

AP Psychology Rapid Learning Series

Course GuideBook



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Chemistry : Biology : Physics : Math

AP Psychology Course Content

TUTORIAL SERIES SUMMARY

Core Unit #1 – History and Research

In this core unit, you will be introduced to psychological science and will come to understand its perspectives, views, and subfields. You will also explore the history of psychology from ancient times to contemporary theories. This core unit concludes with a concise perusal of the basic research premise and techniques used in psychology.

Tutorial 01: Introduction to AP Psychology

- What AP Psychology is
- The Scope of AP Psychology
 - History and Approaches
 - Cognition and Learning
 - Personality and Behavior
- How to Study AP Psychology
- What the AP Exam is
- AP Study Tips
- AP Exam Tips

Tutorial 02: History and Approaches

- Time Line of Key Events
- Psychology in Ancient Times
- Pre-scientific Psychology
- Birth and Development of Psychology
- Current Views in Psychology
- Great Debates in Psychology

Tutorial 03: Research Methods in Psychology

- Basics of Scientific Attitude
- The Scientific Method
- Correlational Method
- Descriptive Methods
- Experimental Method
- Comparison of Methods

Core Unit #2 – Biological Basis of Behavior

In this core unit, you will explore the connections between biology and behavior. You will first focus on the nervous system and learn about the structures that relate to neural communication and of the research tools used in the brain to explore behavior. You will then be introduced to the endocrine system and develop an understanding of the interactions between the nervous and endocrine systems and the effects of the endocrine system on behavior. You will then learn of the various structures involved in sensation and perception before exploring the interaction of nature and nurture as it applies to psychology.

Tutorial 04: The Nervous System, Neuroanatomy and Neurotransmitters

- Neurocortex Orientation
- Neuronal Communication
- The Nervous System
- Basal Ganglia
- Brain Stem
- Research Tools

Tutorial 05: The Endocrine System and Influence on Behavior

- Endocrine Glands and Main Functions
- The Hypothalamus
- Thyroid Gland
- Pituitary Gland
- Adrenal Gland
- Sex Hormones

Tutorial 06: Sensation and Perception

- Basic Principles
- Vision
- Hearing and Equilibrium
- Perception
- Basic Tastes

Tutorial 07: Nature, Nurture and Human Diversity

- Nature and Nurture
- Evolutionary Psychology
- The Nature and Nurture of Gender
- Predicting Individual Differences
- Environmental Influences

Core Unit #3 – Thinking: Consciousness, Cognition, & Intelligence

In this core unit, you will explore the concept of thinking to include an understanding of the states of consciousness; an exploration of various learning strategies developed in psychology; develop an appreciation for the basic processes involved in memory; understand the basic structures involved in language and be able to list the contributions of various psychologists in this field; develop an appreciation for how we think, solve problems, and make decisions to include critical thinking skills; appreciate the various methods we use to solve problems and their limitations; outline the early errors and assumptions made in intelligence testing; explain the genetic and environmental contributions to individual differences; describe the theories of motivation including Maslow's Hierarchy; apply the concepts of personnel and organizational psychology to work motivation; compare and contrast the various theories of emotion; and apply research findings to the detection and computation of emotions.

Tutorial 08: States of Consciousness

- Waking Consciousness
- Sleep
- Hypnosis
- Psychoactive Drugs

Tutorial 09: Learning

- Classical Conditioning
- Operant Conditioning
- Observational Learning
- Comparing Classical and Operant Conditioning

Tutorial 10: Memory

- Memory Encoding
- Memory Storage
- Memory Retrieval and Forgetting

Tutorial 11: Language

- Language Development
- Structure of Language
- Methods of Studying Language

Tutorial 12: Thinking and Problem Solving

- Thinking
- Making Decisions
- Critical Thinking

Tutorial 13: Intelligence Testing and Individual Differences

- Origins of Intelligence Testing
- Exploring Intelligence
- Assessing Intelligence
- Genetic and Environmental Influences on Intelligence

Tutorial 14: Motivation and Work

- Concepts in Motivation
- The Need to Belong
- Motivation in the Workplace
- Representative Motivations

Tutorial 15: Emotion

- Theories of Emotion
- The Physiology of Emotion
- Expressed Emotions

Core Unit #4 – Developmental Psychology

In this core unit, you will explore developmental psychology through an exploration of the life-span approach, developmental theories, and the various dimensions of development from conception through adulthood. You will be able to explain the three main issues in developmental psychology and understand the contributions of key psychologists while being introduced to gender differences and brain development.

Tutorial 16: Life-Span Approach and Developmental Theories

- Introduction to Developmental Psychology
- Conception to Birth
- Newborns
- Infancy and Childhood

Tutorial 17: Dimensions of Development

- Adolescent Physical Development
- Adolescent Cognitive Development
- Adolescent Social Development
- Adult Physical Development
- Adult Cognitive Development
- Adult Social Development

Core Unit #5 – Personality, Abnormalities & Treatments

In this core unit, you will explore personality psychology to include an introduction to various personality theories, key psychologists and key experiments; and then delve into specific personality abnormalities and their treatment. You will conclude this core unit with a look at stress and health through which you will develop an understanding of the various stressors, the physiological effects of stress, and the role of health psychologists and their attempts to promote effective stress-coping strategies.

Tutorial 18: Personality Psychology

- Introduction to Personality Psychology
- Psychoanalytical Perspective
- The Humanistic Perspective
- Contemporary Perspectives

Tutorial 19: Abnormal Psychology

- Introduction to Abnormal Psychology
- Anxiety Disorders
- Mood Disorders
- Schizophrenia
- Personality Disorders

Tutorial 20: Treatment of Psychological Disorders

- Psychotherapies
- Evaluating Psychotherapies
- Biomedical Therapies

Tutorial 21: Stress and Health

- The Physiology of Stress
- Stress and Illness
- Health Promotion

Core Unit #6 – Social Psychology

In this core unit, you will explore social psychology and be able to define and describe various theories and phenomenon within social psychology; outline the Attribution Effect; and explain the experiments performed by Stanley Milgram as to typical procedure, findings, and implications. You will also be able to define and describe prejudice to include, the scapegoat theory, and both its social and cognitive roots; outline the biological and psychological roots of aggression and the media influence; compare and contrast the characteristics of attraction, altruism, and peacemaking and be explain the phenomenon of social traps and enemy perceptions as they relate to conflict.

Tutorial 22: Group Dynamics, Attribution Process and Interpersonal Perception

- Attribution Behavior
- Effects of Attribution
- Attitudes & Actions
- Cognitive Dissonance Theory
- Conformity
- Group Pressure
- Obedience
- Social Facilitation
- Social Loafing
- Effects of Group Interactions
- The Power of Individuals

Tutorial 23: Prosocial and Antisocial Behavior and Cultural Influence

- Prejudice
- Aggression
- Conflict
- Attraction
- Altruism
- Peacemaking

Core Unit #7 – Advanced Topics

In this core unit, you will explore advanced research methods and gain an understanding of statistical tests as well as repeated measures designs and complex designs commonly used in psychology.

Tutorial 24: Advanced Research Methods in Psychology

- Introduction
- Using Statistical Tests
- The t-Test
- Non-Parametric Tests
- Repeated Measures Designs
- Complex Designs

Tutorial Series Features

This tutorial series is a carefully selected collection of core concept topics in psychology that covers the essential concepts in the course. It features three parts:

- Introduction to Psychology Concept Tutorials – 24 essential topics
- Problem-Solving Drills – 24 practice sets
- Super Condense Cheat Sheets – 24 super review sheets

Core Tutorials (CT)

- Self-contained tutorials, not an outline of information, which would need to be supplemented by an instructor.
- Concept map showing inter-connections of new concepts in this tutorial and those previously introduced.
- Definition slides introduce terms, as they are needed.
- Visual representation of concepts.
- 3D visualization of graphs, equations, and other formulas.
- Conceptual explanation of important properties and problem solving techniques
- Animated examples—worked out step by step.
- A concise summary is given at the conclusion of the tutorial.

Problem Solving Drills (PS)

Each tutorial has an accompany Problem Set with 10 problems covering the material presented in the tutorial. Work out each problem and then check it with the provided answer and complete solution provided at the end.

Condensed Cheat Sheet (CS)

Each tutorial has a one-page cheat sheet that summarizes the key concepts and equations presented in the tutorial. Use the cheat sheet as a study guide after completing the tutorial to re-enforce concepts and again before an exam.

01: Introduction to AP Psychology

Chapter Summary:

The tutorial provides an introduction to AP Psychology that includes three main topics. First the scope of this AP course and the core units are introduced to provide an overview. Then the question, "What is Psychology?" will be explored by first defining it and then looking at why we are studying psychology: the importance of this field of social science. The various perspectives in psychology are then introduced to include the various subfields. This tutorial concludes with some tips on how to study psychology.

Tutorial Features:

Specific Tutorial Features:

- Flow charts and concept maps are used to introduce key concepts and to assist in understand the scope of psychology

Series Features:

- Concept map showing inter-connections of concepts introduced.
- Definition slides introduce terms as they are needed.
- Examples given throughout to illustrate how the concepts apply.
- A concise summary is given at the conclusion of the tutorial.

Key Concepts:

- **Psychology** is the science that deals with mental processes and behavior.
- The **focus** is on emotional and behavioral characteristics of the individual through all stages of life, the characteristics of groups and the characteristics of various activities.
- Therefore, **Psychologists** experiment with, observe, test, and treat behavior.

Chapter Review:

What Is Psychology?

Psychology is the science that deals with mental processes and behavior. The focus is on emotional and behavioral characteristics of the individual through all stages of life, the characteristics of groups and the characteristics of various activities. Therefore, Psychologists experiment with, observe, test, and treat behavior.

Perspectives in Psychology:

The study of behaviour, thought, and emotion can be taken from a variety of perspectives. In psychology, there are many perspectives: neuroscience; evolutionary; behaviour genetics; psychodynamic; behavioural; cognitive; and social-cultural.

Subfields in Psychology:

Psychology is a collection of diverse subfields. Some psychologists do basic research, some do applied research, and others provide professional services.

Study Tips for Psychology:

The first technique involves understanding the concepts instead of just memorizing the details. Second, connect the concepts together in a mind map so you can see the flow of one concept to another and then fill in the details around each concept. Third, take your time to go back over each topic in a tutorial. Next, use the "stop and think" questions provided at the end of each topic to test yourself on your understanding of each topic. Next, use the problem set at the end of each tutorial to quiz yourself. Next, talk out loud to yourself during the tutorials. Lastly, remember to take breaks often.

02: History and Approaches

Chapter Summary:

We start in ancient times with Buddha, Confucius, and the Hebrew Scriptures and then see these views remained unchallenged until the time of Ancient Greece. Development continued sporadically until the time of Augustine before again stalling for a considerable length of time (over 1200 years) before the contributions of Descartes and Bacon in the early 1600's. Locke added to psychology in the 1700's but the birth of psychological science occurred in 1879 when the first real experimental laboratory was established. From there, an exponential growth has occurred in the development of psychology as a science up to and including the current day.

Tutorial Features:

Specific Tutorial Features:

- Flow charts and concept maps are used to introduce key historical events.

Series Features:

- Concept map showing inter-connections of concepts.
- Definition slides introduce terms, as they are needed.
- Visual representation of concepts
- Examples given throughout to illustrate how the concepts apply.

Key Concepts:

- **Stability versus Change**
 - Do our individual traits persist as we age or can people change?
- **Rationality versus Irrationality**
 - In some ways we are smart but in others we err
- **Nature versus Nurture**
 - What are the relative contributions of biology and experience?

Chapter Review:

Historic Views:

As far back as humans existed, people have been intensely interested in themselves and in one another. During ancient time, writings reveal the pondering of early questions. In India, Buddha pondered how sensations and perceptions combine to form ideas. In China, Confucius stressed the powers of ideas and of an educated mind. In ancient Israel, Hebrew Scriptures anticipated today's psychology by linking mind and emotion to the body. Socrates and Plato used sheer logic to deduce principles. Both viewed the mind as being separable from the body and believed it continues after death. But like those of today's psychologists who emphasize our built-in genetic predispositions and our intuitive grammar, Socrates and Plato believed knowledge is built within us. Plato was Socrates' pupil. It was Plato who helped to lay the foundations of natural philosophy, science, and Western philosophy. Aristotle was Plato's pupil. Aristotle believed in careful observation instead of sheer logic to deduce principles. Aristotle's observation lead him to believe that knowledge is not preexisting but grows from experiences stored in our memories and that "the soul is not separable from the body, and the same holds good for particular parts of the soul". Aristotle believed that events experienced under strong emotion are better recalled than unemotional happenings and that that we recall memories through a network of associations among our stored

experiences; which has been shown to be true in more recent times. Augustine wrote how the condition of the body influences the mind, and how the mind influences the body. **Rene Descartes:** Scientist and philosopher. Agreed with Socrates and Plato about the existence of innate ideas and the mind being "entirely distinct from the body" and that the mind can survive after the body dies. Fluid in the brain's cavities contained "animal spirits". These spirits flowed from the brain throughout what we call the nerves to the muscles, provoking movement. Memories formed as experiences opened up pores in the brain, into which the animal spirits also flowed.

Francis Bacon: One of the founders of modern science. He centered on experiment, experience, and common-sense judgment. He anticipated our mind's hunger to perceive patterns even in random events. He foresaw research on our eagerness to selectively notice and remember events that confirm our beliefs.

John Locke: Famously argued that the mind at birth is a blank slate; a white paper; upon which experience writes. The mind acts only on what has come in through the senses Helped form modern empiricism.

Birth & Development of Psychology:

First psychological science laboratory was established in 1879 by Wilhelm Wundt and his graduate students. Wundt was seeking to measure the fastest and simplest mental process; what he referred to as the "atoms of the mind". Structuralism: Edward Bradford Titchener. Functionalism: William James. Before 1920's: a science of mental life; Between 1920's and 1960's: a science of observable behavior; After 1960's: a science of behavior and mental processes.

Current Views in Psychology:

For many psychologists, the key word in psychology's definition is 'science'. Psychology is less a set of findings than a way of asking and answering questions. As a science, psychology attempts to sift opinions and evaluate ideas with careful observation and rigorous analysis. In its attempt to describe and explain human nature, psychological science welcomes hunches and plausible-sounding theories and then puts them to the test. If a theory works; if the data supports its predictions, so much the better for that theory. If the predictions fail, the theory will be revised or rejected. By understanding this approach, you, the learner can begin to appreciate how psychologists play their game, how researchers evaluate conflicting opinions and ideas, and how all of us can think smarter when describing and explaining the events of our lives.

03: Research Methods in Psychology

Chapter Summary:

With perspectives ranging from the biological to the social, and with settings from the laboratory to the clinic, psychology relates to many disciplines. This tutorial focuses on the basic research methods used in psychology. It starts with a look at the errors when depending on intuition and 'common sense' and guides the learner through the scientific attitude, scientific method, and three key research areas: descriptive, correlational, and experimental. The tutorial concludes by comparing these three methods.

Tutorial Features:

Specific Tutorial Features:

- Flow charts and concept maps are used to introduce key points.
- Use of tables to graphically display comparison data.

Series Features:

- Concept map showing inter-connections of concepts in this tutorial.
- Definition slides introduce terms as they are needed.
- Visual representation of concepts.
- Connection between structure and function is emphasized throughout.

Key Concepts:

- **The Hindsight Bias** involves finding out something has happened makes it seem inevitable.
- **Overconfidence** is the tendency to be more confident than correct.
- **Critical Thinking** is a combination of skepticism with humility and is considered smart thinking.
- **Subjective Observation Bias** involves the human tendency to see what we expect to see.
- **Blind Study:** participants are uniformed as to what treatment they are receiving.
- **Double Blind:** both participants and researchers are uniformed as to the treatment groups.

Chapter Review:

Is There a Need?

Intuition and common sense can be very misleading when it comes to understanding human behavior. The basis of the scientific attitude is: **Curiosity** is a passion to explore and understand without misleading or being misled. **Skepticism** in the arena of competing ideas, skeptical testing can reveal which ones best match the facts. **Humility** we may have to reject our own ideas. **Critical Thinking:** skepticism with humility. The Scientific Method involves scientists who: Examines assumptions; Discerns hidden values; Evaluates evidence; Assesses conclusions. Doesn't blindly accept arguments and conclusions. Psychologists arm their scientific attitude with the scientific method. They make form theories, generate hypotheses, make observations, and then refine their theories in the light of new observations. Therefore in science, theory is linked to observation.

The Scientific Theory is Integrated set of principles, organizes and predicts behaviors or events, useful summary, may lead to discovery of a coherent picture. **The Hypothesis:** Implies testable predictions; provides the opportunity to test and reject or revise the theory. This gives direction to research.

Basic Research Methods:

Descriptive Methods include: **The Case Study:** Study one individual in great depth. Suggest hypotheses for further study; can be misleading. **The Survey Method:** Looks at many cases in less depth. Asks people to report their behavior or opinions. Important: wording of the questions and who is included. **Naturalistic Observation:** Watching and recording the behavior of organisms in their natural environment.

Correlational Methods are statistical measure of a relationship. Reveals how closely two things vary together. Reveals how well either one predicts the other.

Experimental Methods involve studies in which people are randomly assigned to either a treatment group or a control group to equalize the groups. Any later differences are probably caused by the experimental variable. Involves manipulating the factors of interest; hold others constant. **Independent Variable** is the experimental factor being manipulated. **Dependent Variable** is some measure of behavior that we anticipate will change due to the independent variable.

04: The Nervous System, Neuroanatomy & Neurotransmitters

Chapter Summary:

This tutorial explores the nervous system as it applies to psychology. In order to understand behavior, it is important to obtain a general understanding of the brain, the nervous system, and the interactions between this system and behavior. Various methods of studying the brain are also introduced in this tutorial.

Tutorial Features:

Specific Tutorial Features:

- Comprehensive and easily understood explanation of the concepts involved.

Series Features:

- Concept map showing inter-connections of concepts is introduced.
- Definition slides introduce terms as they are needed.
- Visual representation of concepts
- Historical controversy is highlighted to illustrate how the concepts apply.
- Connection between structure and function is emphasized throughout.
- A concise summary is given at the conclusion of the tutorial.

Key Concepts:

- **Midline:** invisible line down the middle of the brain that separates it into right and left sides
- **Medial:** towards the midline.
- **Lateral:** away from the midline
- **Midsagittal section:** a slice through the midline.
- **Horizontal section:** a slice parallel to the ground.
- **Coronal section:** a slice perpendicular to the ground.
- **Gray Matter:** small blood vessels and cell bodies
- **White Matter:** axons extending from the cell bodies and covered in a myelin sheath
- **Reticular Matter:** combination of gray and white matter
- **Contralateral:** affecting the opposite side
- **Ipsilateral:** affecting the same side

Chapter Review:

Neuronal Communication:

Central Principle: Everything psychological is simultaneously biological.

The Brain's Ultimate Challenge is to understand itself. The body's information system is built from billions of interconnected cells called neurons. We are each a system composed of subsystems that are in turn composed of even smaller subsystems. We are bio-psychosocial systems. Each neuron consists of a cell body and its branching fibers.

The bushy dendrite fibers receive information, and the axon fibers pass it along to other neurons, to muscles or glands. Many axons are wrapped in a layer of fatty tissue, called a myelin sheath that helps speed their impulses. Depending on the type of fiber, the neural impulse travels at speeds ranging from 2 to 200 miles per hour. A neuron fires an impulse when it receives signals from sense receptors stimulated by pressure, heat, or light, or when it is stimulated by chemical messages from neighboring neurons. Neurons generate electricity from chemical events. The resting membrane potential has the inside of the cell

more negative than the outside. The membrane is selectively permeable. The action potential is the electrical signal generated by the cell in response to stimuli. The axon terminal of one neuron is in fact separated from the receiving neuron by a gap of less than a millionth of an inch wide. When the action potential reaches the knoblike terminals at an axon's end, it triggers the release of chemical messengers, called neurotransmitters. The neurotransmitter molecules cross the synaptic cleft and bind to receptor sites on the receiving neuron. A particular neural pathway in the brain may use only one or two neurotransmitters. Particular neurotransmitters may have particular effects on behavior and emotions. Acetylcholine enables muscle action, learning, and memory. Dopamine influences movement, learning, attention, and emotion. Serotonin affects mood, hunger, sleep, and arousal. Norepinephrine helps control alertness and arousal. GABA is a major inhibitory neurotransmitter. Glutamate is a major excitatory neurotransmitter and is involved in memory.

The Nervous System:

Central Nervous System consists of the Brain and Spinal Cord. The Brain: Cerebrum & Cerebellum. Cerebrum: Neocortex and Basal Ganglia. Spinal Cord is the major conduit of information from skin, joints, muscles, & organs of the peripheral nervous system to the brain and visa versa. Neurons cluster into work groups called neural networks. **Basal Ganglia** include Putamen, Globus Pallidus, Caudate Nucleus, Amygdala, Substantia nigra. The **Limbic Lobe** includes: Cingulate gyrus: recognition memory; Hippocampus: spatial memory; Amygdala: emotional memory; Olfactory bulb: smell. The **Brain Stem** includes: Diencephalon consists of Thalamus & Hypothalamus; Midbrain consists of Tectum & Tegmentum; Hindbrain consists of Pons and Medulla.

Research Tools for Studying the Brain include: Clinical Observation. The oldest research tool in psychology; observe the effects of brain diseases and injuries.

Brain Manipulation: Scientists can electrically, chemically, or magnetically stimulate various parts of the brain and note the effects. **Electrical Recordings:**

Electroencephalogram is an amplified tracing of electrical waves. It involves presenting a stimulus repeatedly and filtering out the unrelated activity. **Neuroimaging Techniques:**

Computed Tomography takes x-rays that reveal brain damage. Positive Emission

Tomography shows each brain area's consumption of glucose. Magnetic Resonance Imaging exploits the spin of atoms and shows the brain's soft tissues. Functional MRI shows brain activity through increased blood flow to the active areas.

05: The Endocrine System & Influence on Behavior

Chapter Summary:

This tutorial will introduce the endocrine system and its influence on behaviour. While describing the structures and functions of the main endocrine glands, the learner will develop an understanding of this system's influence on behavior and will learn to appreciate the interconnectedness of the nervous and endocrine systems.

Tutorial Features:

Specific Tutorial Features:

- Comprehensive and easily understood introduction to key organs and their relationship to behavior.

Series Features:

- Concept map showing inter-connections of new concepts in this tutorial and those previously introduced.
- Definition slides introduce terms as they are needed.
- Visual representation of concepts
- Easy explanations of some rather confusing formulae.
- A concise summary is given at the conclusion of the tutorial.

Key Concepts:

- **Homeostasis:** the maintenance of the internal environment in response to a changing external environment.

Chapter Review:

The Endocrine System: Intricate connection between nervous system and endocrine system. The cells in your body communicate through chemical messengers. The nervous system uses chemical messengers, called neurotransmitters, at each synapse (the gap between neurons or between a neuron and a target tissue, such as a muscle cell), and thus represents a point-to-point system of connection. However, there is a second communication system in your body. The endocrine system consists of a number of glands that secrete chemical messengers, called hormones. These hormones travel through the blood stream to distant targets. Both the nervous system and the endocrine system have a large effect on behaviour and there is a great deal of interaction between them. However, the speed and duration of their effects are different. The nervous system sends messages very quickly while it takes longer for the hormones of the endocrine system to find and affect their targets. However, the effects of the hormones tend to last longer.

Hypothalamus: Hypothalamus regulates homeostasis through the release of chemicals to affect body temperature and blood compositions. Hypothalamic neurons respond to sensory signals in three distinct ways: **1. Humoral response:** By either stimulating or inhibiting the release of pituitary hormones into the bloodstream; **2. Visceromotor response:** By adjusting the balance of sympathetic and parasympathetic outputs of the ANS; **3. Somatic motor response:** By inciting an appropriate somatic motor behavioral response.

Thyroid Gland: Butterfly-shaped; across trachea; below larynx. C cells secrete calcitonin. Follicular cells secrete thyroid hormones T3 & T4; effects metabolism. It is essential for normal growth and development in children.

Pituitary Gland: Two fused glands from different embryological origins. The anterior lobe is a true endocrine gland; the posterior lobe is an extension of neural tissue. It extends downward from the brain and is cradled in a protective pocket of bone. The **Posterior Pituitary** is an extension of the neural tissue of the brain and secretes neurohormones made in hypothalamus. The **Anterior Pituitary** is a true gland that is under the influence of the hypothalamus.

Adrenal Gland is a true gland. Its main hormones are aldosterone, cortisol, and androgens. The target of aldosterone is the kidney, while cortisol and androgens affect many tissues. The main effect of aldosterone is sodium and potassium homeostasis. The main effect of cortisol is the stress response and the main effect of androgens from the adrenal cortex is the sex drive in females.

06: Sensation and Perception

Chapter Summary:

The purpose of this tutorial is to develop an understanding of the basic principles of sensation and perception as they relate to psychology. The learner is guided through a description of the structures and functions of sight, hearing, and other senses and then through an exercise in which they will compare and contrast the various aspects of perception.

Tutorial Features:

Specific Tutorial Features:

- Flow charts and concept maps are used to introduce key points.
- Comprehensive and easily understood introduction to key concepts and their relationship to behavior.

Series Features:

- Concept map showing inter-connections of concepts.
- Definition slides introduce terms as they are needed.
- Visual representation of concepts
- A concise summary is given at the conclusion of the tutorial.

Key Concepts:

- **Sensation:** the process by which our sensory receptors and nervous system receive and represent stimulus energies from our environment.
- **Perception:** the process of organizing and interpreting sensory information, enabling us to recognize meaningful objects and events.
- **Top-Down Processing:** information processing guided by higher-level mental processes
- **Bottom-Up Processing:** analysis that begins with the sense receptors and works up to the brain's integration of sensory information.
- **Absolute Threshold:** A measure of the stimulation needed for us to pinpoint its appearance 50% of the time.
- **Weber's Law:** To be perceived as different, two stimuli must differ by a constant minimum percentage (rather than a constant amount).
- **Sensory adaptation:** our diminishing sensitivity to an unchanging stimulus. After constant exposure to a stimulus, our nerve cells fire less frequently.
- **Transduction** is the process by which an environmental stimulus.
- **Somitic Sensory System** composed of touch, pain, temperature and body position sensing.
- **Nociceptors** are neurons that are activated by stimuli that have the potential to cause tissue damage.
- **Thermoreceptors** are neurons that are exquisitely sensitive to changes in temperature.
- **Tastant** is a taste stimulant.
- **Olfactant** is a chemical stimulus in the air.
- **Selective Attention:** the state of selectively processing simultaneous sources of information.
- **Gestalt:** An organized whole.

Chapter Review:

Sensation:

The detection of a weak signal (stimulus) depends on both the signal's strength & on our psychological state. **Signal Detection Theory:** Predicts how and when we will detect weak signals; assumes no single absolute threshold. Detection depends on psychological state. Psychological state includes: Previous experience; Expectations; Motivation; Level of awareness (or fatigue). **Subliminal Stimulation:** we can unconsciously perceive stimuli below our threshold; we can be psychologically affected by subliminal stimulus. An invisible image or word can briefly prime your response to a later question. Sensory adaptation allows us to focus on INFORMATIVE changes in our environment

Vision: is an electromagnetic energy in wave form. The energy content of electromagnetic radiation is proportional to its frequency. Radiation emitted at a high frequency (short wavelengths; less than 1 nm) has the highest energy content as shown by gamma and x-rays. Each visible color has its own characteristic wavelength; it is the mix of these visible wavelengths together that appears to our eyes as white light.

Hearing & Equilibrium: Sound waves strike the tympanic membrane and become vibrations. Energy from vibrations is transferred to the ossicles which vibrate. Vibration is passed to the oval window and creates fluid waves in the cochlea. Fluid waves push on the flexible membranes of the cochlear duct and cause hair cells to bend and release neurotransmitter. Neurotransmitter is released onto sensory neurons which create action potentials that travel through the cochlear nerve to the brain. Equilibrium is sensed using the semicircular canals.

Basic Tastes include: Saltiness (salts) (sides of tongue); Sourness (acids) (sides of tongue); Sweetness (sugars and proteins) (tip of tongue); Bitterness (K⁺, Mg²⁺, quinine, caffeine); (back of tongue); Umami (delicious) (the savory taste of the amino acid glutamate: monosodium glutamate or MSG). Each food activates a different combination

Perception:

Selective attention involves interactions between modalities. An unattended stimulus does affect us. Objects need to be perceived as being distinct from their surroundings; having a meaningful and constant form; and discernable distance and motion. We constantly filter sensory information and infer perceptions in ways that make sense to us. **Binocular cues** involve retinal disparity. **Monocular cues** include: relative size; interposition; relative clarity; texture gradient; relative height; relative motion (motion parallax); linear perspective; and light & shadow. **Motion Perception** is based on assumption that shrinking objects are retreating (not getting smaller) and enlarging objects are approaching.

Perceptual constancy enables us to perceive an object as unchanging even though the stimuli we receive from it changes.

07: Nature, Nurture & Human Diversity

Chapter Summary:

This tutorial will aid the learner in comprehending the basis of evolutionary psychology as it applies to nature, nurture and human diversity and build an understanding of the biological and cultural basis of human diversity through a comparison of various twin, adoption, and temperament studies. It will conclude with a description of the various environmental influences on nature, nurture and human diversity.

Tutorial Features:

Specific Tutorial Features:

- Flow charts and concept maps are used to introduce key points.
- Comprehensive and easily understood introduction to key concepts and their relationship to behavior.

Series Features:

- Concept map showing inter-connections of concepts.
- Definition slides introduce terms as they are needed.
- Visual representation of concepts
- A concise summary is given at the conclusion of the tutorial.

Key Concepts:

- **Evolutionary psychologists** study how natural selection favored behavioral tendencies that contributed to survival and spread our ancestors' genes.
- **Nature and Nurture:** Genes and experience together wire the brain.
- **Role:** a cluster of prescribed actions.
- **Gender:** social category of male or female.
- **Gender Identity:** our sense of being male or female.
- **Behavior Geneticists** assess differences from one another.
- **Temperament** includes inborn emotional excitability.
- **Heritability:** the extent to which variation among individuals can be attributed to their differing genes.

Chapter Review:

Nature and Nurture:

All humans share a **common biological heritage** AND **common behavioral tendencies**. Shared brain architecture predisposes us to sense the world through identical mechanisms Common social behavior. How and how much influence does our individual heredity predispose our differing personalities, preferences, and abilities? To what extent are we shaped by our heredity (our nature) and by our life history (including the nurture we received since our conception)? **Nature enables Nurture**

Evolutionary Psychology:

Human Chromosomes: Each nucleated cell of the body (except egg and sperm) contain 46 chromosomes: 22 matched pairs of autosomes and one pair of sex chromosomes; 22 matched pairs of autosomes direct development of the human body. 1 chromosome = 1 DNA molecule. Each DNA is a long sequence of nucleic acids. Genes are small sequences of nucleotides within DNA. Genes are the basic units of hereditary information. Humans have

~ 25,000 genes. Human Genome is the sequence of nucleotides. 95% of genome is the same as chimps. Human traits are influenced by gene complexes.

Genetic Differences: 6% are different among races; 8% different among groups within a race. Over 85% are individual variations within local groups. Only those who displayed behaviors that assisted them in surviving and producing offspring. Over generations, non-useful genes were lost. Genes with an adaptive edge were selected for. This builds an emphasized capacity for thinking and learning; diversity.

Sexuality: Gender differences extend to differences in behavior. Evolutionary explanation uses natural selection to explain women's more rational and men's more recreational approaches to sex.

The General Principle: Nature selects behaviors that increase the likelihood of sending one's genes into the future.

Critique of Evolutionary psychology explanation includes: it starts with an effect and works backwards; Much of who we are is not hard-wired; Byproducts of a culture's social and family structures; Social consequences of evolutionary psychology.

Predicting Individual Differences:

Behavior Geneticists: Weighs genetic & environmental contributions to our traits. Environment includes every external influence from maternal nutrition to social support.

Twin Studies: Identical twins: Develop from a single fertilized egg that splits in two. Share the same genes, conception, uterus, birth date, and cultural history.

Fraternal twins: Develop from separate eggs. Not genetically alike but share the same conception, uterus, birth date, and cultural history. **Findings:** On both extraversion and neuroticism, identical twins: much more similar than fraternal twins. Identical twins are much more similar in abilities, personality traits, and interests. Twins treated alike were no more similar than those not treated alike. Canadian study of 336 twin pairs showed substantial genetic influence on reading, organized religion, playing sports, and assisted suicide.

Adoption Studies: Adoptee's traits bear more similarities to their biological parents than to their care giving adoptive parents. Adoptive parents do influence the adoptee's attitudes, values, manners, faith, and politics. **Temperament Studies:** Heredity predisposes temperament differences

Humans have an enormous adaptive ability. Our shared biology enables our developed diversity. Gene-Environment interactions are a cascade of interactions between our genetic predispositions and our surrounding environments.

Environmental Influences:

If genetic differences account for about half of our person-to-person differences in personality, what accounts for the rest? Parental nurture? Prenatal nutrition? Early stimulation? Later peer influences? The surrounding culture? This topic will explore all of these. The evidence may surprise you.

08: States of Consciousness

Chapter Summary:

This tutorial describes the various states of consciousness as they apply to psychology. It will delve into a description of the various sleep stages with the intention of building an appreciation for the current theories of why we sleep as well as what and why we dream. A basic understanding of hypnosis will be discussed and corrections to falsehoods regarding this topic will be presented. Various psychoactive drugs and their influences will also be presented.

Tutorial Features:

Specific Tutorial Features:

- Flow charts and concept maps are used to introduce key points.
- Comprehensive and easily understood introduction to key concepts and their relationship to behavior.
- Each sensation is clearly presented
- Use of comparisons and critical thinking to explore this topic

Series Features:

- Concept map showing inter-connections of concepts in this tutorial.
- Definition slides introduce terms as they are needed.
- Visual representation of concepts
- Examples given throughout to illustrate how the concepts apply.
- A concise summary is given at the conclusion of the tutorial.

Key Concepts:

- **Consciousness** is our awareness of ourselves and our environment.
- **Sleep:** is a state of consciousness where we are alive and unconscious at the same time.
- **Biological Rhythms:** are controlled by internal “biological clocks”.
- **Hypnosis** is defined as a social interaction in which one person (the hypnotist) suggests to another (the subject) that certain perceptions, feelings, thoughts, or behaviors will spontaneously occur.
- **Posthypnotic Amnesia** is a temporary memory loss by suggestion.
- **Psychoactive drugs** are chemicals that change perceptions and moods.

Chapter Review:

Waking Consciousness:

Consciousness brings varied information to the surface, enabling us to reflect and plan, exert voluntary control, and communicate our mental states to others. This awareness varies with our attentional spotlight. Our awareness is but the visible surface of our brain’s information processing. Subconscious information processing occurs simultaneously on many parallel tracks. Consciousness emerges from the subconscious interactions of many individual brain events. Conscious processing takes place in sequence. Conscious processing is relatively slow and has limited capacity; skilled at solving novel problems. **Daydreams:** Singer (1975): nearly everyone has daydreams and waking fantasies every day. Younger people spend more time daydreaming and admit to more sexual fantasies. Daydreaming involves familiar details of our daily lives. **Fantasies:** Men fantasize about sex more often, more physically, and less-romantically than women Fantasy is sometimes an escape. Some

help us prepare for future events and it enhances creativity of scientists, writers, and artists while nourishing social and cognitive development.

Sleep:

Research has revealed each of the following to be false: Limbs move to correspond to dreaming; Older adults sleep more than younger ones; Sleepwalkers are acting out their dreams; Only some people dream every night. **Circadian rhythm:** roughly 24 hour cycle Day/night. Body temperature rises as morning approaches; peaks during the day; dips for a time in early afternoon; begins to drop again before sleep. **Sleep cycle** repeats every 90-100 minutes. Two main theories of why we sleep: restoration and adaptation. Three theories of why we dream: Freudian theory of wish-fulfillment; Information Processing Theory; and Activation-Synthesis Hypothesis.

Hypnosis:

Those who study hypnosis agree that its power resides not in the hypnotist but in the subject's openness to suggestion. Hypnotists have no magical mind-control power; they merely engage people's ability to focus on certain images or behaviors. During hypnosis: Hypnotist gives a brief hypnotic induction; Presents a series of suggested experiences; Subject carries them out when told to do so. Nearly everyone is suggestible. Virtually anyone will experience hypnotic responsiveness if led to expect it. Hypnotists use this to prepare the subject. People asked to stare at a spot will, after a few seconds; feel their eyes getting "tired"; natural physiological reaction. The trick is to get the subject to think it was the hypnotist's suggestion, not their own physiology that is the cause. Once the subject believes this, they are now open to further suggestions. 60 years of research disputes the claims of age regression. An authoritative person in a legitimate context can induce people to perform unlikely acts. Hypnosis can alleviate pain. Hypnosis is not a unique physiological state.

Psychoactive Drugs:

Continued use of psychoactive drugs can lead to dependence and addiction. During addiction and dependence, primary focus becomes obtaining and using the drug. The following statements have been found to be scientifically false: Addictive drugs quickly corrupt; Addictions can't be overcome voluntarily; therapy is a must; the concept of addiction can be extended to include much more than just drug dependencies.

Depressants: "downers" such as Barbiturates, opiates, alcohol. They calm neural activity; Slow body functions. **Stimulants:** "uppers" such as caffeine, nicotine, amphetamines, and cocaine. Temporarily excite neural activity and arouse body functions. **Hallucinogens:** Distort perceptions such as Marijuana, LSD, MDMA (ecstasy). Evoke sensory images in the absence of sensory input. Influences on drug use include biological, psychological and cultural.

09: Learning

Chapter Summary:

This tutorial focuses on learning and as such will first introduce both classical and operant conditioning and then compare these two techniques. We will then describe the 5 major conditioning processes. This tutorial will introduce the contributions of Pavlov, Skinner and Bandura. By the end of this tutorial the learner will have developed an understanding of the basic procedures and terms used in classical and operant conditioning.

Tutorial Features:

Specific Tutorial Features:

- Flow charts and concept maps are used to introduce key points.
- Comprehensive and easily understood introduction to key concepts and their relationship to behavior.
- Use of comparisons to explore this topic

Series Features:

- Concept map showing inter-connections of concepts.
- Definition slides introduce terms as they are needed.
- Visual representation of concepts
- Examples given throughout to illustrate how the concepts apply.
- A concise summary is given at the conclusion of the tutorial.

Key Concepts:

- **Learning** is a relatively permanent change in an organism's behavior due to experience.
- **Associative Learning** is learning that certain events occur together.
- **Conditioning** is the process of learning associations.
- **Classical Conditioning** is learning to associate two stimuli and thus to anticipate events.
- **Operant Conditioning** is learning to associate a response and its consequence: reward or punishment.
- **Observational Learning** is learning from others' experiences and examples.
- **Behaviorism** is the view that psychology should be an objective science that studies behavior without reference to mental processes.
- **Shaping**: an operant conditioning procedure in which reinforcers guide behavior toward closer and closer approximations of a desired goal.
- **Reinforcer**: any event that strengthens the behavior it follows.
- **Primary reinforcer**: an innately reinforcing stimulus.
- **Conditioned reinforcer**: a stimulus that gains its reinforcing power through its association with a primary reinforcer.
- **Punishment**: event that decreases the behavior it follows.

Chapter Review:

Classical Conditioning:

A form of associative learning introduced by a Russian physiologist, Ivan Pavlov who studied dog's salivation cues. He showed how scientific research can reveal learning principles that apply across species. This led to John B. Watson's idea that human behavior, though biologically influenced, is mainly a bundle of conditioned responses. Unconscious Response

(UCR) is the unlearned, naturally occurring response to the unconditioned stimulus (UCS), such as salivation when food is in the mouth. Unconditioned Stimulus (UCS) is a stimulus that naturally and automatically triggers a response. Conditioned Response (CR) is the learned response to a previously neutral conditioned stimulus (CS). Conditioned Stimulus (CS) is an originally irrelevant stimulus that, after association with an UCS comes to trigger a conditioned response. He identified 5 major conditioning processes. **Acquisition:** initial stage of learning to associate a neutral stimulus with an unconditioned stimulus so that the neutral stimulus comes to elicit a conditioned response. **Extinction:** the diminishing of a conditioned response. **Spontaneous recovery:** the reappearance, after a rest period, of an extinguished conditioned response. **Generalization:** the tendency, once a response has been conditioned, for stimuli similar to the conditioned stimulus to elicit similar responses. **Discrimination:** the learned ability to distinguish between a conditioned stimulus and other stimuli that do not signal an unconditioned stimulus. The **drawbacks** to Classical Conditioning include: underestimated the importance of cognitive processes and did not take into account biological predisposition.

Operant Conditioning: Is a form of associative learning championed by B.F. Skinner that involves associating behaviour to consequences. Behaviors followed by reinforcers increases, those followed by punishers decrease. Elaborated on Edward L. Thorndike's law of effect to develop an operant chamber, popularly known as the Skinner box. He explored the precise conditions that foster efficient and enduring learning by using shaping and reinforcers. He developed reinforcement schedules: **Continuous Reinforcement:** reinforcing the desired response every time it occurs; **Partial (Intermittent) Reinforcement:** reinforcing a response only part of the time; results in slower acquisition but much greater resistance to extinction; **Fixed-ratio schedule:** reinforces a response only after a specified number of responses; **Variable-ratio schedule:** reinforces a response after an unpredictable number of responses; **Fixed-interval schedule:** reinforces a response only after a specified time has elapsed; **Variable-interval schedule:** reinforces a response at unpredictable time intervals.

Observational Learning: Albert Bandura was the pioneer in observational learning which involves learning through observation of others; especially true among higher animals. It involves observing and imitating others: modeling; the process of observing and imitating a specific behavior. It includes learning social behaviors and it is important in child's development. Mirror neurons: frontal lobe neurons that fire when performing certain actions or when observing another doing so; may enable imitation, language learning, and empathy. Prosocial behavior: positive, constructive, helpful behavior; the opposite of antisocial behavior. What determines if we imitate a model? Part of the answer is reinforcements and punishments; those received by the model as well as by the imitator. We look and we learn. By looking, we learn to anticipate a behavior's consequences in situations like those we are observing. We are especially likely to imitate those we perceive as similar to ourselves, as successful, or as admirable.

"The consensus among most of the research community is that violence on television does lead to aggressive behavior in children and teenagers who watch the programs." National Institute of Mental Health, 1982

10: Memory

Chapter Summary:

The psychological view of memory is simplified in this tutorial. The various types and stages involved in memory are explored. The contributions of Hermann Ebbinghaus are introduced. This tutorial concludes with an overview of the basic retrieval cues and the three types of forgetting.

Tutorial Features:

Specific Tutorial Features:

- Simple illustrations of key concepts and experiments.

Series Features:

- Concept map showing inter-connections of concepts in this tutorial.
- Definition slides introduce terms as they are needed.
- Visual representation of concepts
- Examples given throughout to illustrate how the concepts apply.
- A concise summary is given at the conclusion of the tutorial.

Key Concepts:

- **Memory** is the persistence of learning over time through the storage and retrieval of information.
- **Flashbulb Memory** is a clear memory of an emotionally significant moment or event.
- **Encoding** is the process of information into the memory system.
- **Storage** is the retention of encoded information over time.
- **Retrieval** is the process of getting information out of memory storage.
- **Sensory Memory** is the immediate, initial recording of sensory information in the memory system.
- **Short-term Memory** is activated memory that holds a few items briefly before the information is stored or forgotten.
- **Working Memory** is similar to short-term memory but focuses more on the processing of briefly stored information.
- **Long-term Memory** is the relatively permanent and limitless storehouse of the memory system.

Chapter Review:

Memory Encoding

Encoding occurs either automatically or with effort. **Automatic Encoding** provides the ability for the attention to simultaneously process information that requires effort. **Effortful Encoding** requires rehearsal. **Hermann Ebbinghaus** pioneered research into this area
 Main finding: the amount of remembered material depends on the time spent learning
 Even after we learn material, over-learning increases retention. **Next-In-Line Effect:** Poorest memories are for what was said just before they are to speak. We focus on our own performance and fail to process the last person's words. Information processing in the seconds just before sleep seldom is remembered; Sleep learning doesn't occur. **The Spacing Effect:** Retain information better when rehearsal is distributed over time. **The Serial Position Effect: Encoding Meaning:** Automatically associate information with its meaning; what we already know or imagine. We tend not to remember things exactly as

they were. We construct a model. We recall the mental model we constructed from the information. Deeper, semantic encoding yields much better memory than the “shallow processing” elicited by focusing on acoustic or visual processing. **Encoding Imagery:** Remember words if they lend themselves to images. Mnemonic devices include: method of loci; peg-word system; acronyms; organizing into chunks and hierarchies. and cultural.

Memory Storage

Three-Stage Processing Model: The brain translates sensory information into a neural language. Iconic: fleeting, photographic; Echoic: fleeting, auditory. **Short-term Memory** is limited in duration and capacity; can only hold 7 ± 2 bits of information. Must encode or rehearse in order to keep the information. It is better for random digits than for random letters. **Long-term Memory:** Capacity is limitless. Forgetting occurs as new experiences interfere with our retrieval. The physical memory trace gradually decays. Studies have shown that memory does not reside in individual neurons or in the electrical activity. Increased synaptic efficiency makes for more efficient neural circuits. Prolonged strengthening of potential neural firing is called long-term potentiation (LTP). Two types: **Explicit** memories of names, images, and events are laid down via the hippocampus. **Implicit** memories are laid down via the cerebellum.

Memory Retrieval and Forgetting

We remember more than we recall. Retrieval cues provide reminders of information. **PRIMING:** To retrieve a specific memory, you first need to identify one of the strands that leads to it. Retrieval cues often prime our memories of earlier experiences. Context Effect: Better recall when retested in the same place. **Mood Congruency:** Events in the past may have aroused a specific emotion that later can prime us to recall its associated events. Moods bias memory. Seven sins of memory: Absent-mindedness; Transience; Blocking; misattribution; Suggestibility; Bias; Persistence. **Encoding Failure:** didn't make it into Long-term memory. **Storage Decay:** memories are lost over time. **Retrieval Failure:** Interference or Motivated forgetting.

11: Language

Chapter Summary:

This tutorial covers the contributions of B.F. Skinner and Noam Chomsky to language development and also describes the stages of language acquisition. By the end of the tutorial, learners will appreciate the imaging and stimulation studies focused on language and understand the basic structures involved in language.

Tutorial Features:

Specific Tutorial Features:

- Comprehensive and easily understood explanation of the concepts involved.

Series Features:

- Concept map showing inter-connections of concepts in this tutorial.
- Definition slides introduce terms as they are needed.
- Visual representation of concepts
- Examples given throughout to illustrate how the concepts apply.
- A concise summary is given at the conclusion of the tutorial.

Key Concepts:

- **Language** is our spoken, written, or signed words and the ways we combine them to communicate meaning.
- **Phoneme** in a spoken language is the smallest distinctive sound unit.
- **Morpheme** in a language is the smallest unit that carries meaning.
- **Grammar** in a language is a system of rules that enables us to communicate with and understand others.
- **Semantics** is the set of rules by which we derive meaning from morphemes, words, and sentences in a given language.
- **Syntax** is the rules for combining words into grammatically sensible sentences in a given language.

Chapter Review:

Structure of Language

Language is built on elements that emerge as a child matures. All 6000 human languages are intricately complex. It is complexity built on simplicity. Language contains three main elements: **Phonemes**: Languages have varying numbers of phonemes. English has about 40; other languages have from 20 to 80. In a survey of over 500 languages, 869 phonemes were identified. People growing up learning one set of phonemes usually have difficulty pronouncing those of another language. Sign language has phoneme-like building blocks defined by hand shapes and movements. **Morphemes**: Most morphemes are a combination of two or more phonemes. Some morphemes are words but others are only parts of words. **Grammar**: Enables us to communicate with others. Semantics is the set of rules we use to derive meaning from morphemes, words, and sentences. Syntax refers to the rules we use to order words into sentences.

Language Development:

Language Acquisition: Infants start without language. By 4 months of age, babies can read lips and discriminate speech sounds. **Babbling Stage**: Babies start babbling at about 4

months of age in which they spontaneously utter a variety of sounds but it is not an imitation of adult speech. It includes sounds from various languages. We cannot identify the household language from the babbling. Deaf infants also babble. By 10 months of age: babbling begins to resemble household language. Phoneme sounds outside the infant's native tongue begin to disappear. Eventually lose ability to discriminate sounds they never hear. **One-word Stage:** 12 months old. Child begins to use sounds to communicate meaning. Family members quickly learn an infant's language. Gradually the infant's words conform to the family's language. **Two-word Stage:** 18 months old. Acquire many single words. Uses two-word sentences; telegraphic speech. It follows rules of syntax. No three-word stage; straight to full sentences

Explaining Language Development: B.F. Skinner: Operant conditioning. Explained with familiar learning principles: Association of sights with sounds and words; Imitation of words and syntax modeled by others; Reinforcement: smiles and hugs. **Noam Chomsky: Inborn Universal Grammar.** He believed language is almost entirely inborn. The rate of learning is far too fast to be explained solely by learning principles. Language is not imitated: generate sentences they have never heard. They begin using morphemes in a predictable order. By 4, they can pick out sentences that make sense. Young children tend to over-generalize rules. His views were backed by Baker in 2001.

Cognitive neuroscience's view: Somewhere between Chomsky and Skinner. It uses computational models to study language acquisition. It involves gradual changes in network connections based on experience: statistical structure. Children become linguistically stunted if isolated from language during the critical period for its acquisition. When a young brain does not learn any language, its language-learning capacity never fully develops.

Methods of Studying Language: early methods included postmortem examination and subjective testing. More modern methods include MRI and PET scanning, and electrical stimulation. **Electrical Stimulation:** Motor cortex stimulation: Immediate speech arrest or vocalizations which can be used on either hemisphere. Aphasic Arrest found in left hemisphere only and correlates approximately with Broca's Area, Arcuate fasciculus, Wernicke's Area. **Imaging Studies:** Confirmation of information already known. Found that language processing is more complex and involves a high degree of bilateral activity. Visual evoked increases in striate and extrastriate cortex; Auditory evoked increases in primary and secondary auditory cortex. Extrastriate and secondary auditory were specific to words only.

12: Thinking and Problem Solving

Chapter Summary:

This tutorial describes how we think, solve problems, and make decisions to include critical thinking skills. It also presents a description of the concept of heuristics and explain how they can assist or interfere with problem solving. By the end of this tutorial, the learner will have developed an appreciation for the various methods we use to solve problems and their limitations and an understanding for the basic contributions of framing, belief bias, and overconfidence as they apply to making decisions.

Tutorial Features:

Specific Tutorial Features:

- Comprehensive and easily understood explanation of the concepts involved.

Series Features:

- Concept map showing inter-connections of concepts in this tutorial.
- Definition slides introduce terms as they are needed.
- Visual representation of concepts
- Examples given throughout to illustrate how the concepts apply.
- A concise summary is given at the conclusion of the tutorial.

Key Concepts:

- **Cognition** is the mental activities associated with thinking, knowing, remembering, and communicating.
- **Concept** is a mental grouping of similar objects, events, ideas, or people.
- **Prototype** is a mental image or best example of a category.
- **Algorithm** is a methodical, logical rule or procedure that guarantees solving a particular problem.
- **Heuristic** is a simple thinking strategy that often allows us to make judgments and solve problems efficiently.
- **Insight** is a sudden and often novel realization of the solution to a problem.
- **Critical Thinking** is the careful, deliberate determination of whether one should accept, reject, or suspend judgment about a claim.

Chapter Review:

Thinking: is also known as cognition. We form concepts as a way to think about the countless events, objects and people in our world. Animals can form concepts. To simplify matters, we organize concepts into hierarchies. **Prototypes:** involves forming concepts by definition. Inspiration is sudden insight. Three ways to solve problems: Trial and Error (ex: Thomas Edison); Use an Algorithm (step-by-step); Use a Heuristic (simple strategies).

Impeding Problem Solving: Confirmation Bias is a tendency to search for information that confirms one's preconceptions. Fixation is the inability to see a problem from a new perspective. Mental Set is a tendency to approach a problem in a particular way; especially a way that has been successful in the past but may or may not be helpful in solving a new problem. Functional fixedness is the tendency to think of things only in terms of their usual functions. Representativeness heuristic is judging the likelihood of things in terms of how well they seem to represent, or match, particular prototypes; may lead one to ignore other relevant information.

Making Decisions: Everyday judgments and decisions rarely involve systematic reasoning; they involve heuristics. **Heuristics:** can help make quick, reasonable decisions. Intuitive judgments are instantaneous due to automatic information processing. The price is that sometimes bad judgments are made. **Representativeness Heuristic:** to judge the likelihood of things in terms of how well they represent particular prototypes. Enables a snap decision but also ignores statistics & logic. **Availability Heuristic:** basing our judgments on the availability of information in our memories. MacLeod & Campbell, 1992: the faster people can remember an instance of some event, the more they expect it to recur. Judgmental errors influenced by availability heuristics are not always harmless. A single vivid case can have more influence than statistical evidence. **Overconfidence:** the tendency to overestimate the accuracy of our knowledge and judgments. It involves a combination of using intuitive heuristics, eagerness to confirm beliefs, and knack for explaining away failures. It plagues decisions in real life but does have an adaptive value. **Framing:** the way we present an issue. It is best to frame risks by numbers rather than percentages. Understanding the power of framing can be used to influence important decisions: used in business. **Belief Bias** gets in the way of deductive reasoning. **Belief Perseverance:** our tendency to cling to our beliefs in the face of contrary evidence.

Critical Thinking: Evidence shows that in many cases, our intuition can lead us astray. Our notions of common sense similarly err. Paul Slovic and Baruch Fischhoff, 1977 & 1979; tested common sense. **Critical Thinking:** Parker & Moore define it as the careful, deliberate determination of whether one should accept, reject, or suspend judgment about a claim and the degree of confidence with which one accepts or rejects it. It employs not only logic but broad intellectual criteria such as clarity, credibility, accuracy, precision, relevance, depth, breadth, significance and fairness and gives due consideration to the: Evidence and Context of judgment which is the relevant criteria for making the judgment well. It involves applicable methods or techniques for forming the judgment. Applicable theoretical constructs for understanding the problem and the question at hand. Weak sense of critical thinking results from using intellectual skills alone without intellectual traits of mind. Strong sense of critical thinking requires intellectual humility, empathy, integrity, perseverance, courage, autonomy, confidence in reason, & others: Skepticism with humility. Scientific skepticism: process of critical thinking involves the careful acquisition and interpretation of information and use of it to reach a well-justified conclusion. Enables one to analyze, evaluate, explain, and restructure our thinking, decreasing thereby the risk of adopting, acting on, or thinking with, a false belief.

13: Intelligence Testing & Individual Differences

Chapter Summary:

This tutorial will explore intelligence testing and individual differences. During this exploration, you will be introduced to the contributions of Alfred Binet and Lewis Terman. The early errors and assumptions made in intelligence testing will be outlined as well as the differences between general intelligence and its subcategories. The concepts of reliability, validity and bias, as they relate to intelligence testing will be discussed. This tutorial will conclude with a discussion of the genetic and environmental contributions to individual differences.

Tutorial Features:

Specific Tutorial Features:

- Comprehensive and easily understood explanation of the concepts involved.

Series Features:

- Concept map showing inter-connections of concepts in this tutorial.
- Definition slides introduce terms as they are needed.
- Visual representation of concepts
- Examples given throughout to illustrate how the concepts apply.
- A concise summary is given at the conclusion of the tutorial.

Key Concepts:

- **Intelligence** is a mental quality; a socially constructed concept.
- **Intelligence test** is a method for assessing an individual's mental aptitudes and comparing them with those of others, using numerical scores.
- **Mental Age** is a measure of intelligence test performance the chronological age that most typically corresponds to a given level of performance.
- **Stanford-Binet** is the widely used American revision of Binet's original intelligence test.
- **General Intelligence (g)** is a general intelligence that underlies specific mental abilities
- **Savant syndrome** is a condition in which a person otherwise limited in mental ability has an exceptional specific skill.
- **Emotional Intelligence** is the ability to perceive, express, understand, and regulate emotions.
- **Aptitude test** is a test designed to predict a person's future performance.
- **Achievement test** is a test designed to assess what a person has learned.
- **Wechsler Adult Intelligence Scale (WAIS)** is the most widely used intelligence test and contains verbal and performance subtests.
- **Standardization** is the process of defining meaningful scores by comparison with the performance of a pretested "standardization group"
- **Reliability** is the extent to which a test yields consistent results.
- **Validity** is the extent to which a test measures or predicts what it is supposed to.
- **Social Intelligence** is the know-how involved in comprehending social situations and managing oneself successfully.

Chapter Review:

Origins of Intelligence Testing:

Alfred Binet, in 1904, began assessing intellectual abilities in response to overwhelming range of individual differences in French schools due to a new law. He developed an objective test to identify children likely to have difficulty in the regular classes. He began by assuming that all children follow the same course of intellectual development but some develop more rapidly and set out to measure a child's mental age. Lewis Terman revised Binet's test to reflect North American children. The revised test is the Stanford-Binet and was used to judge immigrants and World War 1 recruits. William Stern derived the famous intelligence quotient, or IQ. This test works well for children but not for adults. Contemporary testing using comparison of other age-matched people instead.

What is Intelligence?

Sternberg and Kaufman, 1998, determined that cultures deem 'intelligent' whatever attributes enable success in those cultures. Intelligence is whatever intelligence tests measure, which historically has tended to be school smarts. Charles Spearman believed there is also a general intelligence, or g, factor that underlies the specific factors. L. L. Thurstone gave 56 different tests to people and mathematically identified eight clusters of "primary mental abilities". Contemporary intelligence theories embrace the concept that intelligence involves several distinct abilities, which cluster together in the same individual often enough to define a small general intelligence factor. Sternberg distinguishes among three aspects of successful intelligence: analytical, creative, and practical. Traditional intelligence tests assess academic intelligence. Sternberg & Wagner: 1993 & 1995: tested practical intelligence; managerial skills. Nancy Cantor and John Kihlstrom studied Social Intelligence and repeatedly found that college grades only modestly predict later work achievement. Mayer, Salovey, & Caruso, 2000: Multifactor Emotional Intelligence Scale (MEIS). **Creativity** consists of: expertise; imaginative thinking skills; a venturesome personality; intrinsic motivation; and a creative environment.

Assessing Intelligence:

In the early 1800's; Franz Gall realized that human intelligence surpasses animal intelligence because the human cortex is more developed. Evidence: a +.44 correlation between brain volume and intelligence score. Orlovskaya and others in 1999 revealed that highly educated people die with more synapses. Einstein's brain was 15 percent larger in the parietal lobe's lower region. Frontal lobe area becomes active while people are taking intelligence tests. Those who perceive quickly tend to score somewhat higher on intelligence tests. Evoked brain response tends to be slightly faster when people with high intelligence scores perform a simple task. Aptitude: your ability to learn a new skill. Achievement: what have you learned? To be widely accepted, psychological tests must meet three criteria: they must be standardized, reliable, and valid. The Stanford-Binet and Wechsler tests meet these requirements. Standardized test results typically form a normal distribution, a bell-shaped pattern of scores that forms the normal curve. 50-70% of intelligence score variation can be attributed to genetic variation. The intelligence test scores of identical twins reared together are virtually as similar as those of the same person taking the same test twice. Twins reared separately have similar scores. Brain scans reveal that identical twins have very similar gray matter volume. One gene that influences intelligence, located on chromosome 6, has recently been identified. Researchers have produced smarter mice. Life experience matters. Our genes shape the experiences that shape us.

14: Motivation and Work

Chapter Summary:

This tutorial explores the theories of motivation including Maslow's Hierarchy. We will describe both the physiological and psychological contributors to various motivating stimuli such as hunger and sexual motivation. This tutorial will conclude by applying the concepts of personnel and organizational psychology to work motivation.

Tutorial Features:

Specific Tutorial Features:

- Simple illustrations of key concepts and experiments.
- Flow charts and concept maps are used to introduce key points.

Series Features:

- Concept map showing inter-connections of concepts in this tutorial.
- Definition slides introduce terms as they are needed.
- Visual representation of concepts
- Examples given throughout to illustrate how the concepts apply.
- A concise summary is given at the conclusion of the tutorial.

Key Concepts:

- **Motivation** is a need or desire that energizes and directs behavior.
- **Instinct** is a complex behavior that is rigidly patterned throughout a species and is unlearned.
- **Incentive** is a positive or negative environmental stimulus that motivates behavior.
- **Set Point** is the point at which an individual's "weight thermostat" is supposedly set.
- **Basal Metabolic Rate** is the body's resting rate of energy expenditure.
- **Anorexia Nervosa** is an eating disorder in which a normal-weight person diets and becomes significantly underweight yet still feeling fat, continues to starve.
- **Bulimia Nervosa** is an eating disorder characterized by episodes of overeating, usually of high-calorie foods, followed by vomiting, laxative use, fasting, or excessive exercise.
- **Sexual Orientation** is an enduring sexual attraction toward members of either one's own sex (homosexual) or the other sex (heterosexual).

Chapter Review:

Concepts in Motivation:

Motivation is a hypothetical concept. Early theory classified almost all behaviors as motivations but they did not explain them; merely named them. However, they did utilize the underlying assumption that genes predispose species-typical behavior. Most current psychologists view human behavior as directed by physiological needs and psychological wants. **Drive Reduction theory** is based on the idea that physiological need creates an aroused state. A physiological drive is an aroused, motivated state. The physiological aim of drive reduction is homeostasis. We are also pulled by incentives; positive or negative stimuli that lure or repel us. A strong drive has both need and incentive. Biological rhythms cycle through times of arousal. In 1970, **Maslow's Hierarchy of Needs** was published.

Representative Motivations:

Hunger: a demonstration of need. In **1950: Ancel Keys** & colleagues studied semi-starvation in 36 male volunteers and found both physiological & psychological effects. **Washburn & Cannon** confirmed that an empty stomach caused hunger pangs. The lateral hypothalamus brings on hunger; the ventromedial hypothalamus depresses hunger. Eating is motivated by physiology and psychology. **Sexual Motivation:** our genes' way of preserving and spreading themselves. In **1966: William Masters & Virginia Johnson** developed the **Sexual Response Cycle**. Hormones direct the development of male and female sex characteristics & activate sexual behavior. We express the direction of our sexual interest in our sexual orientation. Women's sexual orientation is less strongly felt & potentially more fluid & changeable. The brain, genes, & prenatal environmental all play a role.

The Need to Belong:

Social bonds boosted our ancestors' survival rate. Researchers have surmised that groups gained protection from predators & enemies. Self-esteem increases when we feel included, accepted, and loved. The need to belong feeds both deep attachments and menacing threats. We resist breaking social bonds. For children, a brief time-out in isolation can be an effective punishment

Adults: social ostracism can be very painful.

Motivation in the Workplace:

Industrial-organizational psychology or I/O has two subfields: Personnel psychology and Organizational psychology. **Personnel psychology:** applies psychology's methods and principles to selecting and evaluating workers. Main goal: match people's strengths with work. Personnel psychologists use many tools: main one is the job interview. The Interviewer Illusion: interviewers often overrate their discernment. Structured Interviews improve prediction and selection. These psychologists also focus on appraising performance. **Organizational psychology:** considers how work environments and management styles influence worker motivation, satisfaction, and productivity. People with high achievement motivation do achieve more. Outstanding performers are highly motivated and self-disciplined. Engaged and satisfied employees are more productive. Leadership style plays an important role.

15: Emotion

Chapter Summary:

This tutorial will begin by comparing and contrasting the various theories of emotion. We will then outline the physiological responses to emotions before explaining the role of nonverbal communication in emotions. This tutorial will conclude by applying research findings to the detection and computation of emotions.

Tutorial Features:

Specific Tutorial Features:

Comprehensive and easily understood explanation of the concepts involved.

Series Features:

- Concept map showing inter-connections of concepts in this tutorial.
- Definition slides introduce terms as they are needed.
- Visual representation of concepts
- Examples given throughout to illustrate how the concepts apply.
- A concise summary is given at the conclusion of the tutorial.

Key Concepts:

- **Emotion** is a response of the whole organism involving physiological arousal, expressive behaviors, and conscious experience.
- **Cognition** is our perceptions, memories and interpretations.
- **Empathy** is ability to identify with others.

Chapter Review:

Theories of Emotion:

Schachter's Two-Factor Theory: emotions have two ingredients: physical arousal and a cognitive label. Like James and Lange, our experience of emotion grows from our awareness of our body's arousal. Like Cannon and Bard, emotions are physiologically similar. An emotional experience requires a conscious interpretation of the arousal. Arousal response to one event can spill over into the next event. Robert Zajonc: we do NOT have to first label our arousal to experience emotion. Emotional reactions can be quicker than our interpretations. Research on neurological processes confirms theory. Some emotion neural pathways bypass cortical areas involved in thinking.

The Physiology of Emotions:

We perform best when we feel moderately aroused. The level of arousal for optimal performance varies with task difficulty. Physiology of many emotions appears quite similar but feels different. Heart rate, breathing and perspiration are similar for anger, fear, and sexual arousal but the valence is different. Emotions manifest as a unique combination of physiological & physical signs and symptoms. Amygdala activity was specific for viewing fearful faces. Positive emotions & personalities appear to be more focused in the left prefrontal cortex. Disgust & negative personalities appear to be more focused in the right prefrontal cortex. Most physical accompaniments of emotion appear innate and universal.

Expressed Emotions:

Nonverbal communication includes body language, tone of voice, and facial expressions. Suppression of expression = impairing memory for details with the eyes showing fear and

anger, and the mouth showing happiness. We are especially good at detecting nonverbal threats. Introverts are better at reading other's emotions. Extroverts are easier to read. Experience can sensitize us to particular emotions.

Empathy

Judith Hall: analyzed 125 studies: women generally surpass men at reading people's emotional cue. Questioned if this is a by-product of traditional gender roles? Studies of 23,000 people from 26 cultures: women reported being more open to feelings. Women are far more likely to describe themselves as empathetic. Physiological measures of empathy show a much smaller gender gap. Females are more likely to express empathy; react more visibly.

Detecting and Computing Emotion

Facial muscles reveal signs of emotions you may be trying to conceal. Detecting lying and deceit takes practice. Our brains are amazing emotion detectors. Electrodes attached to facial muscles can detect hidden reactions. This has an application to job interviews. Meaning of gestures varies with the culture. Cultures and languages share many similarities in categorizing emotions. Physiological indicators of emotion also cross cultural boundaries. Not due to learned behaviours. Charles Darwin: facial expressions helped with survival. Smiles are a social phenomena as well as emotional reflexes. Adaptive for us to interpret faces in particular contexts
Cultures differ in how much emotion they express.

Affects of Facial Expressions

Expressions communicate, amplify & regulate emotion. Study participants could change their emotion depending on their induced facial expressions. Facial feedback is subtle but detectable. People manipulated into furrowing their brows feel sadder when looking at sad photos. Looking at oneself in the mirror amplifies the effect. How we walk and hold our posture affects our mood. Imitating other people's expressions helps us feel what they are feeling.

16: Life-Span Approach and Developmental Theories

Chapter Summary:

This tutorial will help to explain three main issues in developmental psychology. We will then outline the events in prenatal development and state the contributions of Jean Piaget. After applying research findings that helped form our current theories of social development, this tutorial will conclude by comparing and contrasting the three main parenting styles and describe which one appears to be most effective.

Tutorial Features:

Specific Tutorial Features:

- Comprehensive and easily understood explanation of the concepts involved.

Series Features:

- Concept map showing inter-connections of concepts in this tutorial.
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Key Concepts:

- **Developmental Psychology** studies physical, cognitive, and social change throughout the life span.
- **Zygote** is the fertilized egg.
- **Embryo** is the developing human organism from about 2 weeks after fertilization through the second month.
- **Fetus** is the developing human organism from 9 weeks after conception to birth.
- **Teratogens** are agents, such as chemicals and viruses that can reach the embryo during prenatal development and cause harm.
- **Rooting reflex** is a baby's tendency, when touched on the cheek, to open the mouth and search for the nipple.
- **Maturation** is the biological growth processes that enable orderly changes in behaviour, relatively uninfluenced by experience.
- **Schema** is a concept or framework that organizes and interprets information.
- **Assimilation** is interpreting one's new experience in terms of one's existing schemas.
- **Accommodation** is adapting one's current understandings (schemas) to incorporate new information.
- **Object permanence** is the awareness that things continue to exist even when not perceived.
- **Conservation** is the principle that properties such as mass, volume, and number remain the same despite changes in forms of objects.
- **Theory of Mind** is people's ideas about their own and others' mental states and the behaviours these might predicts.
- **Stranger Anxiety** is the fear of strangers that infants commonly display.
- **Attachment** is an emotional tie with another person.
- **Critical period** is an optimal period shortly after birth when an organism's exposure to certain stimuli or experiences produces proper development.
- **Imprinting** is the process by which certain animals form attachments during a critical period very early in life.

- **Self-Concept** is a sense of one's own identity and personal worth.

Chapter Review:

Developmental Psychology:

Current developmental psychologists take a Life-span perspective with a focus on discovering how maturation and experience shape us. This focus is on **Three Main Issues:** Nature / Nurture Issue: how much do genetic inheritance (our nature) and experience (the nurture we receive) influence our development? Continuity /Stages Issue: Is development a gradual, continuous process or does it proceed through a sequence of separate stages? Stability / Change Issue: Do our early personality traits persist through life, or do we become different people as we age?

Conception to Birth:

Women are born with as many eggs as she will ever have and releases one mature egg at a time. Men constantly produce sperm and release over 200 million with each ejaculation. The Egg is 83,000 times larger than one sperm cell. When sperm reaches the egg, they release digestive enzymes. When one sperm penetrates, the egg's surface is blocked to others. Two cells become one; referred to as a zygote. Fewer than half of the zygotes survive beyond two weeks. They begin dividing immediately. At one week there are approximately 100 cells. The cells then begin to differentiate. By 10 days: Outer part becomes placenta; Inner part becomes embryo. Over next 6 weeks, organs begin to form and function. 9 weeks: Embryo looks human and is referred to as a fetus. By the end of sixth month, the fetus can survive if born. The fetus can hear its mother's voice while in the womb. Infants prefer mother's voice immediately. Placenta transfers nutrients & oxygen from mother to fetus while also screening out many potentially harmful substances but Teratogens can slip by.

Newborns:

Newborns are equipped with reflexes: will withdraw limbs to avoid pain and turn head to clear airway; rooting reflex to obtain food; reflexively cry when hungry. Until 1960's: thought that newborns could only see a blur of meaningless light and dark shades. Research shows we are born preferring sights & sounds that facilitate social responsiveness. Perceptual abilities develop continuously. Newborns are already using sensory equipment to learn. Brain and mind develop together. The sequence of motor development is universal.

Infancy & Childhood:

Jean Piaget is the most influential developmental psychologist. He believed that children reason in wildly illogical ways about problems whose solutions are self-evident to adults. We assimilate new experiences: interpret them in terms of our current schemas. We accommodate, or adjust our schemas to fit the particulars of new experiences; as children interact with the world, they construct and modify their schemas. He believed children develop through a series of stages. Each stage has distinctive characteristics: Permits specific kinds of thinking. Current thinking sees development as more continuous. Current psychologists believe Piaget underestimated young children's competence.

Sensorimotor Stage: from birth to nearly age 2. Children take in the world through their sensory & motor interactions but lack object permanence until age 8 months.

Sensorimotor Stage: Preschool to age 6 or 7. Children are too young to perform mental operations and are unable to perceive things from another's point of view. Preschoolers begin forming a theory of mind. **Concrete Operational Stage:** Age 7. Children are capable of thinking in words & of conservation. **Formal Operational Stage:** Age 12. Children are capable of abstract thinking. These stages provide implications for teachers and parents. In all cultures, infants develop an intense bond with their caregivers; leads to stranger anxiety. At 12 months, attachment is firmly developed. Origins of attachment are

body contact & familiarity. There is both secure & insecure attachment. Responsive parenting plays a large role in which form children take. A child's self-concept gradually strengthens. By age 8 to 10, their self-image is quite stable. Newborns learn to make sense of sensations with a greater speed than psychologists once believed possible.

17: Dimensions of Development

Chapter Summary:

This tutorial will identify the key physical changes that occur throughout adolescence and adulthood and explain the influences of adolescent development. An outline of gender differences in adolescent and adult development will be provided. This tutorial will conclude with a brain development comparison between adolescents and adults.

Tutorial Features:

Specific Tutorial Features:

- Comprehensive and easily understood explanation of the concepts involved.

Series Features:

- Concept map showing inter-connections of concepts in this tutorial.
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Key Concepts:

- **Adolescence** is life between childhood & adulthood (teen years).
- **Puberty** is the period of sexual maturation, during which a person becomes capable of reproducing.
- **Primary Sex characteristics** are the body structure that make sexual reproduction possible.
- **Secondary Sex Characteristics** are nonreproductive sexual characteristics.
- **Menarche** is the first menstrual period.
- **Spermarche** is the first ejaculation.
- **Identity** is one's sense of self.
- **Intimacy** is the ability to form close, loving relationships.
- **Generativity** is being productive & supporting future generations.
- **Menopause** is the time of natural cessation of menstruation.
- **Alzheimer's Disease** is a progressive and irreversible brain disorder characterized by gradual deterioration of memory, reasoning, language, and finally, physical functioning.
- **Cross-sectional Study** is a study in which people of different ages are compared with one another.
- **Longitudinal Study** is research in which the same people are restudied and retested over a long period.
- **Crystallized Intelligence** is one's accumulated knowledge and verbal skills.
- **Fluid Intelligence** is one's ability to reason speedily and abstractly.
- **Social Clock** is the culturally preferred timing of social events such as marriage, parenthood, and retirement.

Chapter Review:

Adolescent Physical Development:

Adolescence starts with the beginnings of sexual maturity and ends with independent adult status. Sexual Maturity is beginning earlier than it used to. Early puberty coincides with increasing child obesity and father absence. This has psychological effects: benefits males, stressful for females. There are compulsory schooling influences. G. Stanley Hall: storm

and stress of adolescence. Tolstoy: a time of vitality without the cares of adulthood . Peer's approval imperative; Sense of direction in flux; Feelings of alienation. At age 11 in girls; age 13 in boys, the primary & secondary sex characteristics develop dramatically. Feelings of attraction begin 1-2 years previous. Until puberty, brain cells increase number of connections. During adolescence, selective pruning of unused connections occurs. Frontal lobe development lags behind emotional limbic system.

Adolescent Cognitive Development:

Ability to reason gives new level of social awareness & moral judgment. Adolescents begin to contemplate what is possible which leads to criticism of society, parents, & personal shortcomings. Adolescent reasoning is self-focused. Adolescents become more capable of abstract logic which allows them to reason hypothetically and deduce consequences.

Adolescent critical task: discerning right from wrong; developing character. Kohlberg: Adolescents move through stages from simplistic & concrete towards more abstract and principled. **Preconventional:** Occurs before age 9; Self-interest; To avoid punishment or gain concrete rewards. **Conventional:** Teenagers: social approval; teamwork; Cares for others & upholds laws & social rules. **Postconventional:** Not all people reach this level; what one perceives as basic ethical principles. Moral judgments are made quickly & automatically; involve emotion. Morality depends on social influences. Best predictor for teenage behavior is their friend's behavior. Moral education needs to focus on thinking, feeling, and acting.

Adolescent Social Development:

Erik Erikson: Adolescents' task is to synthesize past, present, and future possibilities into a clearer sense of self in which they will try out different "selves". They view self by individualism. Capacity for intimacy IF strong identity is first developed in teen years. Carol Gilligan: identity search differs between males & females. Males: individualists; Females: relationship-oriented. It is important in Western society to separate from parents. Parent-adolescent conflicts become temporarily more intense but progressively less frequent. Positive relations with parents support positive peer relations: healthy & happy. There is a diminishing parental influence: growing peer influence. Elliot Aronson: social atmosphere in most high schools is poisonously clique-driven and exclusionary.

Adult Physical Development:

Physical abilities crest by mid-twenties. Decline is gradual but then accelerates. It has less to do with age than with a person's health and exercise habits. It may trigger psychological responses. Foremost biological sign of aging in women is menopause. Expectations and attitudes influence emotional impact. Aging in men is seen in a more gradual decline in sperm count, testosterone level, speed of erection & ejaculation. Elderly are the most rapidly growing population group. Evolutionary Theory of Aging: We pass on our genes most successfully when we raise our young and then stop consuming resources. Sensory abilities gradually decrease. We are more susceptible to life-threatening ailments with aging. Neural processing in brain slows down as we age but there is compensation for those who remain active. Alzheimer's disease strikes 3% of world's population by age 75.

Adolescent Cognitive Development:

Adults can remember some things really well but less well for name recall; better for meaningful context. Type of experimental model showed different results. Cross-sectional: intelligence declines with age: longitudinal: remains stable until very late in life. This was due to strengths and weakness of each model. Crystallized intelligence increases up to very old age; fluid intelligence slowly declines. Cognitive differences explain most creative age.

Adult Social Development:

Life events associated with family, relationships, & work creates differences between younger & older adults. Studies show that "mid-life" crisis is a myth. Life events are more important than chronological age in shaping differences. Erik Erikson: Intimacy & Generativity dominate adulthood. Pair-bonding is a trademark of the human animal. 9 in 10 heterosexual adults marry. Most married Europeans & North Americans of both sexes feel happier than those who are unmarried. This is the same for lesbian couples. Neighbourhoods with high marriage rates typically have low rates of social pathologies. Marriages that last are not always devoid of conflict. Having a child is usually the happiest event in life. Children eventually leave home: can cause separation difficulties. Happiness is about having work that fits your interests & provides a sense of competence & accomplishment. Happy marriage: close, supportive companion who sees you as special and/or loving children. Old Age: less intense joy but greater contentment & increased spirituality. Normal range of reactions to death is wider than most suppose. Variations within every culture.

18: Personality Psychology

Chapter Summary:

The main perspectives regarding personality psychology are presented and compared in this tutorial. The contributions of Sigmund Freud are outlined and the Humanistic perspective is explained using Maslow's Hierarchy of Needs. The big five factors of trait perspective are listed. By the end of this tutorial, the learner will have developed an appreciation of the influence of culture on personality.

Tutorial Features:

Specific Tutorial Features:

- Comprehensive and easily understood explanation of the concepts involved.
- Effective Illustrations.

Series Features:

- Concept map showing inter-connections of concepts in this tutorial.
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Key Concepts:

- **Personality** is an individual's characteristic pattern of thinking, feeling, and acting.
- **Free Association** is a method of exploring the unconscious.
- **Psychoanalysis** is Freud's theory that attributes our thoughts and actions to unconscious motives and conflicts.
- **Unconscious** is that part of our mind that to Freud, is a reservoir of mostly unacceptable thoughts, wishes, feelings and memories.
- **Defence Mechanisms** in psychoanalytic theory, is the ego's protective methods of reducing anxiety by unconsciously distorting reality.
- **Collective Unconscious** is Carl Jung's concept of a shared, inherited reservoir of memory traces from our species' history.
- **Identity** is one's sense of self.
- **Trait** is a characteristic pattern of behavior or a disposition to feel and act.
- **Reciprocal Determinism** is the interacting influences between personality and environmental factors.
- **Spotlight Effect** is overestimating others' noticing and evaluating.

Chapter Review:

Psychoanalytical Perspective: Sigmund Freud

He developed a "Theory of Personality". He first used hypnosis but later switched to free association. He focused on helping people retrieve and release painful unconscious memories. The mind is like an iceberg where most of our mind, the unconscious, is below our awareness. Unacceptable passions & thoughts are repressed or forcibly blocked from consciousness but still have a powerful influence on us. **Id** is a reservoir of unconscious psychic energy that constantly strives to fulfill basic drives and operates on the pleasure principle. **Ego** operates on the reality principle and acts to gratify the id's impulses in realistic ways and is partly conscious. **Superego** is the voice of conscience that focuses on

how one ought to behave and strives for perfection but also produces pride and guilt. Personality forms during first few years of life: Psychosexual Stages. Anxiety is the price we pay for civilization and is the ego's fear of losing control. Defense mechanisms help us repress our sexual and aggressive impulses. Projective tests: Thematic Apperception & Rorschach Inkblot test. Tests lack validity or reliability. Recent research contradicts Freud's specific ideas. Development is lifelong: not fixed in childhood. His method of questioning could cause false memories. Little support for Freud's idea that defense mechanisms disguise sexual and aggressive impulses. Freud's theory rests on few objective observations and offers few hypotheses to verify or reject. Subconscious conducts cooler information processing that occurs without our awareness.

Carl Jung

A Neo-Freudian. He believed the unconscious contains more than repressed thoughts and feelings. He believed in a Collective Consciousness.

The Humanistic Perspective:

Focus on "healthy" ways people strive for self-determination and self-realization. It is championed by Abraham Maslow & Carl Rogers. The emphasis is on human potential. Rogers: People are basically good & have self-actualizing tendencies. Criticism: can lead to self-indulgence, selfishness, & erosion of moral restraint.

Contemporary Perspectives:

These focus on interaction of persons and environments. They involve analysis of basic dimensions & their impact on behavior. They are focused on studies of self-esteem, self-serving bias, and cultural influences.

Trait Perspective

William Sheldon, 1954: Body type: endomorph, mesomorph, ectomorph : modestly linked. To capture full individuality, place people on several trait dimensions simultaneously.

Eysenck Personality Questionnaire: Use a statistical procedure called "factor analysis" to identify clusters of test items. Biology influences personality factors.

Minnesota Multiphasic Personality Inventory (MMPI): empirically derived

Big Five Factors. Visiting another culture: traits remain hidden while we carefully attend to social cues.

Social-Cognitive Perspective

This perspective emphasizes the interaction of persons with their situations. It is based on the belief that we learn many of our behaviours either through conditioning or by observing others and modeling their behaviour. Mental processes are also important. External Locus of Control: Chance or outside forces determine their fate. Internal Locus of Control: To a great extent, each person has control of their own destiny. "Internals" achieve more at school, act more independently, enjoy better health, feel less depressed; have more self-control. Learned helplessness leads to passive resignation. The greatest advances are seen when optimism is combined with realism.

19: Abnormal Psychology

Chapter Summary:

This tutorial will list and explain the various types of anxiety disorders and will describe the biological and social-cognitive perspectives as they relate to specific psychological disorders. Explanations of the various symptoms of mood disorders will be provided as well as an overview of personality disorders before comparing and contrasting the various subtypes of schizophrenia.

Tutorial Features:

Specific Tutorial Features:

- Comprehensive and easily understood explanation of the concepts involved.
- Effective Illustrations.

Series Features:

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Key Concepts:

- **Psychological Disorder** is a “harmful dysfunction” in which behavior is judged to be atypical, disturbing, maladaptive, and unjustifiable.
- **Bio-Psycho-Social Perspective** is a contemporary perspective which assumes that biological, psychological, and sociocultural factors combine and interact to produce psychological disorders.
- **Neurotic Disorder** is a psychological disorder that is usually distressing but that allows one to think rationally and function socially.
- **Psychotic Disorder** is a psychological disorder in which a person loses contact with reality, experiencing irrational ideas and distorted perceptions.
- **Anxiety Disorders** are psychological disorders characterized by distressing, persistent anxiety or maladaptive behaviours that reduce anxiety.
- **Mood Disorders** are psychological disorders characterized by emotional extremes.
- **Schizophrenia** is a group of severe disorders characterized by disorganized and delusional thinking, disturbed perceptions, and inappropriate emotions and actions.
- **Personality Disorders** are psychological disorders characterized by inflexible and enduring behaviour patterns that impair social functioning.

Chapter Review:

Anxiety Disorders:

Generalized Anxiety Disorder: a person is continually tense, apprehensive, and in a state of autonomic nervous system arousal. Symptoms are commonplace; their persistence is not. Cannot identify cause; therefore cannot deal with or avoid it. **Panic Disorder:** marked by a minutes-long episode of intense dread in which a person experiences terror and accompanying chest pain, choking, or other frightening sensations. Of people who experience anxiety, 1 in 75 will experience a panic attack. It is unpredictable: it develops into a panic disorder: fear the fear: avoid situations. Agoraphobia is fear or avoidance of situations in which escape might be difficult or help unavailable when panic strikes: Charles

Darwin. **Phobias:** marked by a persistent, irrational fear and avoidance of a specific object or situation. It is a common psychological disorder that many people accept and live with.

Obsessive-Compulsive Disorder: characterized by unwanted repetitive thoughts (obsessions) and/or actions (compulsions). Example: Howard Hughes.

Explaining Anxiety Disorders:

Psychoanalytic Perspective: childhood repression of intolerable impulses, ideas and feelings
 Today: learning and biological perspectives. Learning: fear conditioning, stimulus generalization, reinforcement, observational learning. Biological: natural selection, genes, physiology.

Mood Disorders:

Major Depressive Disorder: a person, for no apparent reason, experiences two or more weeks of depressed moods, feelings of worthlessness, and diminished interest or pleasure in most activities. A dramatic increase is seen in number of people with depression.

Depression is a whole body disorder: Involves genetic predispositions, biochemical imbalances, melancholy mood, and negative thoughts. **Manic Episode:** marked by a hyperactive, wildly optimistic state. **Bipolar Disorder:** a person alternates between the hopelessness and lethargy of depression and the overexcited state of mania. Drugs that alleviate mania reduce Norepinephrine. Drugs that reduce depression increase Norepinephrine or Serotonin by blocking reuptake or blocking chemical breakdown. Brains of depressed people are less active, indicating a slowed-down state. Left frontal lobe: active during positive emotions; inactive in depressed states. Severely depressed patients: frontal lobes 7% smaller.

Schizophrenia:

1 in 100 people will develop schizophrenia. Strikes as young people are maturing into adulthood. It affects males & females equally but strikes men earlier & more severely. Due in part to Dopamine over activity: too many receptors. Chronic: abnormally low brain activity in frontal lobes. During hallucinations: vigorously active in several core regions including thalamus. It includes enlarged, fluid-filled areas with corresponding shrinkage of cerebral tissue, including smaller thalamus. Causes: combination of genes, prenatal, & psychological factors. Prenatal Causes: low birth weight, birth complications; conceived during times of famine. Mid-pregnancy viral infection affects fetal brain development Genetic factors: people might INHERIT a predisposition. **Chronic or Progress** Schizophrenia: Develops gradually; men more than women. It is emerging from a long history of social inadequacy. Helps explain why those predisposed to schizophrenia often end up in the lower socioeconomic levels or homeless. People with this condition exhibit negative symptoms. **Acute or Reactive Schizophrenia:** Reaction to particular life stress. Has a rapid onset; recovery is much more likely. People with this condition exhibit positive symptoms and respond to drug therapy.

Personality Disorders:

AVOIDANT: Anxiety; fearful sensitivity to rejection

SCHIZOID: Eccentric behaviors; social disengagement

HISTRIONIC: Dramatic or impulsive behaviors

NARCISSISTIC: Exaggerate their own importance

BORDERLINE: Unstable identity, relationships, emotions

Antisocial Personality Disorder: a personality disorder in which the person (usually a man) exhibits a lack of conscience for wrongdoing, even toward friends and family members May be aggressive and ruthless or a clever con artist.

20: Treatment of Psychological Disorders

Chapter Summary:

This tutorial will compare and contrast the various types of psychotherapies and then describe the research that supports or refutes each type of psychotherapy. It will then name and describe three different types of alternative therapies that have been studied before explaining the use of meta-analysis as it relates to the treatment of psychological disorders. This tutorial will conclude by describing the various types of biomedical treatments.

Tutorial Features:

Specific Tutorial Features:

- Comprehensive and easily understood explanation of the concepts involved.
- Effective Illustrations.

Series Features:

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Key Concepts:

Psychotherapy is an emotionally charged, confiding interaction between a trained therapist and someone who suffers from psychological difficulties.

Psychoanalysis is Freud's therapeutic technique that attributes our thoughts and actions to unconscious motives and conflicts.

Resistance is the blocking from consciousness of anxiety-laden material.

Transference is the patient's transferring to the analyst of emotions linked with other relationships.

Client-Centered Therapy is a humanistic therapy, developed by Carl Rogers.

Active Listening is empathic listening in which the listener echoes, restates, and clarifies.

Behavior Therapy is therapy that applies learning principles to the elimination of unwanted behaviors.

Counterconditioning is a behaviour therapy procedure that conditions new responses to stimuli that trigger unwanted behaviours and is based on classical conditioning.

Exposure Therapies are behavioural techniques that treat anxieties by exposing people to the things they fear and avoid.

Systematic Desensitization is a type of counterconditioning that associates a pleasant relaxed state with gradually increasing anxiety-triggering stimuli.

Aversive Conditioning is a type of counterconditioning that associates an unpleasant state with an unwanted behaviour.

Token Economy is an operant conditioning procedure that rewards desired behaviour.

Cognitive Therapy is therapy that teaches people new, more adaptive ways of thinking and acting.

Cognitive-Behaviour Therapy is a popular integrated therapy that combines changing self-defeating thinking with changing behaviour.

Family Therapy is therapy that treats the family as a system.

Meta-Analysis is a procedure for statistically combining the results of many different research studies.

Psychopharmacology is the study of the effects of drugs on mind and behaviour.

Electroconvulsive Therapy is a biomedical therapy for severely depressed patients in which a brief electric current is sent through the brain of an anaesthetized patient.

Psychosurgery is surgery that removes or destroys brain tissue in an effort to change behaviour.

Lobotomy is a now-rare psychosurgical procedure once used to calm uncontrollably emotional or violent patients and acts to cut the nerves that connect the frontal lobes to the emotion-controlling centers of the inner brain.

Chapter Review:

Psychotherapies:

There are two main categories: psychotherapies and biomedical therapies. Today's favored treatment depends on the therapist's viewpoint. Many therapists seek to integrate the insights from each view. There is interplay of bio-psycho-social influences composed of Psychoanalytic, Humanistic, Behavioral, Cognitive, and Group therapy.

Psychoanalytic therapy is rarely practiced today: Sigmund Freud. Psychoanalytic assumptions influence many other therapies. Basic premise: problems start in childhood. Blocks in the flow of free associations indicate resistance. The existence of repressed memories is hotly debated.

Humanistic therapy is client-centered & nondirective. FOCUS on: the present and future; conscious thoughts; taking immediate responsibility for one's feelings and actions; promoting growth; active listening.

Behavioral therapy applies learning principles to eliminate the unwanted behavior. It is based on the belief that maladaptive symptoms are learned behaviors: replace these with constructive behaviors. It uses classical conditioning, counterconditioning, exposure therapies, systematic desensitization, aversive conditioning, and operant conditioning such as token economies.

Cognitive therapies are based on the assumption that our thinking colors our feelings. It is used for nonspecific disorders: general anxiety & major depression. If depressing thinking patterns are learned, then they can be replaced: teach new, more constructive ways of thinking.

Cognitive-Behavioral therapy combines the reversal of self-defeating thinking with efforts to modify behavior.

Group therapy: All but traditional psychoanalysis can be carried out in small groups. It saves time & money with no decrease in effectiveness. It allows clients to try out new ways of behaving & receive feedback.

Evaluating Psychotherapies:

Researchers use **meta-analysis** to determine effectiveness of therapy. There are now more than 75 meta-analyses of psychotherapy outcomes. In 1952: **Hans Eysenck**: Summarized studies. He found 2/3 of patients markedly improved after psychotherapy but also found similar findings for untreated patients. Criticism: could only find 24 studies. In 1980: **Mary Lee Smith & colleagues** combined the results of 475 investigations. The evidence overwhelmingly supported the efficacy of psychotherapy.

Alternative therapies: Therapeutic Touch not supported; Light Exposure Therapy and EMDR are supported by research.

Light Exposure Therapy: To counter the effects of SAD: Seasonal Affective Disorder.

EMDR: Eye Movement Desensitization & Reprocessing. It was discovered in 1989 by **Francine Shapiro**. It is used to help traumatized people. 40,000 mental health professionals from 52 countries use this technique. It is validated by the Society of Clinical Psychology. Research has found three **Common Benefits** in various therapies: Hope for demoralized people; A new perspective on oneself and the world; and an empathic, trusting, caring relationship.

Biomedical Therapies:

Most biomedical treatments combine with life-skills programs & family support.

Drug Therapies are the most widely used biomedical treatments. They were introduced in the 1950s: greatly reduced need for psychosurgery or hospitalization. Researchers used Double-Blind Trials technique to determine efficacy.

Antipsychotic Drugs: dampen responsiveness to irrelevant stimuli by blocking dopamine or serotonin. They are most helpful for schizophrenia patients with positive symptoms.

Antianxiety Drugs: Depress central nervous system activity. The major criticism: reduces symptoms without dealing with underlying, unresolved problems & can lead to drug dependency.

Antidepressant Drugs: Increase the availability of norepinephrine or serotonin: **SSRIs**. People with depression often improve after a month on antidepressants; most people without treatment also improve.

Electroconvulsive Therapy: used only for severe depression. Usually consists of 3 sessions a week for 2 – 4 weeks: 80% or more of patients are markedly improved. Some memory loss is seen but no discernible brain damage.

Repetitive Transcranial Magnetic Stimulation: gentler approach.

Psychosurgery: removes or destroys brain tissue: Lobotomy. It was mostly abandoned when drug therapy became available.

21: Stress and Health

Chapter Summary:

This tutorial will define and describe various stressors and then outline the physiological effects of stressors. After a comparison between the acute and chronic effects of stress, this tutorial will conclude with an explanation of the role of health psychologists and their attempts to promote effective stress-coping strategies.

Tutorial Features:

Specific Tutorial Features:

- Comprehensive and easily understood explanation of the concepts involved.
- Effective Illustrations.

Series Features:

- Concept map showing inter-connections of concepts in this tutorial.
- Definition slides introduce terms as they are needed.
- Visual representation of concepts
- Examples given throughout to illustrate how the concepts apply.
- A concise summary is given at the conclusion of the tutorial.

Key Concepts:

- **Stress** is the process by which we perceive and respond to certain events, called stressors, that we appraise as threatening or challenging.
- **Health Psychology** is a subfield of psychology that provides psychology's contribution to behavioral medicine.
- **Behavioral Medicine** is an interdisciplinary field that integrates behavioral and medical knowledge and applies that knowledge to health and disease.
- **General Adaptation Syndrome (GAS)** is Selye's concept of the body's adaptive response to stress in three stages: alarm, resistance, exhaustion.
- **Coronary Heart Disease** is the clogging of the vessels that nourish the heart muscle; the leading cause of death in many developed countries.
- **Type A Personality** is Friedman and Rosenman's term for competitive, hard-driving, impatient, verbally aggressive, and anger-prone people.
- **Type B Personality** is Friedman and Rosenman's term for easygoing, relaxed people.
- **Type D Personality** is Denollet's term for distressed people, marked by negative emotions and social inhibition.
- **Psychophysiological Illness** is literally "mind-body" illness; any stress-related physical illness such as hypertension and some headaches.
- **Biofeedback** is a system for electronically recording, amplifying, and feeding back information regarding a subtle physiological state, such as blood pressure or muscle tension.

Chapter Review:

The Physiology of Stress:

Stress can profoundly affect health. The General alarm reaction: Physiological responses help protect body & brain. The General Adaptation Syndrome is harmful.

The Stress Response: A coordinated reaction to threatening stimuli characterized by: Avoidance behavior; Increased vigilance and arousal; Activation of sympathetic division of

ANS; and Mobilization of glucose stores by the release of cortisol from the adrenal glands. Hypothalamus is centrally involved. It orchestrates the humoral, visceromotor and somatic motor responses.

Stress and Illness:

POSITIVE effects: if perceive stressors as challenges: Arousing and motivating.

NEGATIVE effects: threaten our resources: Severe or prolonged stress can harm us due to child abuse and post-traumatic stress reactions that lead to later risks of chronic disease: elevated rates of circulatory, digestive, respiratory & infectious diseases. Prolonged stress can produce physical deterioration (hippocampus). Health consequences after catastrophes and significant life changes can be significant. Happiness stems from our response to daily events. Little stressors add up & take a toll on our health. Especially stressful if perceived as negative & uncontrolled. Link confirmed between perceived loss of control & pessimism with health problems. There is a link between economic status & longevity. Income inequality is a high predictor of premature death. Optimism influences our vulnerability to stress. Its affects include: mood, immune response, blood pressure, recovery from surgery. Stress and personality also play a BIG role in coronary heart disease risk. Type A personality is more prone to health risks. Type A's toxic core is NEGATIVITY: negative emotions have physical consequences. Stress itself does not make us sick: it makes us vulnerable. Stress & negative emotions do correlate with progression and speed to decline in HIV/AIDS. Stress & negative emotions linked to cancer's rate of progression. Placebo effect may involve eliciting an immune enhancement effect.

Health Promotion:

Attention is turning to health maintenance as ways to cope with stress, preventing illness, and promoting well-being. If we cannot eliminate stress by changing or ignoring a situation, we had best manage it. Confront it or escape the problem and take steps to prevent its recurrence. **Sustained exercise** Strengthens the body but also reduces stress, depression & anxiety. It is a useful adjunct to antidepressant drugs & psychotherapy. **Biofeedback:** We can train people to bring their heart rate and blood pressure under conscious control. Teach Type A heart attack victims to relax to reduce risk of a further heart attack. **Social support** promotes happiness and health. But, relationships can also be stressful: especially if crowded and lack privacy. Married people live longer, healthier lives. Positive, happy, supportive marriages are conducive to health; conflict-laden ones are not. Supportive environments foster stronger immune function. Suppressed traumas can affect our physical health. **Health-promotion programs** are cost effective. Persuading people can be challenging. First hurdle: get people to see their vulnerability to stress & behavior-related health problems.

22: Group Dynamics, Attribution Theory & Interpersonal Perception

Chapter Summary:

This tutorial will compare and contrast the effects of social facilitation and social loafing before defining and describing various theories and phenomenon within social psychology to include groupthink, group polarization, and deindividuation. It will then outline the Attribution Effect and conclude by explaining the experiments performed by Stanley Milgram as to typical procedure, findings, and implications.

Tutorial Features:

Specific Tutorial Features:

- Comprehensive and easily understood explanation of the concepts involved.
- Effective Illustrations.

Series Features:

- Concept map showing inter-connections of concepts in this tutorial.
- Definition slides introduce terms as they are needed.
- Visual representation of concepts
- Examples given throughout to illustrate how the concepts apply.
- A concise summary is given at the conclusion of the tutorial.

Key Concepts:

- **Social Psychology** is the scientific study of how we think about, influence, and relate to one another.
- **Attribution Theory** is the theory that we tend to give a causal explanation for someone's behavior, often by crediting either the situation or the person's disposition.
- **Fundamental Attribution Error** is the tendency for observers, when analyzing another's behavior, to underestimate the impact of the situation and to overestimate the impact of personal disposition.
- **Attitude** is a belief and feeling that predisposes one to respond in a particular way to objects, people, and events.
- **Foot-in-the-door Phenomenon** is the tendency for people who have first agreed to a small request to comply later with a larger request.
- **Cognitive Dissonance Theory** is the theory that we act to reduce the discomfort we feel when two of our thoughts are inconsistent.
- **Conformity** is adjusting one's behavior or thinking to coincide with a group standard.
- **Normative Social Influence** is the influence resulting from a person's desire to gain approval or avoid disapproval.
- **Informational Social Influence** is the influence resulting from one's willingness to accept another's opinions about reality.
- **Social Facilitation** is improved performance of tasks in the presence of others that occurs with simple or well-learned tasks but not with tasks that are difficult or not yet mastered.
- **Social Loafing** is the tendency for people in a group to exert less effort when pooling their efforts toward attaining a common goal than when individually accountable.
- **Deindividuation** is the loss of self-awareness and self-restraint occurring in group

- situations that foster arousal and anonymity.
- **Group Polarization** is the enhancement of a group's prevailing attitudes through discussion within a group.
- **Groupthink** is the mode of thinking that occurs when the desire for harmony in a decision-making group overrides a realistic appraisal of alternatives.

Chapter Review:

The Attribution Process: In 1958, **Fritz Heider** proposed the Attribution Theory. People usually attribute others' behavior to either their internal dispositions or their external situations. In 1979, **Napolitan & Goethals'** experiments illustrated the Fundamental Attribution Error. When explaining our own behavior, we are sensitive to how our behavior changes with the situations we encounter. When explaining others' behavior we disregard the situation and leap to unwarranted conclusions about their personality traits. Observing someone in varied situations counters the fundamental attribution error. Judgments have consequences. Most people assume that changing someone's attitudes can change behavior but dozens of experiments show this is not true. Attitudes will guide our actions if outside influence on what we say and do is minimal. Powerful situations can manipulate what we say. Attitudes Follow Behavior confirmed by the foot-in-the-door phenomenon and the phenomenon that role playing affects attitudes. It works for good deeds as for bad. We feel motivated to justify our actions. **Leon Festinger**, Cognitive Dissonance Theory: "If I chose to do or say it, I must believe it". The implications are that we can influence our feelings by altering our behaviors. People often act differently than they talk.

Group Dynamics:

There is an enormous power of social influence. This is seen in our conformity, compliance, & group behavior. Behavior is contagious. In **1999: Chartrand & Bargh** tested the Chameleon Effect which is unconsciously mimicking others' expressions, postures, & voice tones. Mimicry is part of empathy. There are serious effects of suggestibility. Social Norms: understood rules for accepted & expected behavior. We tend to conform to avoid rejection or gain social approval. Our view depends on our values. Cultures vary in the value they place on individualism or collectivism. In **1960's & 70's: Stanley Milgram** conducted Obedience Experiments. They would conduct shock experiments to see if participants would comply with giving apparently very strong shocks to other people. They found that 63% of men aged 20 to 50 years old complied fully. Their methods set off a huge ethics debate. Strong social influences can make people conform to falsehoods or capitulate to cruelty.

Interpersonal Perception:

In **1898: Norman Triplett:** Social Facilitation experiments. When observed, we perform unmastered tasks less well. The most likely response, in the case of easy tasks, is usually the correct response. The most likely response, in difficult tasks, is usually not the correct one. In **1974: Alan Ingham** & colleagues studied Social Loafing. Deindividuation involves abandoning normal restraints to the power of the group. Over time, an initial difference between groups tends to grow and leads to enhancement of a group's prevailing tendencies.

The terrorist mentality: Suicide terrorists are not born terrorists: Their actions are the fruit of a long process that engages the polarizing effect of interaction among the like-minded. It arises among people who get together because of a grievance and then become more and more extreme as they interact in isolation from any moderating influences.

Groupthink: group interactions can distort important decisions. It involves harmonious but unrealistic group thinking. It is fed by overconfidence, conformity, self-justification, and group polarization. It is prevented when a leader welcomes various opinions, invites experts' critiques of developing plans, & assigns people to identify possible problems.

The power of individuals: Social control and personal control interact. The power of committed individuals has an influence on their groups. When feeling pressured, we may

react by doing the opposite of what is expected: reasserts our sense of freedom. The power of one or two consistently committed individuals can sway majorities.

23: Prosocial & Antisocial Behavior & Cultural Influence

Chapter Summary:

This tutorial will start by defining and describing prejudice to include, the scapegoat theory, and both its social and cognitive roots. It will then outline the biological and psychological roots of aggression and the media influence before comparing and contrasting the characteristics of attraction, altruism, and peacemaking. This tutorial will conclude by explaining the phenomenon of social traps and enemy perceptions as they relate to conflict.

Tutorial Features:

Specific Tutorial Features:

- Comprehensive and easily understood explanation of the concepts involved.
- Effective Illustrations.

Series Features:

- Concept map showing inter-connections of concepts in this tutorial.
- Definition slides introduce terms as they are needed.
- Visual representation of concepts
- Examples given throughout to illustrate how the concepts apply.
- A concise summary is given at the conclusion of the tutorial.

Key Concepts:

- **Prejudice** is an unjustifiable and usually negative attitude toward a group and its members.
- **Ingroup** refers to 'us'; people with whom one shares a common identity.
- **Outgroup** refers to 'them'; those perceived as different or apart from one's ingroup
- **Ingroup Bias** is the tendency to favour one's own group.
- **Scapegoat Theory** is the theory that prejudice offers an outlet for anger by providing someone to blame.
- **Just-World Phenomenon** is the tendency of people to believe the world is just and that people therefore get what they deserve and deserve what they get.
- **Aggression** is any physical or verbal behaviour intended to hurt or destroy.
- **Frustration-Aggression Principle** is the principle that frustration, which is the blocking of an attempt to achieve some goal, creates anger, which can generate aggression.
- **Conflict** is a perceived incompatibility of actions, goals, or ideas.
- **Social Trap** is a situation in which the conflicting parties, by each rationally pursuing their self-interest, become caught in mutually destructive behaviour.
- **Mere Exposure Effect** is the phenomenon that repeated exposure to novel stimuli increases liking of them.
- **Passionate Love** is an aroused state of intense positive absorption in another, usually present at the beginning of a love relationship.
- **Companionate Love** is the deep affectionate attachment we feel for those with whom our lives are intertwined.
- **Equity** is a condition in which people receive from a relationship in proportion to what they give to it.
- **Altruism** is unselfish regard for the welfare of others.
- **Bystander Effect** is the tendency for any given bystander to be less likely to give aid if other bystanders are present.

- **Social Exchange Theory** is the theory that our social behaviour is an exchange process that aim of which is to maximize benefits and minimize costs.
- **Superordinate Goals** are shared goals that override differences among people and require their cooperation.
- **GRIT** is Graduated and Reciprocated Initiatives in Tension-Reduction which is a strategy designed to decrease international tensions.

Chapter Review:

Antisocial Behavior: Prejudice

Prejudice involves a mixture of beliefs, emotions, and predispositions to action. Beliefs are often over-generalized and called stereotypes. Emotions involved in prejudice are hostility, envy, or fear. The term 'predispositions to action' means to discriminate. Prejudice involves schemas that influence how we notice and interpret events. Our preconceived ideas about people bias our impressions of their behavior. Blatant prejudice is being replaced by subtle prejudice. Prejudice still surfaces in public settings. Gender prejudice & discrimination persist as well. Boys are still valued more than their sisters.

Social roots: Inequalities, social divisions, and emotional scapegoating are partly responsible. Prejudice rationalizes inequalities. Blame-the-victim dynamic: Self-Fulfilling Prophecy. We are a group-bound species: We define our identities partly in terms of our groups. Need to distinguish enemies from friends & have our group be dominant. Facing the terror of death heightens patriotism & produces loathing & aggression toward those who threaten one's worldview. Frustration intensifies prejudice. Scapegoating can also boost ingroup members' self-esteem.

Cognitive roots: A by-product of how we cognitively simplify the world using categorization, vivid cases, and the just-world phenomenon. We tend to overestimate the similarity of people within groups other than our own but are keenly sensitive to differences in our own. The Availability Heuristic: We often judge the frequency of events by instances that readily come to mind.

Antisocial Behavior: Aggression

Aggression is the most destructive force in relations. It involves an interaction of biology and experience. It varies too widely to be an unlearned instinct. Animals have been bred for aggressiveness. Aggression is more likely if the frontal lobe system is damaged, inactive, or disconnected. Biochemical Influences: Hormones, alcohol, & other substances. Four main psychological factors that trigger aggression: Aversive events; Learning to express & inhibit; Sexual aggression & the media; TV violence, pornography & society. Different cultures model, reinforce, & evoke different tendencies toward violence. Correlation between father absence and violence holds for all races, income levels, and locations. Observing TV violence tends to desensitize people. Rape Myth: women invite or enjoy rape: depicted in Media Media depictions can disinhibit & desensitize: fosters hostile, domineering attitudes.

Antisocial Behavior: Conflict

Conflict: Individual interests' verses communal well-being. Elements of conflict are the same at any level. Psychologists are exploring ways to convince people to cooperate for their mutual betterment; through agreed-upon regulations, through better communication, and through promoting awareness of our responsibilities toward community, nation, and the whole of humanity. When in conflict, we have a tendency to form diabolical images of each other. Each party accepts credit for good deeds and shucks the blame for bad deeds.

Prosocial Behavior - Attraction

Proximity is the most powerful predictor of friendship and involves the Mere Exposure effect. After proximity, appearance most affects your first impression. Attractiveness is unrelated

to self-esteem & happiness. Beauty is in the eye of the culture. Youthful appearance is more attractive in all cultures. Opposites do NOT attract: the more alike people are, the more their liking endures. Reward Theory of Attraction: We will like those whose behavior is rewarding to us; We will continue relationships that offer more rewards than costs. Passionate Love: Hatfield: two-factor theory of emotion. Failure to appreciate passionate love's limited half-life can doom a relationship. Companionate love is enduring. Equity is one key to a gratifying & enduring relationship. Intimacy is also very important.

- Ultruism

The 'best' odds of our helping someone occur when: we have just observed someone else being helpful; we are not in a hurry; the victim appears to need and deserve help; the victim is in some way similar to us; we are in a small town or rural area; we are feeling guilty; we are focused on others and not preoccupied; and we are in a good mood. This last result, the happy people are helpful people, is one of the most consistent findings in all of psychology. No matter how people are cheered; whether by being made to feel successful and intelligent, by thinking happy thoughts, by finding money, or even by receiving a posthypnotic suggestion; they become more generous and more eager to help.

- Peacemaking

Peacemaking involves: Cooperation, Communication, and Conciliation. It is most effective when it uses Superordinate Goals. A shared predicament has a powerfully unifying effect. GRIT as an alternative to war or surrender and stands for "Graduated and Reciprocated Initiatives in Tension-Reduction".

24: Advanced Research Methods in Psychology

Chapter Summary:

This tutorial discusses the power and robustness characteristics of tests and suggests strategies for increasing these when planning research. A comprehensive look at the repeated measures design and complex designs is provided. The use of flowcharts and tables is introduced to assist in determining the appropriate experimental design.

Tutorial Features:

Specific Tutorial Features:

- Comprehensive and easily understood explanation of the concepts involved.
- Effective Illustrations.
- Use of flowcharts and tables to lead logistic determination of appropriate tests.

Series Features:

- Concept map showing inter-connections of concepts in this tutorial.
- Definition slides introduce terms as they are needed.
- Visual representation of concepts
- Examples given throughout to illustrate how the concepts apply.
- A concise summary is given at the conclusion of the tutorial.

Key Concepts:

- **Statistic** is a value, such as a mean, computed from a sample.
- **Sample** is a subset of a specific population.
- **Parameter** is a value computed from a population.
- **Parametric** is a test which is based on certain assumptions about the properties of the population from which samples are taken & about the sampling process itself.
- **Power** is the probability that it will lead to the correct rejection of the null hypothesis.
- **Robustness** is the extent to which any underlying assumptions about the population and sample can be disregarded without seriously compromising the conclusions.
- A **correlation** is a non-causal relationship in which you want to know whether there is a significant co-variation between two sets of data.
- A **causal relationship** is one in which two or more means or medians are significantly different from one another and one will cause an effect in the other.
- **Differential Transfer** occurs when the effects of one condition persist and influence performance in subsequent conditions.
- **Main effect** is the effect of each independent variable alone.
- **Interaction effect** is the effect of the independent variables in combination.

Chapter Review:

Using Statistical Tests:

There are key questions that researchers ask when choosing a statistical test before gathering data. What kind of decision do you want the test to help you with? Are you trying to investigate a non-causal or causal relationship? Does your data satisfy the theoretical assumptions of a parametric test? What design is the investigation? Parametric tests are always more likely to be more powerful than non-parametric tests. It is advised to find ways to maximize the power of a test: increase sample size or decrease variability.

T-Test: powerful parametric procedure. It is based on four assumptions: The variable

being measured is normally distributed in the population(s) from which the samples are drawn; The population(s) have the same variance; The data are obtained by a process of random sampling from the population(s), and each score is obtained independently of the others; The data represent measures on at least the interval scale. The T-test can be used for smaller sample sizes but its robustness decreases with sample size. If sample size is <10 , use non-parametric test. **Non-Parametric Tests:** Used when parametric assumptions cannot be met. It can be used when there is a significant difference between two sets of ordinal data.

Repeated Measures Design:

'Repeated measures' is NOT the same as repeated measures design. It involves manipulating an independent variable and then compares measures of participants' behavior in two or more conditions. It is advisable to use the Repeated Measures Designs when: Few participants are available; more convenient & efficiency is desired; and increased sensitivity is desired. It is used to study changes over time. It can pose a threat to internal validity: Participants' become practiced at taking the test. The solution: balance the practice effects across all the conditions. The key is to learn to use appropriate techniques. **COMPLETE design:** balanced for EACH participant. In this design, the researcher administers the conditions to each participant several times using different orders each time. **INCOMPLETE design:** each condition is administered to each participant only once. Repeated measures design may have a problem with differential transfer: threatens both internal and external validity. Best way to determine if differential transfer is a problem: do two separate experiments. Using same independent variable, do both a repeated measures and a random groups design. Compare results: if they are the same, then report repeated measures results .

Complex Designs:

Researchers more often use complex designs in which two or more independent variables are studied simultaneously. Simplest possible complex experiment: two independent variables each manipulated at two levels. An interaction effect occurs when the effect of one independent variable differs depending on the level of a second independent variable. Each independent variable must be implemented using either an independent groups design or a repeated measures design. **MIXED complex design:** Both an independent groups variable and a repeated measures variable. Power and complexity increase substantially when the number of independent variables increases. Analysis of complex designs: Use inferential statistics such as null hypothesis testing and confidence intervals & use F-test to determine main effects and interaction effects.