorrhea. Gonorrhea* is one of the stis that has been recognized the longest By scientists. It often has no symptoms but can produce a burning sensation

• *syphilis.* If untreated, *syphilis* may affect the brain, the heart, and a developing Fetus.

• *genital warts.* Another common sti is *genital warts* (caused by the *human Papilloma virus*).

• *aids* **acquired Immune defi ciency syndrome (aids).**

Sexual problems

Erectile dysfunction a male's inability To achieve or maintain an erection.

Premature ejaculation a male's Inability to delay orgasm as long as He wishes.

Inhibited ejaculation a male's Inability to ejaculate when he wants To, if at all.

Anorgasmia (an-or-gaz-mee-uh) A female's lack of orgasm.

Inhibited sexual desire a sexual Dysfunction in which the motivation For sexual activity is restrained or Lacking entirely.

C H A P # 1 2 DEVELOPMENT

1. Nature and Nurture: The Enduring Developmental Issue

Developmental psychology The branch of psychology that studies the patterns of growth and change that occur throughout life.

Nature-nurture issue The issue of the degree to which environment and heredity infl uence behavior.

Determining the Relative Influence of Nature and Nurture

Identical twins Twins who are genetically identical.

Developmental Research Techniques

Cross-sectional research A research method that compares people of different ages at the same point in time.

Longitudinal research A research method that investigates behavior as participants age.

Sequential research A research method that combines cross-sectional and longitudinal research by considering a number of different age groups and examining them at several points in time.

2. Prenatal Development: Conception to Birth

The Basics of Genetics

Chromosomes Rod-shaped structures that contain all basic hereditary information.

Genes The parts of the chromosomes through which genetic information is transmitted.

The human genome project

The earliest development

Zygote The new cell formed by the union of an egg and sperm.

Embryo A developed zygote that has a heart, a brain, and other organs.

Fetus A developing individual from eight weeks after conception until birth.

Age of viability The point at which a fetus can survive if born prematurely.

Genetic influences on the fetus

- *Phenylketonuria (PKU)* .
- *Sickle-cell anemia* .
- *Tay-Sachs disease* .
- *Down syndrome* .

Prenatal environmental influences

Teratogens Environmental agents such as a drug, chemical, virus, or other factor that produce a birth defect.

Factor that produce a birth defect.

- *Mother's nutrition* .
- *Mother's illness* .
- *Mother's emotional state* .
- *Mother's use of drugs*.
- *Alcohol* .
- *Nicotine use* .

Alternative paths to conception

3. Infancy and Childhood

The Extraordinary Newborn

Reflexes Unlearned, involuntary responses that occur automatically in the presence of certain stimuli.

Reflexes development of the senses: taking in the world

Habituation The decrease in the response to a stimulus that occurs after repeated presentations of the same stimulus.

Development of social behavior: Taking on the world

Attachment The positive emotional bond that develops between a child & a particular individual.

Assessing Attachment

The Father's Role.

Social Relationships with Peers.

The Consequences of Child Care Outside the Home.

Parenting Styles and Social Development.

Authoritarian parents Parents who are rigid and punitive and value unquestioning obedience from their children.

Permissive parents Parents who give their children relaxed or inconsistent direction and, although they are warm, require little of them.

Authoritative parents Parents who are fi rm, set clear limits, reason with their children, and explain things to them.

Uninvolved parents Parents who show little interest in their children and are emotionally detached.

Temperament Basic, innate disposition.

Erikson's Theory of Psychosocial Development.

Psychosocial development Development of individuals' interactions and understanding of each other and of their knowledge and understanding of themselves as members of society.

Trust-versus-mistrust stage According to Erikson, the fi rst stage of psychosocial Development, occurring from birth to age 1½ years, during which time infants develop feelings of trust or lack of trust.

Autonomy-versus-shame-and-doubt stage The period during which, according to Erikson, toddlers (ages 1½ to 3 years) develop independence and autonomy if exploration and freedom are encouraged or shame and self-doubt if they are restricted and overprotected.

Initiative-versus-guilt stage According to Erikson, the period during which children ages 3 to 6 years experience conflict between independence of action and the sometimes negative results of that action.

Industry-versus-inferiority stage According to Erikson, the last stage of childhood, during which children age 6 to 12 years may develop positive social interactions with others or may feel inadequate and become less sociable.

Cognitive development: children's

Thinking about the world

Cognitive development The process by which a child's understanding of the world changes as a function of age and experience.

Sensorimotor stage According to Piaget, the stage from birth to 2 years, during which a child has little competence in representing the environment by using images, language, or other symbols.

Object permanence The awareness that objects—and people—continue to exist even if they are out of sight.

Preoperational stage According to Piaget, the period from 2 to 7 years of age that is characterized by language development.

Egocentric thought A way of thinking in which a child views the world entirely from his or her own perspective.

Principle of conservation The knowledge that quantity is unrelated to the arrangement and physical appearance of objects.

Concrete operational stage According to Piaget, the period from 7 to 12 years of age that is characterized by logical thought and a loss of egocentrism.

Formal operational stage According to Piaget, the period from age 12 to adulthood that is characterized by abstract thought.

Information-processing approaches:

Charting children's mental programs

Information processing The way in which people take in, use, and store information.

Zone of proximal development (ZPD) According to Vygotsky, the level at which a child can almost, but not fully, comprehend or perform a task on his or her own.

4. Adolescence: Becoming an Adult

Adolescence The developmental stage between childhood and adulthood.

Puberty The period at which maturation of the sexual organs occurs, beginning at about age 11 or 12 for girls and 13 or 14 for boys. For boys, the onset of puberty is marked by their first ejaculation, known as *spermarche*.

Erikson's theory of psychosocial development: the search for identity

Identity-versus-role-confusion stage According to Erikson, a time in adolescence of major testing to determine one's unique qualities.

Identity The distinguishing character of the individual: who each of us is, what our roles are, and what we are capable of.

Intimacy-versus-isolation stage According to Erikson, a period during early adulthood that focuses on developing close relationships.

Generativity-versus-stagnation stage According to Erikson, a period in middle adulthood during which we take stock of our contributions to family and society.

Ego-integrity-versus-despair stage According to Erikson, a period from late adulthood until death during which we review life's accomplishments and failures.

5. Adulthood

Emerging adulthood The period beginning in the late teenage years and extending into the mid-20s.

Physical Development: The Peak of Health

Menopause The period during which women stop menstruating and are no longer fertile.

Physical Changes in Late Adulthood: The Aging Body

Genetic preprogramming theories of aging Theories that suggest that human cells have a builtin time limit to their reproduction and that they are no longer able to divide after a certain time.

Wear-and-tear theories of aging Theories that suggest that the mechanical functions of the body simply stop working effi ciently.

Cognitive Changes: Thinking About—and During— Late Adulthood

In general, skills relating to *fluid intelligence* (which involves information-processing skills such as memory, calculations, and analogy solving) show declines in late adulthood

Memory changes in late adulthood:Are older adults forgetful?

Alzheimer's disease A progressive brain disorder that leads to a gradual
And irreversible decline in cognitive abilities.

The social world of late adulthood: Old but not alone

Disengagement theory of aginga theory that suggests that aging produces a gradual withdrawal from the world on physical, psychological,and social levels.

Activity theory of aging A theory that suggests that the elderly who are most successful while aging are those who maintain the interests and activities they had during middle age.

Life review The process by which people examine and evaluate their lives.

C H A P #13 Personality

1. Psychodynamic Approaches to Personality

Psychodynamic approaches to personality Approaches that assume that personality is motivated by inner forces and conflicts about which people have little awareness and over Which they have no control.

Freud's Psychoanalytic Theory:Mapping the Unconscious Mind

Psychoanalytic theory Freud's theory that unconscious forces act as determinants Of personality.

Unconscious A part of the personality that contains the memories, knowledge, beliefs, feelings, urges, drives,and instincts of which the individual is not aware

Structuring personality: id, ego, and superego

Id The raw, unorganized, inborn part of personality whose sole purpose is to reduce tension created by primitive drives related to hunger, sex, aggression, and irrational impulses.

Ego The part of the personality that provides a buffer between the id and the outside world.

Superego According to Freud, the final personality structure to develop; it represents the rights and wrongs of society as handed down by a person's parents, teachers, and other important Figures.

Psychosexual stages Developmental periods that children pass through during which they encounter conflicts between the demands of society and their own sexual urges.

Fixations Confl icts or concerns that persist beyond the developmental period in which they first occur.

Developing personality: psychosexual stages

Oral stage according to freud, a stage from birth to age 12 to 18 months, in which an infant's center of pleasure is the mouth.

Anal stage According to Freud, a stage from age 12 to 18 months to 3 years of age, in which a child's pleasure is centered on the anus.

Phallic stage According to Freud, a period beginning around age 3 during which a child's pleasure focuses on the genitals.

Oedipal conflict A child's sexual interest in his or her opposite-sex parent, typically resolved through identification with the same-sex parent.

Identifi cation The process of wanting to be like another person as much as possible, imitating that person's behavior and adopting similar beliefs and values.

Latency period According to Freud, the period between the phallic stage and puberty during which children's sexual concerns are temporarily put aside.

Genital stage According to Freud, the period from puberty until death, marked by mature sexual behavior (that is, sexual intercourse).

Defense mechanisms

Defense mechanisms In Freudian theory, unconscious strategies that people use to reduce anxiety by concealing the source of it from themselves and others.

Repression The primary defense mechanism in which unacceptable or unpleasant id impulses are pushed back into the unconscious.

The Neo-Freudian Psychoanalysts: Building on Freud

Neo-Freudian psychoanalysts Psychoanalysts who were trained in traditional Freudian theory but who later rejected some of its major points.

Jung's collective unconscious

Collective unconscious According to Jung, a common set of ideas, feelings, images, and symbols that we inherit from our ancestors, the whole human race, and even animal ancestors from the distant past.

Archetypes According to Jung, universal symbolic representations of a particular person, object, or experience(such as good and evil).

Horney's neo-freudian perspective Adler and the other neo-freudians

Inferiority complex According to Adler, a problem affecting adults who have not been able to overcome the feelings of inferiority that they developed as children, when they were small and limited in their knowledge about the world.

2. Trait, Learning, Biological and Evolutionary, and Humanistic Approaches

Trait Approaches: Placing Labels on Personality

Trait theory A model of personality that seeks to identify the basic traits necessary to describe personality.

Traits Consistent personality characteristics and behaviors displayed in different situations.

Allport's trait theory: identifying basic characteristics

Learning approaches:

Social cognitive approaches to personality

Social cognitive approaches to personality Theories that emphasize the influence of a person's cognitions—thoughts, feelings, expectations, and values—as well as observation of others' behavior, in determining personality.

Self-efficacy Belief in one's personal capabilities. Self-efficacy underlies people's faith in their ability to carry out a particular behavior or produce a desired outcome.

Self-esteem The component of personality that encompasses our positive and negative selfevaluations.

Biological and Evolutionary Approaches:

Are We with Personality?

Biological and evolutionary approaches to personality Theories that suggest that important components of personality are inherited.

Temperament The innate disposition that emerges early in life.

Humanistic Approaches: The Uniqueness of You

Humanistic approaches to personality Theories that emphasize people's innate goodness and desire to achieve higher levels of functioning.

Rogers and the need for self-actualization

Self-actualization A state of self fulfillment in which people realize their highest potential, each in a unique way.

Unconditional positive regard An attitude of acceptance and respect on the part of an observer, no matter what a person says or does.

Comparing Approaches to Personality

3. Assessing Personality: Determining What Makes Us Distinctive

Psychological tests Standard measures devised to assess behavior objectively; used by psychologists to help people make decisions about their lives and understand more about themselves.

Self-Report Measures of Personality

Self-report measures A method of gathering data about people by asking them questions about a sample of their behavior.

Minnesota Multiphasic Personality Inventory-2 (MMPI-2) A widely used self-report test that identifies people with psychological difficulties and is employed to predict some everyday Behaviors.

Teststandardization A technique used to validate questions in personality tests by studying the responses of people with known diagnoses.

Projective Methods

Projective personality test A test in which a person is shown an ambiguous stimulus and asked to describe it or tell a story about it.

Rorschach test A test that involves showing a series of symmetrical visual stimuli to people who then are asked what the figures represent to them.

Thematic Apperception Test (TAT) A test consisting of a series of pictures about which a person is asked to write a story.

Behavioral Assessment

Behavioral assessment Direct measures of an individual's behavior used to describe personality characteristics.

C H A P #1 4 Health Psychology: Stress,Coping, and Well-Being

1. Stress and Coping

Stress: Reacting to Threat and Challenge

Stress A person's response to events that are threatening or challenging.

The nature of stressors: my stress is your pleasure Categorizing stressors

Cataclysmic events Strong stressors that occur suddenly and typically affect many people at once (e.g., natural disasters).

Personal stressors Major life events, such as the death of a family member, that have immediate negative consequences that generally fade with time.

Posttraumatic stress disorder (PTSD) A phenomenon in which victims of major catastrophes or strong personal stressors feel long-lasting effects that may include re-experiencing the event in vivid flashbacks or dreams.

Background stressors ("daily hassles") Everyday annoyances, such as being stuck in traffic, that cause minor irritations and may have long-term ill effects if they continue or are compounded by other stressful events.

The High Cost of Stress

Psychophysiological disorders Medical problems influenced by an interaction of psychological, emotional, and physical difficulties.

The general adaptation syndrome model: the course of stress

General adaptation syndrome (GAS) A theory developed by Selye that suggests that a person's response to a stressor consists of three stages: alarm and mobilization, resistance, and exhaustion.

Psychoneuroimmunology and stress

Coping with stress

Coping The efforts to control, reduce, or learn to tolerate the threats that lead to stress.

Learned helplessness

Learned helplessness A state in which people conclude that unpleasant or aversive stimuli cannot be controlled—a view of the world that becomes so ingrained that they cease trying to remedy the aversive circumstances even if they actually can exert some influence on the situation

COPING STYLES: THE HARDY PERSONALITY

Hardiness A personality characteristic that is associated with a lower rate of stress-related illness and consists of three components: commitment, challenge, and control.

Commitment .

• *Challenge* .

• *Control* .

SOCIAL SUPPORT: TURNING TO OTHERS

Social support A mutual network of caring, interested others.

2.psychological Aspects of Illness and Well-Being

Type A behavior pattern A cluster of behaviors involving hostility, competitiveness, time urgency, and feeling driven.

Type B behavior pattern A cluster of behaviors characterized by a patient, cooperative, noncompetitive, and nonaggressive manner.

Psychological Aspects of Cancer Smoking

3. Promoting Health and Wellness

Reactance A negative emotional and
Cognitive reaction that results from the
Restriction of one's freedom.

Well-Being and Happiness

Subjective well-being People's own evaluation of their lives in terms of both their thoughts and their emotions.

What are the characteristics of happy people? Does money buy happiness?

C H A P #1 5 Psychological Disorders

1. Normal Versus Abnormal:

Defining Abnormality

Abnormality as deviation from the average .

• *Abnormality as deviation from the ideal* .

• *Abnormality as a sense of personal discomfort* .

• *Abnormality as the inability to function effectively* .

• *Abnormality as a legal concept* .

Abnormal behavior Behavior that causes people to experience distress and prevents them from functioning in their daily lives.

Perspectives on Abnormality:From Superstition to Science

Medical perspective The perspective that suggests that when an individual displays symptoms of abnormal behavior, the root cause will be found in a physical examination of the individual, which may reveal a hormonal imbalance, a chemical deficiency, or a brain injury.

Psychoanalytic perspective The perspective that suggests that abnormal behavior stems from childhood conflicts over opposing wishes regarding sex and aggression.

Behavioral perspective The perspective that looks at the behavior itself as the problem.

Cognitive perspective The perspective that suggests that people's thoughts and beliefs are a central component of abnormal behavior.

Humanistic perspective The perspective that emphasizes the responsibility people have for their own behavior, even when such behavior is abnormal.

Sociocultural perspective The perspective that assumes that people's behavior—both normal and abnormal— is shaped by the kind of family group, society, and culture in which they live.

DSM-IV-TR: determining diagnostic distinctions

***Diagnostic and Statistical Manual of Mental Disorders,* Fourth Edition, Text Revision (*DSM-IV-TR*)** A system, devised by the American Psychiatric Association, used by most professionals To diagnose and classify abnormal behavior. *DSM-IV-TR* presents comprehensive and relatively precise definitions for more than 200 disorders divided into 17 major categories. It also includes five types of information, known as axes, which have to be considered in assessing a patient:

• **Axis I: Clinical Disorders.** Disorders that produce distress and impair functioning.

• **Axis II: Personality Disorders and Mental Retardation.** Enduring, rigid behavior patterns.

• **Axis III: General Medical Conditions.** Physical disorders that may be related to psychological disorders.

• **Axis IV: Psychosocial and Environmental Problems.** Problems in a person's life such as stressors or life events that may affect the diagnosis, treatment, and outcome of psychological disorders.

• **Axis V: Global Assessment of Functioning.** Overall level of mental, social, occupational, and leisure functioning.

2. The Major Psychological Disorders

Anxiety Disorders

Anxiety disorder The occurrence of anxiety without an obvious external cause that affects daily functioning.

Phobic disorder

Phobias Intense, irrational fears of specific objects or situations.

Panic disorder

Panic disorder Anxiety disorder that takes the form of panic attacks lasting from a few seconds to several hours.

Generalized anxiety disorder

Generalized anxiety disorder The experience of long-term, persistent anxiety and worry.

Obsessive-compulsive disorder (OCD) A disorder characterized by obsessions or compulsions.

Obsession A persistent, unwanted thought or idea that keeps recurring.

Compulsion An irresistible urge to repeatedly carry out some act that seems strange and unreasonable.

Somatoform Disorders

Somatoform disorders Psychological difficulties that take on a physical(somatic) form, but for which there is no medical cause.

Conversion disorder A major somatoform disorder that involves an actual physical disturbance, such as the inability to use a sensory organ or the complete or partial inability to move an arm or leg.

Hypochondriasis A disorder in which people have a constant fear of illness and a preoccupation with their health.

Dissociative Disorders

Dissociative disorders Psychological dysfunctions characterized by the separation of different facets of a person's personality that are normally integrated.

Dissociative identity disorder (DID) A disorder in which a person displays characteristics of two or more distinct personalities.

Dissociative fugue A form of amnesia in which the individual leaves home and sometimes assumes a new identity.

Mood Disorders

Mood disorder A disturbance in emotional experience that is strong enough to intrude on everyday living.

Major depression

Major depression A severe form of depression that interferes with concentration, decision making, and sociability.

Mania and bipolar disorder

Mania An extended state of intense, wild elation.

Bipolar disorder A disorder in which a person alternates between periods of euphoric feelings of mania and periods of depression.

Schizophrenia

Schizophrenia A class of disorders in which severe distortion of reality occurs.

Decline from a previous level of functioning .

Disturbances of thought and speech .

Delusions .

Hallucinations and perceptual disorders. Emotional disturbances .

Types

Disorganized (hebephrenic) schizophrenia

Paranoid schizophrenia

Catatonic schizophrenia

Undifferentiated schizophrenia

Personality Disorders

Personality disorder A disorder characterized by a set of inflexible, maladaptive behavior patterns that keep a person from functioning appropriately in society.

Antisocial personality disorder A disorder in which individuals show no regard for the moral and ethical rules of society or the rights of others.

Borderline personality disorder A disorder in which individuals have difficulty developing a secure sense of who they are.

Narcissistic personality disorder A personality disturbance characterized by an exaggerated sense of self- importance.

Childhood Disorders

Attention-deficit hyperactivity disorder (ADHD) A disorder marked by inattention, impulsiveness, a low tolerance for frustration, and a great deal of inappropriate activity.

Autism , a severe developmental disability that impairs children's ability to communicate And relate to others,

Other Disorders

Organic mental disorders

Sexual

Desire disorders,

Sexual arousal disorders and *paraphilias,*

Eating disorders

3. Psychological Disorders

The Social and Cultural Context of Psychological Disorders

• Prolonged depression or feelings of hopelessness,

• Withdrawal from other people.

• Thoughts of inflicting harm on oneself or suicide.

• A chronic physical problem for which no physical cause can be determined.

• A fear or phobia that prevents you from engaging in everyday activities.

• Feelings that other people are out to get you or are talking about and plotting against you.

• Inability to interact effectively with others,

C H A P #16 Treatment of Psychological Disorders

1. Psychotherapy:

Psychologists

Psychologists with a Ph.D. Or Psy.D. Who have also completed a postgraduate internship. They specialize in assessment and treatment of psychological difficulties, providing psychotherapy and, in some U.S. states, can prescribe drugs.

Counseling Psychologists

Psychologists with a Ph.D. Or Ed.D. Who typically treat day-to-day adjustment problems, often in a university mental health clinic.

Psychiatrists

M.D.s with postgraduate training in abnormal behavior. Because they can prescribe medication, they often treat the most severe disorders.

Psychoanalysts

Either M.D.s or psychologists who specialize in psychoanalysis, the treatment technique fi rst developed by Freud.

Licensed Professional Counselors or Clinical Mental Health Counselors

Professionals with a master's degree who provide therapy to individuals, couples, and Families and who hold a national or state certification.

Clinical or Psychiatric Social Workers

Professionals with a master's degree and specialized training who may provide therapy, usually regarding common family and personal problems.

Psychodynamic Approaches to Therapy

Psychodynamic therapy Therapy that seeks to bring unresolved past conflicts and unacceptable impulses from the unconscious into the conscious, where patients may deal with the problems More effectively.

Psychoanalysis: freud's therapy

Psychoanalysis Freudian psychotherapy in which the goal is to release hidden unconscious thoughts and feelings in order to reduce their power in controlling behavior.

Transference The transfer of feelings to a psychoanalyst of love or anger that had been originally directed to a patient's parents or other authority figures.

Behavioral Approaches to Therapy

Behavioral treatment approaches Treatment approaches that build on the basic processes of learning, such as reinforcement and extinction, and assume that normal and abnormal behavior are both learned.

Classical conditioning treatments

Aversive conditioning A form of therapy that reduces the frequency of undesired behavior by pairing an aversive, unpleasant stimulus with undesired behavior.

Systematic desensitization A behavioral technique in which gradual exposure to an anxietyproducing stimulus is paired with relaxation to extinguish the response of anxiety.

Exposure A behavioral treatment for anxiety in which people are confronted either suddenly or gradually with a stimulus that they fear.

Operant conditioning techniques

Token system,

Contingency contracting,

Observational learning,

Dialectical behavior therapy

Dialectical behavior therapy A form of treatment in which the focus is on getting people to accept who they are regardless of whether it matches their ideal.

Cognitive Approaches to Therapy

Cognitive treatment approaches Treatment approaches that teach people to think in more adaptive ways by changing their dysfunctional cognitions about the world and themselves.

Cognitive-behavioral approach

A treatment approach that incorporates basic principles of learning to change the way people think.

Rational-emotive behavior therapy A form of therapy that attempts to restructure a person's belief system into a more realistic, rational, and logical set of views by challenging dysfunctional beliefs that maintain irrational behavior.

2. Psychotherapy: Humanistic, Interpersonal, and Group Approaches to

Humanistic Therapy

Humanistic therapy Therapy in which the underlying rationale is that people have control of their behavior, can make choices about their lives, and are essentially responsible for solving their Own problems.

Person-centered therapy

Person-centered therapy Therapy in which the goal is to reach one's potential for selfactualization

Interpersonal Therapy

Interpersonal therapy (IPT) Short term therapy that focuses on the context of current social relationships.

Group Therapy, Family Therapy, and Self-Help Groups

Group therapy Therapy in which people meet in a group with a therapist to discuss problems.

Family therapy An approach that focuses on the family and its dynamics.

Spontaneous remission Recovery without treatment.

WHICH KIND OF THERAPY WORKS BEST?

For most people, psychotherapy is effective .

• *On the other hand, psychotherapy doesn't work for everyone* .

• *No single form of therapy works best for every problem,*

• *Most therapies share several basic similar elements*

4. Biomedical Therapy: Biological Approaches to Treatment

Drug Therapy

Drug therapy Control of psychological disorders through the use of drugs.

Antipsychotic drugs Drugs that temporarily reduce psychotic symptoms such as agitation, hallucinations, and delusions.

Antidepressant drugs Medications that improve a severely depressed patient's mood and feeling of wellbeing.

Mood stabilizers Drugs used to treat mood disorders that prevent manic episodes of bipolar disorder.

Antianxiety drugs Drugs that reduce the level of anxiety a person experiences essentially by reducing excitability and increasing feelings of well-being.

Electroconvulsive therapy (ECT) A procedure used in the treatment of severe depression in which an electric current of 70-150 volts is briefly administered to a patient's head.

Transcranial magnetic stimulation (TMS) A depression treatment inwhich a precise magnetic pulse is directed to a specific area of the brain.

Psychosurgery

Psychosurgery Brain surgery once used to reduce the symptoms of mental disorder but rarely used today.

Community Psychology:Focus on Prevention

Community psychology A branch of psychology that focuses on the prevention and minimization of psychological disorders in the community.

Deinstitutionalization The transfer of former mental patients from institutions to the community. You and your therapist should agree on the goals for treatment. They should be clear, specifi c, and attainable.

C H A P# 17 Social Psychology

1. Attitudes and Social Cognition

ROUTES TO PERSUASION

Central route processing Message interpretation characterized by thoughtful consideration of the issues and arguments used to persuade.

Peripheral route processing Message interpretation characterized by consideration of the source and related general information rather than of the message itself.

The link between attitudes and behavior

Cognitive dissonance The conflict that occurs when a person holds two contradictory attitudes or thoughts(referred to as cognitions).

Social Cognition: Understanding Others

Social cognition The cognitive processes by which people understand and make sense of others and themselves.

Schemas Sets of cognitions about people and social experiences.

Central traits The major traits considered in forming impressions of others

Attribution processes: understanding the causes of behavior

Attribution theory The theory of personality that seeks to explain how we decide, on the basis of samples of an individual's behavior, what the specific causes of that person's behavior are.

Situational causes (of behavior)

Perceived causes of behavior that are based on environmental factors.

Dispositional causes (of behavior) Perceived causes of behavior that are based on internal traits or personality factors.

Attribution biases: to err is human

Halo effect A phenomenon in which an initial understanding that a person has positive traits is used to infer other uniformly positive characteristics.

Assumed-similarity bias The tendency to think of people as beingsimilar to oneself even when meeting them for the first time.

Self-serving bias The tendency to attribute personal success to personal factors (skill, ability, or effort) and to attribute failure to factors outside oneself.

Fundamental attribution error A tendency to over attribute others' behavior to dispositional causes and minimize of the importance of situational causes.

2. Social Influence and Groups

Social influence The process by which the actions of an individual or group affect the behavior of others.

Group Two or more people who interact with one another, perceive themselves as part of a group, and are interdependent.

Conformity A change in behavior or attitudes brought about by a desire to follow the beliefs or standards of other people.

Status The social rank held within a group.

Social supporter A group member whose dissenting views make nonconformity to the group easier.

GROUPTHINK: CAVING IN TO CONFORMITY

Groupthink A type of thinking in
Which group members share such a
Strong motivation to achieve consensus
That they lose the ability to critically
Evaluate alternative points of view.

Compliance: Submitting to Direct Social Pressure

Compliance Behavior that occurs in response to direct social pressure.

Foot-in-the-door technique .

Door-in-the-face technique

That's-not-all technique

Not-so-free sample.

Industrial-organizational (I/O) psychology The branch of psychology focusing on work- and jobrelated issues, including worker motivation, satisfaction, safety, and productivity.

Obedience: Following Direct Orders

Obedience A change in behavior in response to the commands of others.

3. Prejudice and Discrimination

Stereotype A set of generalized beliefs and expectations about a particular group and its members.

Prejudice A negative (or positive) evaluation of a particular group and its members.

Discrimination Behavior directed toward individuals on the basis of their membership in a particular group.

The Foundations of Prejudice

Social neuroscience The subfield of social psychology that seeks to identify the neural basis of social behavior.

4. Positive and Negative Social Behavior

Interpersonal attraction (or close relationship) Positive feelings for others; liking and loving.
Reciprocity-of-liking effect A tendency to like those who like us.

How do I love thee? Let me count the ways

Passionate (or romantic) love A state of intense absorption in someone that includes intense physiological arousal, psychological interest, and caring for the needs of another.

Companionate love The strong affection we have for those with whom our lives are deeply involved.

Aggression and Prosocial Behavior: Hurting and Helping Others

Aggression The intentional injury of, or harm to, another person.

Instinct approaches: aggression as a release

Catharsis The process of discharging built-up aggressive energy.

Helping Others: The Brighter Side of Human Nature

Prosocial behavior Helping behavior.

Diffusion of responsibility The tendency for people to feel that responsibility
For acting is shared, or diffused, among those present.

Altruism Helping behavior that is beneficial to others but clearly requires
Self-sacrifice.

Going by the Numbers: Statistics in Psychology

1. Descriptive Statistics

Statistics The branch of mathematics concerned with collecting, organizing, analyzing, and drawing conclusions from numerical data.

Descriptive statistics The branch of statistics that provides a means of summarizing data.
Frequency distribution An arrangement of scores from a sample that indicates how often a particular score is present.

Histogram Bar graph.

The Mean: Finding the Average

Central tendency An index of the central location within a distribution of scores; the most representative score in a distribution of scores (the mean, median, and mode are measures of Central tendency). Order.

Mode The most frequently occurring score in a set of scores.

Mean The average of all scores, arrived at by adding scores together and dividing by the number of scores.

Median The point in a distribution of scores that divides the distribution exactly in half when the scores are listed in numerical order.

Mode The most frequently occurring score in a set of scores.

Normal distribution A distribution of scores that produces a symmetrical, bell-shaped curve in which the right half mirrors the left half and in which the mean, median, and mode all have
The same value.

2. Measures of Variability

Variability The spread, or dispersion, of scores in a distribution.

Range The difference between the highest score and the lowest score in a distribution.

The Standard Deviation: Differences from the Mean

Standard deviation An index of the average deviation of a set of scores from the center of the distribution.

3. Using Statistics to Answer Questions: Inferential Statistics and Correlation

Population All the members of a group of interest.

Sample A representative subgroup of a population of interest.

Inferential statistics The branch of statistics that uses data from samples to make predictions about the larger population from which the sample is drawn.

Significant outcome An outcome in which the observed outcome would be expected to have occurred by chance with a probability of .05 or less.

The Correlation Coefficient: Measuring Relationships

Positive relationship A relationship established by data that shows high values of one variable corresponding with high values of another, and low values of the first variable corresponding With low values of the other.

Negative relationship A relationship established by data that shows high values of one variable corresponding with low values of the other.

Correlation coeffi cient A numerical measure that indicates the extent of the relationship between two variables.

====THE END====