



STUDYRESOURCES

DISCORD

AP EXAM 2020

Notes

<https://t.me/studyresources3>



AP PSYCHOLOGY

Full Myers Book Quizlet (788 terms): https://quizlet.com/_8arite?x=1jqt&i=2ro4mx

Password: studyresources

[FRQ Scoring Guidelines/Examples](#)

Ctrl-F is your friend!

History and Approaches (2-4%)

- **Psychology is derived from physiology (biology) and philosophy**

- **EARLY APPROACHES**

- o **Structuralism** – used INTROSPECTION (act of looking inward to examine mental experience) to determine the underlying STRUCTURES of the mind
- o **Functionalism** – need to analyze the PURPOSE of behavior

- **APPROACHES KEY WORDS**

- o **Psychoanalytic/dynamic** – unconscious, childhood
- o **Behavioral** – learned, reinforced
- o **Humanistic** – free will, choice, ideal, actualization
- o **Cognitive** – Perceptions, thoughts
- o **Evolutionary** – Genes
- o **Biological** – Brain, NTs
- o **Sociocultural** – society
- o **Biopsychosocial** – combo of above

- **PEOPLE:**

- o **Mary Calkins:** First Fem. Pres. of APA
- o **Charles Darwin:** Natural selection & evolution
- o **Dorothea Dix:** Reformed mental institutions in U.S.
- o **Stanley Hall:** 1st pres. of APA 1st journal
- o **William James:** Father of American Psychology – functionalist
- o **Wilhem Wundt:** Father of Modern Psychology – structuralist
- o **Margaret Floy Washburn:** 1st fem. PhD
- o **Christine Ladd Franklin:** 1st fem.

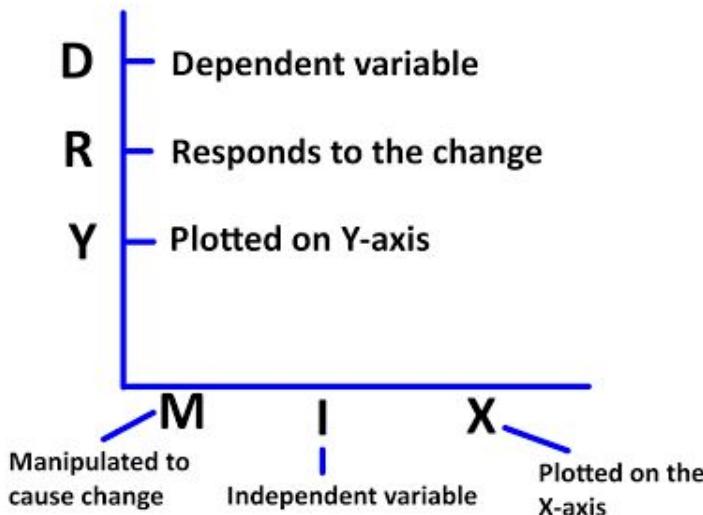
- **RANDOM TERMS**

- o **Basic research** – purpose is to increase knowledge (rats)
- o **Applied research** – purpose is to help people
- o **Psychologist** – research or counseling – MS or PhD
- o **Psychiatrist** – prescribe medications and diagnose – M.D.

Research Methods

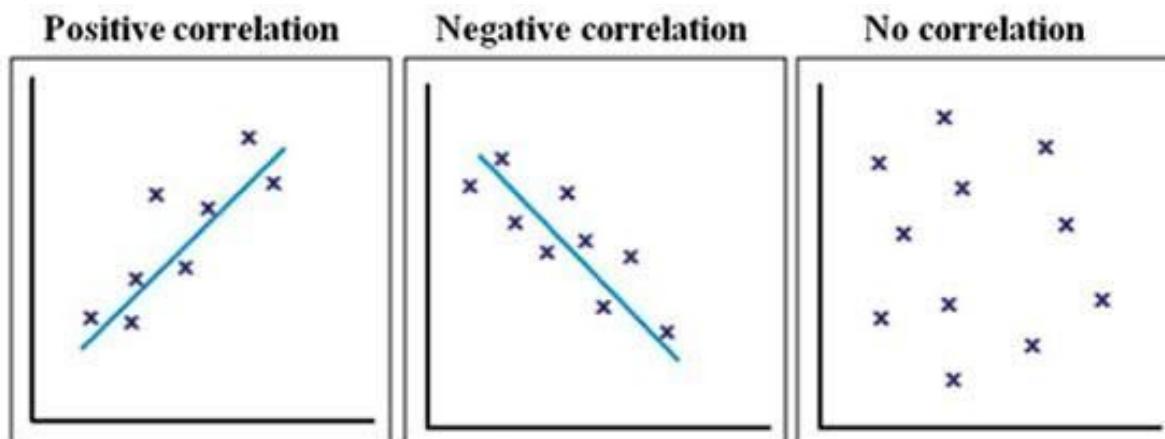
(8-10%)

- **EXPERIMENT**: Adv: researcher controls variables to establish **cause and effect** Disadv: difficult to generalize



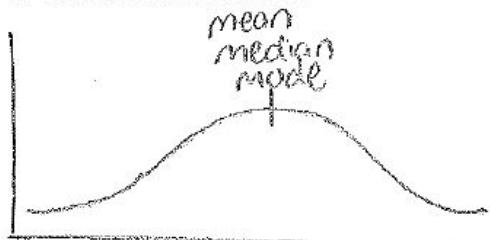
- **Independent Variable**: manipulated by the researcher
 - **Experimental Group**: received the treatment (part of the IV)
 - **Control Group**: placebo, baseline (part of the IV)
 - **Placebo Effect**: show behaviors associated with the exp. group when having received placebo
 - **Double-Blind**: Exp. where neither the participant or the experimenter is aware of which condition people are assigned to (drug studies)
 - **Single-Blind**: only participant blind – used if experimenter can't be blind (gender, age, etc)
- **Dependent Variable**: measured variable (is DEPENDENT on the independent variable)
- **Operational Definition**: clear, precise, typically quantifiable definition of your variables – allows replication
- **Confound**: error/ flaw in study
- **Random Assignment**: assigns participants to either control or experimental group at random – minimizes bias, increase chance of equal representation
- **Random Sample**: method for choosing participants – minimizes bias
 - Assignment and sampling can be done via names in a hat, computer generation
- **Validity**: accurate results
- **Reliability**: same results every time
- **NATURALISTIC OBSERVATION**: Adv: real-world validity (observe people in their own setting) Disadv: No cause and effect
- **CORRELATION**: Adv: identify relationship between two variables Disadv: No cause and effect (**CORRELATION DOES NOT EQUAL CAUSATION**)
 - **Positive Correlation** – variables increase & decrease together

- o **Negative Correlation** – as one variable increases the other decreases



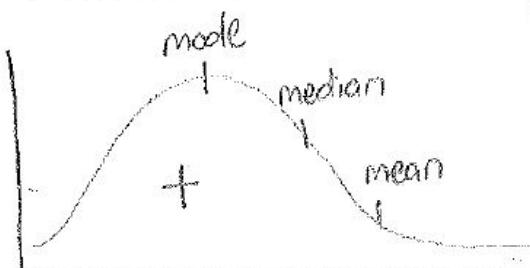
- o **The stronger the # (closer to 1 or -1) the stronger the relationship REGARDLESS of the pos/neg sign**
 - **3rd variable problem (lurking variable)** – diff. variable is responsible for relationship (breast implants & suicide)
 - **Illusory correlation** – belief of correlation that doesn't exist (old man predicts rain from arthritis)
- **CASE STUDY:** Adv. Studies ONE person (usually) in great detail – lots of info Disadv: No cause and effect
- **DESCRIPTIVE STATS:** shape of the data
 - o **Measures of Central Tendency:**
 - **Mean:** Average (use in normal distribution)
 - **Median:** Middle # (use in skewed distribution)
 - **Mode:** occurs most often

- o **Normal Distribution:**



- **INFERRENTIAL STATISTICS:** establishes significance (meaningfulness)

- o **Positive Skew:**



- **STATISTICAL SIGNIFICANCE** =

results not due to chance

- **ETHICAL GUIDELINES (APA)**

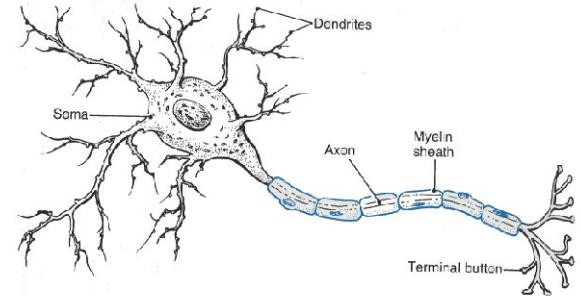
- o Confidentiality: names kept secret
- o Informed Consent: must agree to be part of study
- o Debriefing: must be told the true purpose of the study (done after for deception)
- o Deception must be warranted
- o No harm– mental/physical

- o **Negative Skew:**



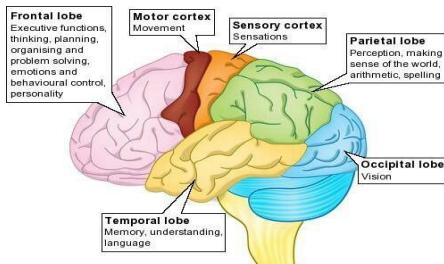
**Biological Basis
(8-10%)**

- **NEURON:** Basic cell of the NS
 - **Dendrites:** Receive incoming signal
 - **Soma:** Cell body (includes nucleus)
 - **Axon:** AP travels down this
 - **Myelin Sheath:** speeds up signal down axon, protects axon
 - **Axon Terminals:** release NTs – send signal onto next neuron
 - **Vesicles:** sacs inside terminal contain NTs
 - **Synapse:** gap b/w neurons
- **Action Potential:** movement of sodium and potassium ions across a membrane sends an electrical charge down the axon
 - **All or none law:** stimulus must trigger the AP past its threshold, but does not increase the intensity of the response (flush the toilet)
 - **Refractory period:** neuron must rest and reset before it can send another AP (toilet resets)



- | |
|---|
| <ul style="list-style-type: none"> ● <u>Sensory neurons – receive signals</u> ● <u>Afferent neurons – Accept signals</u> ● <u>Motor neurons – send signals</u> ● <u>Efferent neurons – signal Exits</u> |
|---|
- **Interneurons** – cells in spinal cord responsible for reflex loop
 - **CENTRAL NS:** Brain and spinal cord
 - **PERIPHERAL NS:** Rest of the NS
 - **Somatic NS:** Voluntary movement
 - **Autonomic NS:** Involuntary (heart, lungs, etc)
 - **Sympathetic NS:** Arouses the body for fight/flight (generally activates – sympathetic to you getting eaten by a tiger helps you run away)
 - **Parasympathetic NS:** established homeostasis after a sympathetic response (generally inhibits)
 - **NEUROTRANSMITTERS (NT):** Chemicals released in synaptic gap, received by neurons
 - **GABA:** Major inhibitory NT
 - **Glutamate:** Major Excitatory NT; get excited when seeing your mates!
 - **Dopamine:** Reward & movement
 - **Serotonin:** Moods and emotion
 - **Acetylcholine (ACh):** Memory

- o Epinephrine & Norepinephrine: sympathetic NS arousal
- o Endorphins: pain control
- o Oxytocin: love and bonding
- Agonist: drug that mimics a NT
- Antagonist: drug that blocks a NT
- Reuptake: Unused NTs are taken back up into the sending neuron. SSRIs (selective serotonin reuptake inhibitors) block reuptake – treatment for depression
- AREAS OF THE BRAIN:
- Hindbrain: oldest part of the brain
 - o Cerebellum – movement/balance (picture walking a tightrope balance a bell)
 - o Medulla – vital organs (HR, BP)
 - o Pons – sleep/arousal (Ponzzzzzzz)
- Midbrain
 - o Reticular formation: alertness
- Forebrain: higher thought processes
 - o Limbic System
 - Amygdala: emotions, fear (Amy, da! You're so emotional!)
 - Hippocampus: memory (if you saw a hippo on campus you'd remember it!)
 - Hypothalamus: Reward/pleasure center, eating behaviors – link to endocrine system
 - o Thalamus: relay center for all but smell (you MUST (thalaMUST) use your thalamus, unless its MUSTY – smell)
 - o Cerebral Cortex: outer portion of the brain – higher order thought processes
 - Occipital Lobe: located in the back of the head – vision – mom's eyes!
 - Frontal Lobe: decision making, planning, judgment, movement, personality
 - Parietal Lobe: located on the top of the head - sensations
 - Temporal Lobe: located on the sides of the head (temples) – hearing and face recognition



- Somatosensory Cortex: map of our sensory receptors –in parietal lobe
- Motor Cortex: map of our motor receptors – located in frontal lobe
- o Left hemisphere only – damage results in aphasia (damaged speech)
 - Broca's Area: Inability to produce speech (Broca – Broken speech)
 - Wernicke's Area: Inability to comprehend speech (Wernicke's what?)

- o Corpus Callosum: bundle of nerves that connects the 2 hemispheres – sometimes severed in patients with severe seizures – leads to “split-brain patients”

- Lateralization: the brain has some specialized features – language is processed in the L Hemisphere
- Split-brain experiments: done by *Sperry & Gazzanaga*.
 - Images shown to the right hemisphere will be processed in the left (& vice versa), patient can verbally identify what they saw

- **BRAIN**

- **PLASTICITY**: Brain can “heal” itself

- **NATURE VS. NURTURE: ANSWER IS BOTH**

- o Twin Studies:

- Identical twins – Monozygotic (MZ)
- Fraternal twins – Dizygotic (DZ)

- o Genetics: MZ twins will have a higher percentage of also developing a disease

- o Environment: MZ twins raised in different environments show differences

- **ENDOCRINE SYSTEM**: sends hormones throughout the body

- o Pituitary Gland: Controlled by hypothalamus. release growth hormones

- o Adrenal Glands: related to sympathetic NS: releases adrenaline

- **BRAIN IMAGING**:

- o EEG: brain activity – not specific

- o XRAY: not useful, doesn’t show tissues

- o CT / MRI: shows structures

- o PET: Radioactive glucose shows brain activity (when in doubt pick this one)

- o fMRI: Radioactive glucose shows activity: real-time

- o lesion – brain damage or abnormal tissue

Sensation & Perception

(6 – 8%)

- **ABSOLUTE THRESHOLD**: detection of signal 50% of time (is it there)

- **DIFFERENCE THRESHOLD (also called a just noticeable difference (JND) and follows WEBER'S LAW)**

WEBER'S LAW: two stimuli must differ by a constant minimum proportion. (Can you tell a change?)

		SIGNAL	
		present	absent
RESPONSE	yes	hit	false alarm
	no	miss	correct rejection

- **SIGNAL DETECTION THEORY**

- **Sensory Adaptation**: diminished sensitivity as a result of constant stimulation (can you feel your underwear?)

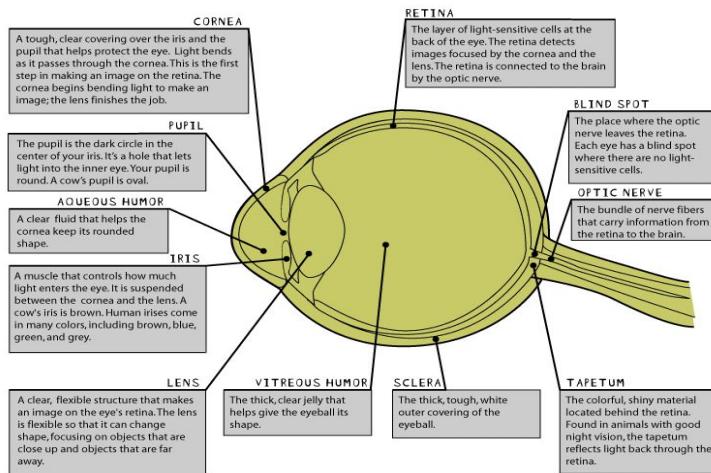
- **Perceptual Set**: tendency to see something as part of a group – speeds up signal processing

A B C D E F
10 11 12 13 14

- **Inattentional Blindness:** failure to notice something added b/c you're so focused on another task (gorilla video)

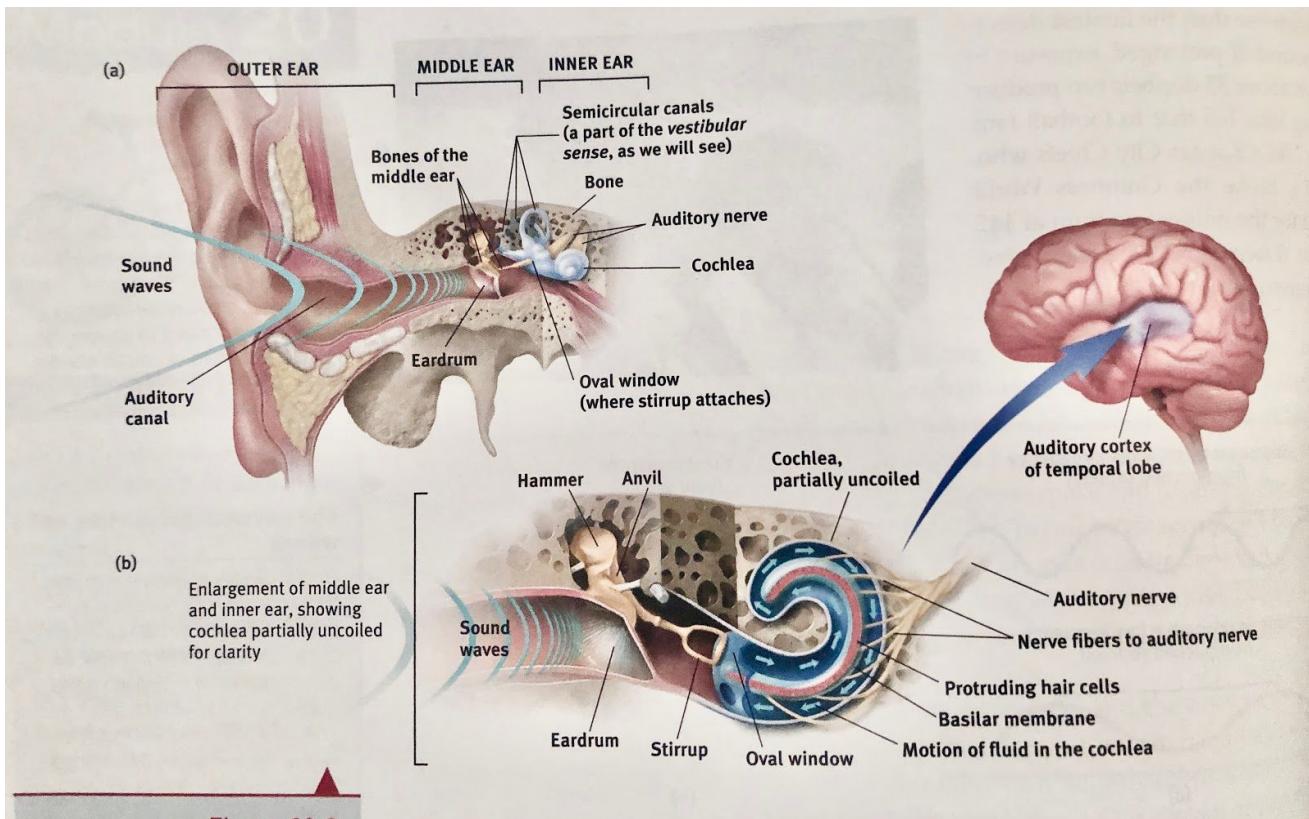
- **Change Blindness:** failure to notice a change in the scene (door study)
- **Cocktail party effect:** notice your name across the room when it's spoken, when you weren't previously paying attention
- **VISUAL SYSTEM:**

- o Pathway of vision: light cornea pupil/iris lens retina rods/cones bipolar cells ganglion cells optic nerve optic chiasm occipital lobe
- o **Cornea** – protects the eye
- o **Pupil/iris** – controls amount of light entering eye
- o **Lens** – focuses light on retina
- o **Fovea** – area of best vision (cones here)



- o **Rods** – black/white, dim light. Responsible for peripheral vision
- o **Cones** – color, bright light (red, green, blue)
- o **Bipolar cells** – connect rods/cones and ganglion cells
- o **Ganglion cells** – opponent-processing occurs here
- o **Blind spot** – occurs where the optic nerve leaves the eye
- o **Feature detectors** – specialized cells that see motion, shapes, lines, etc. located in occipital lobe (experiments by Hubel & Weisel)
- **THEORIES OF COLOR VISION:**
 - o **Trichromatic** – three cones for receiving color (blue, red, green)
 - Explains color blindness - they are missing a cone type (Helmholtz)
 - o **Opponent Process** – complementary colors are processed in ganglion cells – explains afterimage effect
- **Visual Capture:** Visual system overwhelms all others (nauseous in an IMAX theater – vision trumps vestibular)

- **Constancies:** recognize that objects do not physically change despite changes in sensory input (size, shape, brightness)
- **Phi Phenomenon:** adjacent lights blink on/off in succession – looks like movement (traffic signs with arrows)
- **Stroboscopic movement:** motion produced by a rapid succession of slightly varying images (animations)
- **MONOCULAR CUES (how we form a 3D image from a 2D image)**
 - Interposition: overlapping images appear closer
 - Relative Size: 2 objects that are usually similar in size, the smaller one is further away
 - Relative Clarity: hazy objects appear further away
 - Texture Gradient: coarser objects are closer
 - Relative Height: things higher in our field of vision look further away
 - Linear Perspective: parallel lines converge with distance (think railroad tracks)
- **BINOCULAR CUES:** (how both eyes make up a 3D image)
 - Retinal Disparity: Image is cast slightly different on each retina, location of image helps us determine depth
 - Convergence: Eyes strain more (looking inward) as objects draw nearer
- **TOP-DOWN PROCESSING:** Whole smaller parts
- **BOTTOM-UP PROCESSING:** Smaller Parts Whole
- **AUDITORY SYSTEM:**
 - Pathway of sound: sound pinna auditory canal eardrum (tympanic membrane) hammer, anvil, stirrup (HAS) oval window cochlea auditory nerve temporal lobes
 - Outer Ear: pinna (ear), auditory canal
 - Middle Ear: ear drum , HAS (bones vibrate to send signal)



- o **Inner Ear:** cochlea – like COACHELLA (sounds 1st processed here)

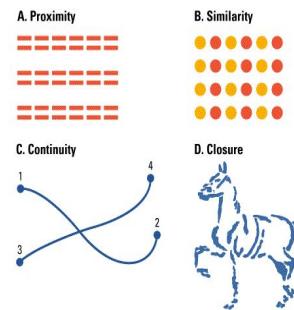
- **THEORIES OF HEARING:** both occur in the cochlea
 - o **Place theory** – location where hair cells bends determines sound (high pitches)
 - o **Frequency theory** – rate at which action potentials are sent determines sound (low pitches)
- **OTHER SENSES:**
 - o Touch: Mechanoreceptors spinal cord thalamus somatosensory cortex
 - o Pain: Gate-control theory: we have a “gate” to control how much pain is experienced
 - o Kinesthetic: Sense of body position
 - o Vestibular: Sense of balance (semicircular canals in the inner ear affect this)
 - o Taste (gustation): 5 taste receptors: bitter, salty, sweet, sour, umami (savory)
 - o Smell (olfaction): Only sense that does NOT route through the thalamus 1st. Goes through temporal lobe and amygdala
- **GESTALT PSYCHOLOGY:** Whole is greater than the sum of its parts

Gestalt Principles:

- **Figure/ground:** organize information into figures objects (figures) that stand apart from surrounds (background)



- Closure: mentally fill in gaps
-
- Proximity: group things together that appear near each other
-
- Similarity: group things together based off of looks
-
- Continuity: tendency to mentally form a continuous line



States of Consciousness (2 – 4%)

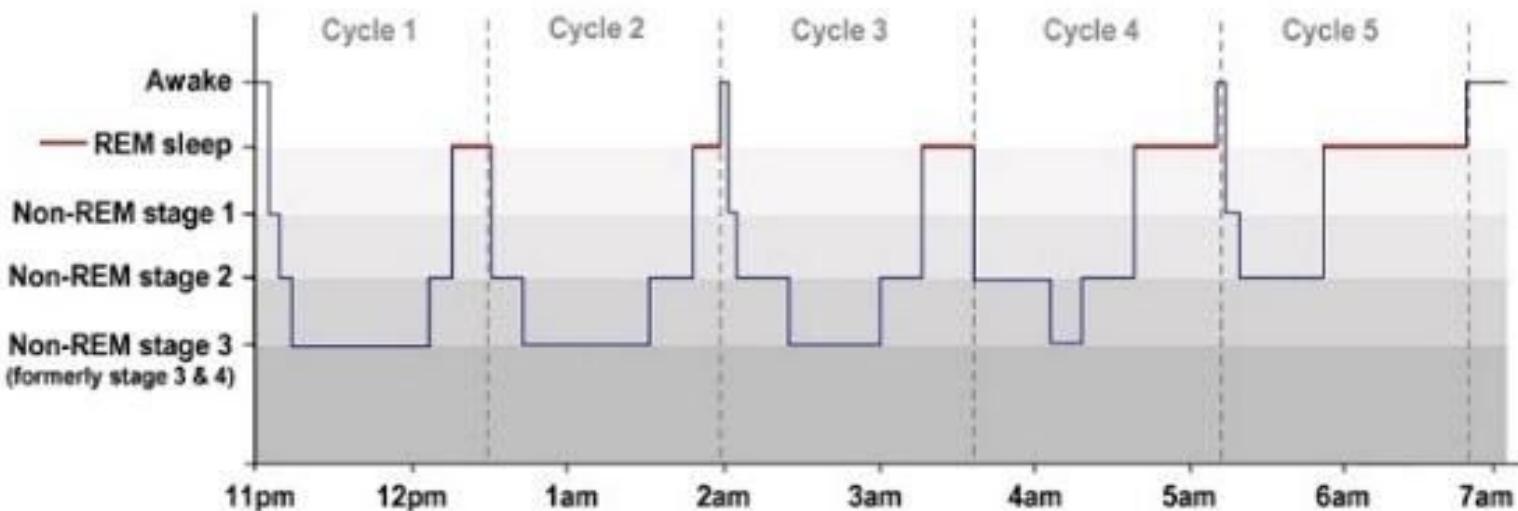
- **STATES of CONSCIOUSNESS:**

- **Conscious**: controlled processes – totally aware
- **Preconscious**: Outside awareness, but can be brought into consciousness (remembering)
- **Nonconscious**: automatic processing (controlling respirations)
- **Unconscious**: Lack of awareness; knocked out
- **Altered States**: produced through drugs, fatigue, hypnosis
- **Sleep**

- **METACOGNITION**: Thinking about thinking

- **SLEEP**:

- **Beta Waves**: awake (you betta be awake for the exam)
- **Alpha Waves**: high amp., drowsy
- NREM (non REM) stages-
- **Stage 1**: light sleep
- **Stage 2**: bursts of sleep spindles
- **Stage 3 Delta waves**: Deep sleep
- **Rapid Eye Movement (REM)**: dreaming, cognitive processing
 - Entire cycle takes 90 minutes, REM occurs in b/w each cycle. REM lasts longer throughout the night
 - **REM rebound**: Lack of REM sleep results in quick instances of REM during the day time to incorporate for the lack of it.



- **CIRCADIAN RHYTHM:** 24 hour biological clock

- Body temp & sleep
- Controlled by the Suprachiasmatic nucleus (SCN) in the brain
- Explains jet lag

- **SLEEP DISORDERS:**

- **Insomnia:** Inability to fall asleep (due to stress/anxiety)
- **Sleep walking/talking:** (due to fatigue, drugs, alcohol) – NOT during REM
- **Night terrors:** extreme nightmares – NOT in REM sleep – typical in children
- **Narcolepsy:** fall asleep out of nowhere (due to deficiency in orexin)
- **Sleep Apnea:** stop breathing suddenly while asleep (due to obesity usually)

- **DREAM THEORIES:**

- **Freud's Unconscious Wish Fulfillment:** Dreaming is gratification of unconscious desires and needs
 - **Latent Content:** hidden meaning of dreams
 - **Manifest Content:** obvious storyline of dream

- **Activation Synthesis:** Brain produces random bursts of energy – stimulating lodged memories. Dreams start random then develop meaning

- **HYPNOSIS:**

- **It Can:** Reduce pain, help you relax
- **It CANNOT:** give you superhuman strength, make you regress, make you do things against your will

- **PSYCHOACTIVE DRUGS:**

- **Triggers dopamine release in the brain**
- **Depressants:** Alcohol, barbiturates, tranquilizers, opiates (narcotics)

- Decrease sympathetic NS activation, highly addictive
- o **Stimulants:** Amphetamines, Cocaine, MDMA (ecstasy), Caffeine, Nicotine
 - Increase sympathetic NS activation, highly addictive
- o **Hallucinogens:** LSD, Marijuana
 - Causes hallucinations, not very addictive
- o **Tolerance:** Needing more of a drug to achieve the same effects
- o **Dependence:** Become addicted to the drug – must have it to avoid withdrawal symptoms
- o **Withdrawal:** Psychological and physiological symptoms associated with sudden stoppage. Unpleasant – can kill you.

Learning
(7-9 %)

• **CLASSICAL CONDITIONING: PAVLOV!**

- o **Unconditioned Stimulus (UCS):** brings about response w/o needing to be learned (food)
- o **Unconditioned Response (UCR):** response that naturally occurs w/o training (salivate)
- o **Neutral Response (NS):** stimulus that normally doesn't evoke a response (bell)
- o **Conditioned Stimulus (CS):** once neutral stimulus that now brings about a response (bell)
- o **Conditioned Response (CR):** response that, after conditioning, follows a CS (salivate)
- o **Contiguity:** Timing of the pairing, NS/CS must be presented immediately BEFORE the US
- o **Acquisition:** process of learning the response pairing
- o **Extinction:** previously conditioned response dies out over time
- o **Spontaneous Recovery:** After a period of time the CR comes back out of nowhere
- o **Generalization:** CR to like stimuli (similar sounding bell)
- o **Discrimination:** CR to ONLY the CS
- **CONTINGENCY MODEL: Rescorla & Wagner** – classical conditioning involves cognitive processes
- **CONDITIONED TASTE AVERSION (ONE-TRIAL LEARNING): John Garcia** – Innate predispositions can allow classical conditioning to occur in one trial (food poisoning)
- **COUNTERCONDITIONING: Little Albert and John Watson (father of behaviorism)** – conditioned a fear in a baby (only to countercondition – remove it- later on)

• **OPERANT CONDITIONING: SKINNER!**

- o **LAW OF EFFECT (Thorndike):** Behaviors followed by pos. outcomes are strengthened, neg. outcomes weaken a behavior (cat in the puzzle box)
- **PRINCIPLES OF OPERANT COND:**
- o **Pos. Reinforcement:** Add something nice to increase a behavior (gold star for turning in HW)

- o **Neg. Reinforcement:** Take away something *bad/annoying* to *increase* a behavior (put on seatbelt to take away annoying car signal)
- o **Pos. Punishment:** Add something *bad* to *decrease* a behavior (spanking)
- o **Neg. Punishment:** Take away something *good* to *decrease* a behavior (take away car keys)
- o **Primary Reinforcers:** innately satisfying (food and water)
- o **Secondary Reinforcers:** everything else (stickers, high-fives)
 - **Token Reinforcer:** type of secondary- can be exchanged for other stuff (game tokens or money)
- o **Generalization:** respond to similar stimulus for reward
- o **Discrimination:** stimulus signals when behavior will or will not be reinforced (light on means response are accepted)
- o **Extinction / Spontaneous Recovery:** same as classical conditioning
- o **Overjustification Effect:** reinforcing behaviors that are intrinsically motivating causes you to stop doing them (give a child 5\$ for reading when they already like to read – they stop reading)
- o **Shaping:** use *successive approximations* to train behavior (reward desired behaviors to teach a response – rat basketball)
- o **Continuous Reinforcement schedule:** Receive reward for every response
- o **Fixed Ratio schedule:** Reward every X number of response (every 10 envelopes stuffed get \$\$)
- o **Fixed Interval schedule:** Reward every X amount of time passed (every 2 weeks get a paycheck)
- o **Variable Ratio schedule:** Rewarded after a random number of responses (slot machine)
- o **Variable Interval schedule:** Rewarded after a random amount of time has passed (fishing)
- o **Variable schedules are most resistant to extinction** (how long will keep playing a slot machine before you think it's broken?)

- **SOCIAL (OBSERVATIONAL) LEARNING: BANDURA!**

- **Modeling Behaviors:** Children model (imitate) behaviors. Study used BoBo dolls to demonstrate the following
- o **Prosocial** – helping behaviors
- o **Antisocial** – mean behaviors

- **MISC LEARNING TYPES**

- o **Latent learning (Tolman!)** – learning is hidden until useful (rats in maze get reinforced half way through, performance improved
 - **Cognitive maps** – mental representation of an area, allows navigation if blocked
- o **Insight learning (Kohler!)** – some learning is through simple intuition (chimps with crates to get bananas)
- o **Learned Helplessness (Seligman!)** – no matter what you do you never get a positive outcome so you just give up (word scrambles)

Cognition
(8 – 10%)

ENCODING: Getting info into memory

- **Automatic encoding** – requires no effort (what did you have for breakfast?)
- **Effortful encoding** – requires attention (school work)
- Shallow, intermediate, deep processing; the more emphasis on MEANING the deeper the processing, and the better remembered
- **Imagery** – attaching images to information makes it easier to remember (shoe w/ spaghetti laces)
- **Self-referent encoding** – we better remember what we're interested in (you'd remember someone's phone number who you found extremely attractive)
- **Dual encoding** – combining different types of encoding aids in memory
- **Chunking** – break info into smaller units to aid in memory (like a phone #)
 - **Mnemonics** – shortcuts to help us remember info easier
 - Acronyms – using letter to remember something (PEMDAS)
 - Method of loci – using locations to remember a list of items in order
- **Context dependent memory** – where you learn the info you best remember the info (scuba divers testing)
- **State dependent memory** – the physical state you were in when learning is the way you should be when testing (study high, test high)

STORAGE: Retaining info over time

- **Information Processing Model** – Sensory memory, short term memory, long term memory model
- **Sensory Memory** – stores all incoming stimuli that you receive (first you have to pay attention)
 - **Iconic Memory** – visual memory, lasts 0.3 seconds
 - **Echoic Memory** – auditory memory, lasts 2-3 seconds
- **Short Term Memory** – info passes from sensory memory to STM – lasts 30 secs, and can remember 7 ± 2 items
 - **Rehearsal** (repeating the info) **resets the clock**
- **The Working Memory Model** splits STM into 2 – **visual spatial memory (from iconic mem)** and **phonological loop (from echoic mem)**. A “central executive” puts it together before passing it to LTM
- **Long term memory** – lasts a lifetime
 - **Explicit (Declarative):** Conscious recollection
 - **Episodic:** events
 - **Semantic:** facts
 - **Implicit (Nondeclarative):** unconscious recollection
 - **Classical conditioning**

- **Priming:** info that is seen earlier “primes” you to remember something later on (octopus, assassin, climate, bogeyman)
- **Procedural:** skills

- **Memory organization**

- **Hierarchies:** memory is stored according to a hierarchy
- **Semantic networks:** linked memories are stored together
- **Schemas:** preexisting mental concept of how something should look (like a restaurant)

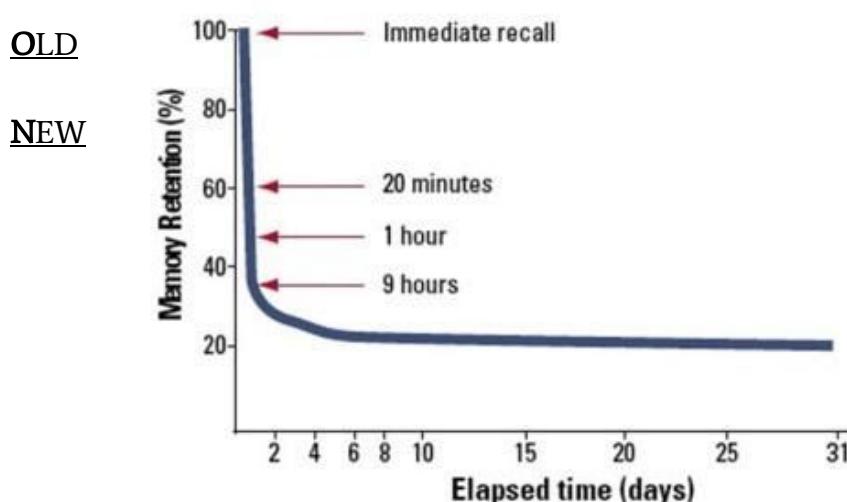
- **Memory storage**

- **Acetylcholine neurons in the hippocampus for most memories**
- **Cerebellum for procedural memories**

- **Long-term potentiation:** neural basis of memory – connections are strengthened over time with repeated stimulation (more firing of neurons)

RETRIEVAL: Taking info out of storage

- **Serial Position Effect:** tendency to remember the beginning and the end of the list best
- **Recall:** remember what you've been told w/o cues (essays)
- **Recognition:** remember what you've been told w/ cues (MC)
- **Flashbulb memories:** particularly vivid memories for highly important events (9/11 attacks)
- **Repressed memories:** unconsciously buried memories – are unreliable
- **Encoding failure:** forget info b/c you never encoded it (paid attention to it) in the first place (which is the real penny)
- **Encoding specificity principle:** the more closely retrieval cues match the way we learned the info, the better we remember the info (like state dependent memory)
- **Forgetting curve:** recall decreases rapidly at first, then reaches a plateau after which little more is forgotten (**EBBINGHAUS**)



moves backwards (forget old info)

- **ALZHEIMER'S DISEASE:** caused by destruction of acetylcholine in hippocampus

- **Proactive interference**

blocks *new*

- **Retroactive interference**

blocks *old*

- **Misinformation effect:**

distortion of memory by suggestion or misinformation
(**Loftus** – lost in the mall, Disney land)

- **Anterograde amnesia:**

amnesia moves forward (forget new info – 50 first dates)

- **Retrograde amnesia:** amnesia

LANGUAGE

- **Phonemes:** smallest unit of sound (ch sound in chat)
- **Morpheme:** smallest unit that carries meaning (-ed means past tense)
- **Grammar:** rules in a language that enable us to communicate
- **Semantics:** set of *rules* by which we derive meaning (adding –ed makes something past tense)
- **Syntax:** rules for combining words into sentences (white house vs casa blanca)
- **Babbling stage:** infants babble 1st stage of speech
- **One-word stage:** duh
- **Two-word stage:** duh duh
- **Theories of language development:**
 - **Imitation:** Kids repeat what they hear – but they don't do it perfectly
 - **Overregularization:** grammar mistake where children overuse certain morphemes (I go-ed to the park)
 - **Operant conditioning:** reinforced for language use
 - **Inborn universal grammar:** theory comes from **NOAM CHOMSKY** – says that language is innate and we are predisposed to learn it
 - **Critical period:** period of time where something must be learned or else it cannot ever happen (language must be learned young – Genie the Wild Child)
 - **Linguistic determinism:** language influences the way we think (Hopi people do not have words for the past, thus cannot easily think about the past) developed by **WHORF**

THINKING

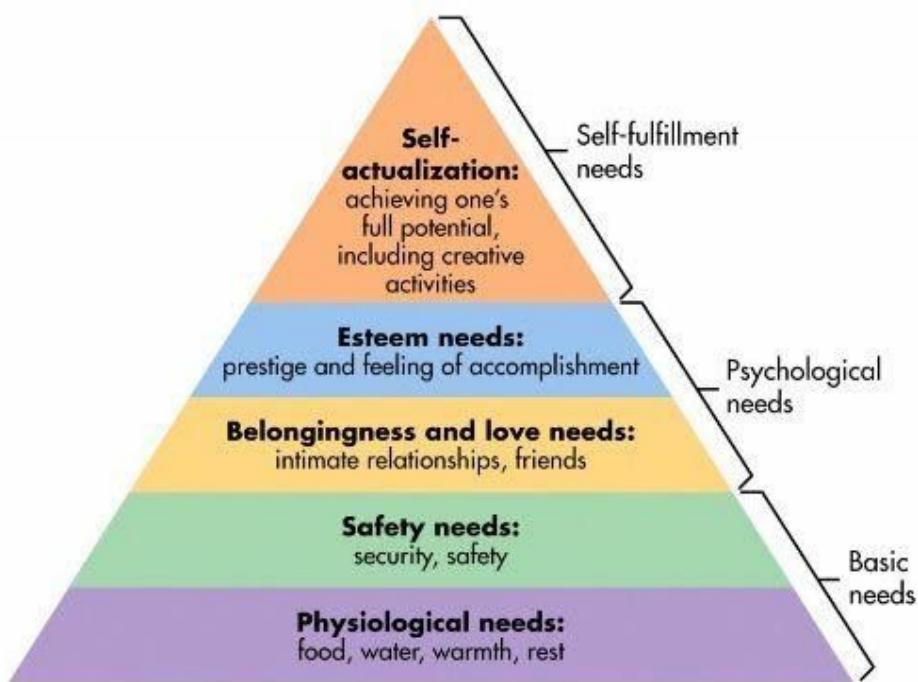
- **Concepts:** mental categories used to group objects, events, characteristics
- **Prototypes:** all instances of a concept are compared to an ideal example (what you first think of)
- **Algorithms:** step by step strategies that guarantee a solution (formula)
- **Heuristics:** shortcut strategy (rule of thumb)
 - **Representative Heuristic:** make inferences based on your experience (like a stereotype) – assume someone must be a librarian b/c they're quiet
 - **Availability heuristic:** relying on availability to judge the frequency of something (overestimating death due to plane crashes due to recent events)
- **Functional Fixedness:** keep using one strategy – cannot think outside of the box
- **Belief bias:** tendency of one's preexisting beliefs to distort logical reasoning by making invalid conclusions
- **Belief perseverance:** tendency to cling to our beliefs in the face of contrary evidence
- **Confirmation bias:** look for evidence to support what we already believe
- **Inductive reasoning:** data driven decisions, specific general
- **Deductive reasoning:** driven by logic, general specific

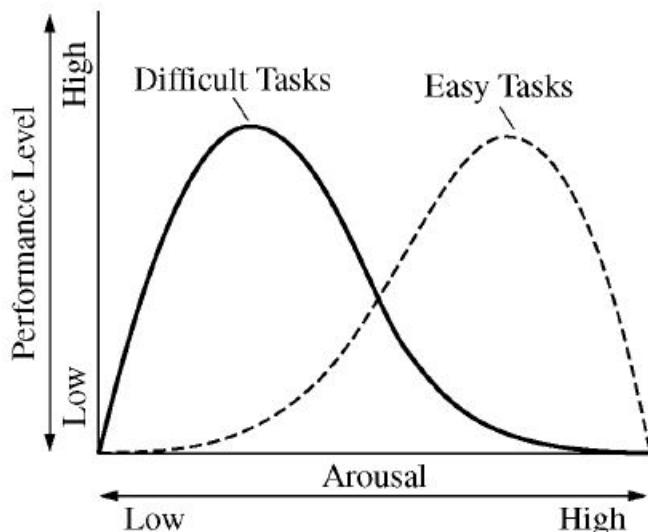
- **Divergent thinking:** ability to think about many different things at once

Motivation & Emotion
(6-8%)

THEORIES OF MOTIVATION

- **INSTINCT:** complex behaviors have fixed patterns and are not learned (explains animal motivation)
- **DRIVE REDUCTION:** physiological need creates aroused tension (drive) that motivates you to satisfy the need (driven by **homeostasis:** equilibrium)
 - o **Primary drive:** unlearned drive based on survival (hunger, thirst)
 - o **Secondary drive:** learned drive (wealth or success)
- **OPTIMUM AROUSAL:** humans aim to seek optimum levels of arousal –easier tasks requires more arousal, harder tasks need less





- **HIERARCHY OF NEEDS:** theory derived by **MASLOW** – needs lower in the pyramid have priority over needs higher in the pyramid
- **Intrinsic motivation:** inner motivation – you do it b/c you like it
- **Extrinsic motivation:** motivation to obtain a reward (trophy)
- **Evolutionary Theory of Motivation:**
 - o **Instincts:** biology based behaviors that promote survival
 - o **Drive-reduction theory:** a biological need (imbalance that threatens survival) produces a drive. We act to reduce drives to maintain homeostasis
- **Cognitive Dissonance Theory:** when we experience discomfort or the feeling of dissonance (conflict of attitudes/ideas) we change our thinking to fit our behavior
 - o 2 ways to avoid dissonance: rationalizing (changing thoughts/cognitions) or change behaviors

HUNGER

- **Signals of hunger:**
 - o Stomach contractions (aka stomach pangs) tell us we're hungry
 - o **Glucose** (sugar) level is maintained by the **pancreas (endocrine system)**.
 - o **Insulin** decreases glucose. Too little glucose makes us hungry.
 - o **Orexin** is a hunger-triggering hormone secreted by the hypothalamus
 - o **Ghrelin** is secreted by the empty stomach, sending out "I'm hungry" signals to the brain; decreases after eating
 - o **Obestatin** is a hunger suppressing hormone secreted by the stomach
 - o **PPY OR ppy:** digestive tract hormone; sends out "I'm not hungry" signals to the brain
 - o Other chemicals include ghrelin, obestatin, and PPY

- o **Lateral hypothalamus:** when stimulated makes you hungry, when lesioned you will never eat again. (I'm **LATE** for lunch. I'm hungry. The **LATERal hypothalamus** makes you hungry.)
- o **Ventromedial hypothalamus:** when stimulated you feel full, when destroyed you eat eat eat eat (fat woman and cake)
- o **Leptin:** leptin signals the brain to reduce appetite
- **Obesity:**
 - o Increased risk of **heart attack, hypertension, atherosclerosis, diabetes**
 - o Can be genetic – adopted children resemble their biological parents
 - o **Set point:** there is a control system that dictates how much fat you should carry – every person is different
 - o **Basal Metabolic rate:** the number of calories required to keep your body functioning at rest
- **Eating Disorders:**
 - o **Binge Eating Disorder:** the same as bulimia nervosa where there is a loss of control while eating large amounts of food, but there are no compensatory behaviors (vomiting, laxatives, etc), or guilt/shame about intake
 - o **Anorexia:** weight loss of at least 15% ideal weight, distorted body image
 - **Causes:** overly critical parents, perfectionist tendencies, societal ideals
 - o **Bulimia:** usually normal body weight, go through a binge-purge eating pattern (eat massive amounts, then throw up)
 - **Causes:** same as anorexia
 - **Genetic variations** in FTO, leptin, the leptin receptor and ghrelin, genes involved in the neuroregulation of food intake, appear to contribute to obesity risk by influencing satiety and hunger, and may contribute to increased caloric intake.
 - **What psychological and cultural factors influence hunger** -Hunger also reflects learning, our memory of when we last ate, and our expectation of when we should eat again. Humans as a species prefer certain tastes (such as sweet and salty) but we satisfy those preferences with specific foods prescribed by our situation and our culture. Some taste preferences, such as the avoidance of new foods or of foods that have made us ill, have survival value.

SEXUALITY

- **Biology of sex:**
 - o **Hypothalamus:** stimulation increases sexual behavior, destruction leads to sexual inhibition
 - o **Pituitary gland:** monitors, initiates, and restricts hormones
 - **Males – testosterone**
 - **Females - estrogen**

- o **Sexual Response Pattern:** Excitement phase, plateau, orgasm, refractory period (resolution phase) (cannot “fire” again until you reset, guys only)
- o **Sexual Orientation:** one’s erotic attraction towards members of the same sex, the opposite sex, or both sexes. Research says it is rooted in BIOLOGY and not subject to environmental factors
- o **Alfred Kinsey:** 1st researcher to conduct studies in sex, suggested that people were very promiscuous. Studies lacked a representative sample, created scale of homosexuality
- o **Homosexuality:** biological roots: differences in the brain, identical twins more likely to both be gay, later sons more likely to be (hormones from mom)
- o **Cultural influences on sexual motivation:** sexual motivation may be subject to family and societal values, religious and personal values, cultural expectations, and the media

THEORIES OF EMOTIONS

- **JAMES-LANGE:** stimulus physiological arousal emotion
- **CANNON-BARD:** stimulus physiological arousal & emotion simultaneously
- **SCHACTER TWO FACTOR:** adds in cognitive labeling (bridge experiment) stimulus arousal interpret external cues label emotion
- Some stimuli are routed directly to the **amygdala** bypassing the frontal cortex (gut reaction to a cockroach)
- **Behavioral factors:** there are **SIX** universal emotions (happiness, anger, sadness, surprise, disgust, fear) seen across ALL cultures
 - o Found out by Paul Ekman
- **Non-verbal cues:** gestures, duchenne smile (you can tell a real smile from a fake one)
- **Facial feedback hypothesis:** being forced to smile will make you happier (facial expressions influence emotion)

STRESS AND HEALTH

- **GENERAL ADAPTATION SYNDROME (GAS):** three phases of a stress response (**SELYE** came up w/ this)
 - o **Alarm:** body/you freak out in response to stress
 - o **Resistance:** body/you are dealing with stress
 - o **Exhaustion:** body/you cannot take any more, give up
- **Type A Personality:** rigid, stressful person, perfectionist. At risk for heart disease
- **Type B Personality:** laid back, non stressed.

INDUSTRIAL/ORGANIZATIONAL PSYCH

- **Industrial / Organizational Psych:** psychological of the workplace – focuses on employee recruitment, placement, training, satisfaction, productivity
- **Ergonomics / Human Factors:** intersection of engineering and psych – focuses on safety and efficiency of human-machine interactions
- **Hawthorne effect:** productivity increases when workers are made to feel important (teacher teaches when principal comes in)

- **Theory X management:** manager controls employees, enforces rules. Good for lower level jobs

- **Theory Y management:** manager gives employees responsibility, looks for input. Good for high level jobs

- **Employee Commitment:**

- Affective: emotional attachment (best type)
- Continuance: stay due to costs of leaving
- Normative: stay due to obligation (they paid for your school)

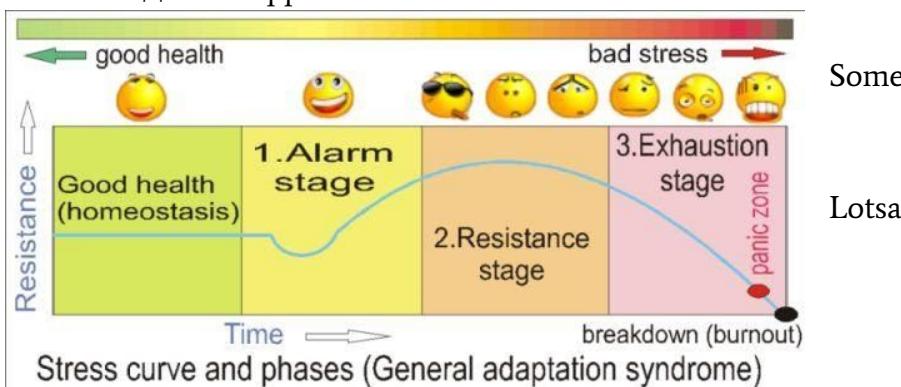
- **Meaning of Work:**

- Job – no training, just do it for \$\$, No happiness

- Career – work for advancement, happiness

- Calling – work because you love it, happiness

Development (7-9%)



- **Prenatal Development:**

- **Zygote:** 0 – 14 days, cells are dividing
- **Embryo:** until about 9 weeks, vital organs being formed
- **Fetus:** 9 wks to birth, overall development
- **Teratogens:** external agents that can cause abnormal prenatal development (alcohol, drugs, etc)
 - Fetal alcohol syndrome (FAS): large amount of alcohol leads to FAS, causes deformities, intellectual disability, death

- **Physical Development:**

- **Maturation:** natural course of development, occurs no matter what (walking)
- **Reflexes:** innate responses we're born with
 - Rooting, sucking, swallowing, grasping, stepping
- **Habituation:** after continual exposure you pay less attention – used to test babies
- **Eyes have the most limited development, takes till 1 year**
 - **Visual cliff:** babies have to learn depth perception, so they will cross a "cliff"
- **Other senses are fairly developed**
- **Brain development continues for a few years**

- ***JEAN PIAGET'S COGNITIVE DEV.***

0-2 Sensorimotor	<p>Infants explore the world and develop their motor movement (going from lying down, to sitting up [6 months], walking (1 year)</p> <p>Object permanence: Knowing that objects outside of our sight still exist</p> <p>Stranger Anxiety</p> <p>“Out of sight is NOT out of mind”</p>
3-6 Pre-operational	<p>Egocentrism: Inability of children to consider other people's perspectives</p> <p>Imagination is strong Imaginative play</p> <p>Animism: speaking to toys and dolls as if they were people</p> <p>Naive and innocent</p> <p>Lack of conservation</p> <p>Lack of logic</p>
7-11 years Concrete operations	<p>Children develop LOGIC and the ability to consider other perspectives and support their own with evidence</p> <p>MATH</p> <p>Conservation: mass, quantity, volume</p> <p>Have difficulties thinking hypothetically or on an abstract level</p>
12+ Formal Operations stage	<p>Abstract reasoning: Teenagers develop the capacity to think on an abstract level</p>

	Engage in hypothetical reasoning and questioning
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- **Schemas** – concepts or frameworks that organize info
- **Assimilation:** incorporate new info into existing schema (aSSimulation – same stuff)
- **Accommodation:** adjust existing schemas to incorporate new information
(ACcommodation - All Change)
- **Sensorimotor Stage: Birth to 2 years: focused on exploring the world around them**
 - o **Lack Object Permanence:** Objects when removed from field of view are thought to disappear (peek-a-boo)
 - o **Dev. Sense of Self:** by 2 yrs can recognize themselves in the mirror
- **Pre-operational Stage: 2 – 7 years: use pretend play, developing language, using intuitive reasoning**
 - o **Lack Conservation:** recognize that substances remain the same despite changes in shape, length, or position (girls with juice in glasses)
 - o **Lack Reversibility:** cannot do reverse operations (count out both 4+2 and 2+4)
 - o **Are egocentric:** inability to distinguish one's own perspective from another's – think everyone sees what they see
- **Concrete Operational Stage: 7-11 yrs: use operational thinking, classification, and can think logical in concrete context**
- **Formal Operational Stage: 11-15 yrs: use abstract and idealist thoughts, hypothetical-deductive reasoning**
- **Problems with Piaget's theory:** stages too discrete, dev. differs b/w kids
- **VYGOTSKY'S THEORY:** cognitive development is a social process too, need to interact w/ others
 - o **Zone of Proximal Development:** gap b/w what a child can do on their own and w/ support. Need scaffolding (teachers)

SOCIOEMOTIONAL DEVELOPMENT

- **Temperament:** patterns of emotional reactions and babies (precursor to personality)
- **Imprinting:** baby geese believe the first thing they see after hatching is their mom – happens during a **critical period** (from LORENZ)
- **HARRY HARLOW:** discovered that contact comfort is more important than feeding (monkeys fed on wire or cloth mothers). Monkeys raised in isolation couldn't socialize
- **MARY AINSWORTH:** developed the **strange situation paradigm** (children left alone in a room w/ a stranger, then reunited w/ mom – determines your attachment style)
 - o **Secure attachment (60% of infants):** upset when mom leaves, easily calmed on return. Tend to be more stable adults
 - o **Avoidant attachment (20% infants):** actively avoids mom, doesn't care when she leaves
 - o **Ambivalent attachment(10% infants):** actively avoids mom, freaks out when she leaves

- o **Disorganized attachment (5%)**: confused, fearful, dazed – result of abuse
- **BAUMRIND**: parenting styles
 - o **Authoritarian**: rules & obedience, “my way or the highway” – kids lack initiative in college
 - o **Permissive**: kids do whatever – no rules – kids lack initiative in college
 - o **Authoritative**: give and take w/ kids – kids become socially competent and reliable
- **KOHLBERG'S MORAL DEV**
 - o **Preconventional morality**: Children: they follow rules to avoid punishment
 - o **Conventional morality**: adolescents: follow rules b/c rules exist to keep order
 - o **Postconventional morality**: adults: they do what they believe is right (even if it goes against society)
- **Carol Gilligan**: said moral reasoning and moral behaviors are two different things (what you say isn't always what you do)
- **ERIKSON'S SOCIOEMOTIONAL DEV.** : 8 stages, each stage represents a crisis that must be resolved, results in competence or weakness

Time frame	Freud's Psychosexual Fixation: being stuck in a stage Regression: reverting to a previous developmental stage	Erikson's Psychosocial Stages
0 - 1.5 years	Oral stage “Erogenous zone”: Mouth Babies like to suck on things Oral fixation: smoking, talking too much, non-stop kissing, chewing gum, eating too much, nail biting	Trust vs. Mistrust Babies' sense of fulfillment Having their basic needs met Attachment occurs during this stage
1.5 - 3 years	Anal stage Potty training Self-control	Autonomy vs. Shame and Doubt Infants try to assert their autonomy by saying “No!” Convincing adults of their

	<p>Control of one's body</p> <p>Anal fixation:</p> <p>Anal retentive personality: OCD about cleanliness</p> <p>Anal expulsive personality: Someone who always makes a mess all the time</p>	<p>preferences</p> <p>Kids learn to control their bodies and emotions</p> <p>Relates to temperament</p>
3-6	<p>Phallic</p> <p>Kids realize that boys and girls are different</p> <p>Freud saw this stage as the beginning of masturbation</p> <p>OEDIPUS COMPLEX ELECTRA COMPLEX</p>	<p>Initiative vs. Guilt</p> <p>Willingness to take action Being assertive</p> <p>“Why?”</p> <p>Kids develop their sense of curiosity</p>
7-11	<p>Latency</p> <p>“Peaceful period”</p> <p>Unconscious desires and impulses lay dormant</p> <p>“Calm before the storm”</p>	<p>Industry vs. Inferiority</p> <p>Kids begin attending formal schooling</p> <p>Kids realize that they are compared/competing with other kids</p> <p>Industry: working hard, putting in effort</p> <p>Inferiority: feeling that others are better</p>

		<p>Inferiority complex</p> <ul style="list-style-type: none"> - Could lead the assumption that hard work doesn't make a difference - One will always suck <p>Developed by Alfred Adler by analyzing the relationships between siblings</p>
12-18	<p>Genital</p> <p>Puberty</p> <p>The repressed unconscious and sexual desires/impulses come flooding out</p>	<p>Identity vs. Role confusion</p> <ul style="list-style-type: none"> - Teenagers experiment/explore their identities and roles in society/social groups <p>Having a clearly established identity is essential to move on beyond this stage</p> <p>“Who am I?”</p> <p>“Why am I here?”</p> <p>“What’s the meaning of life?”</p> <p>Role confusion results from not knowing who you are and what your purpose is</p> <p>Identity crisis</p> <p>Existential crisis</p>
20-40		<p>Intimacy vs. Isolation</p> <p>Once a young adult has established his or her identity, the</p>

		<p>next concern is developing close relationships/find one's partner</p> <p>Considering marriage</p> <p>Isolation: results from feeling sad and lonely</p>
40-60		<p>Generativity vs Stagnation</p> <p>Middle adulthood when (usually adults are married have started their families/careers) people consider whether their lives are MEANINGFUL</p> <p>Generative means staying busy and liking the direction one's life is going in</p> <p>Stagnation: feeling that one's life is meaningless or boring/routine</p> <p>Stagnation could result a mid-life crisis</p>
60+		<p>Integrity vs Despair</p> <p>Integrity: When an older person looks back on his life and feels proud/accomplished</p> <p>Despair: REGRET about how one has lived his or her life</p>

- o **Trust vs Mistrust** (*birth – 18 months*): if needs are dependably met infants dev basic trust

- o **Autonomy vs shame & doubt** (1-3 yrs): toddlers learn to exercise their will and think for themselves
- o **Initiative vs guilt** (3-6 yrs): learn to initiate tasks and carry out plans
- o **Industry vs inferiority** (6 yrs to puberty): learn the pleasure of applying themselves to tasks
- o **Identity vs role confusion:** (adolescence thru 20s): refine a sense of self by testing roles and forming an identity
- o **Intimacy vs isolation:** (20s—40s): form close relationships and gain capacity for love
- o **Generativity vs stagnation:** (40s-60s): discover sense of contributing to the world, thru family & work
- o **Integrity vs despair:** (60s and up): reflect on your life, feel satisfaction or failure
- **PUBERTY!** (rapid skeletal and sexual maturation)
 - o **Primary sex characteristics:** necessary structures for reproduction (ovaries, testicles, vagina, penis)
 - o **Secondary sex characteristics:** nonreproductive characteristics that dev during puberty (breasts, hips, deepening of voice, body hair)
 - o **Frontal lobe continuous dev (not fully developed till 25)**
- **GENDER DEVELOPMENT:** sex = chromosomes, gender = what you identify yourself as
 - o **Gender roles:** expected behaviors (norms) for men/women
 - o **Social learning theory:** we learn gender roles and identity from those around us
- **AGING:**
 - o **Cellular clock theory:** cells have a maximum # of divisions before they can't divide anymore
 - o **Free-radical theory:** unstable oxygen molecules w/in cells damage DNA
 - o **Over time skills decrease** (reaction time, memory)
- **CROSS-SECTIONAL STUDY:** studies ppl of different ages at the same point in time
 - o **Adv:** inexpensive & quick
 - o **Disadv:** can be differences due to generational gap
- **LONGITUDINAL STUDY:** studies same ppl over time
 - o **Adv:** eliminates groups differences, lots of detail
 - o **Disadv:** expensive, time consuming, high drop out rates
- **Problem-focused coping:** solving or doing something to alter the course of stress (planning, acceptance)
- **Emotion-focused coping:** reducing the emotional distress (denial, disengagement)

Personality
(5-7%)

PSYCHODYNAMIC EXPLANATION

SIGMUND FREUD said personality was largely unconscious.

- **Conscious:** immediate awareness of current environment

- **Preconscious:** available to awareness (phone #s)
- **Unconscious:** unavailable to awareness
- **id:** our hidden true animalistic wants and desires – operates on the pleasure principle, all about rewards and avoiding pain (*devil on your shoulder – entirely unconscious*)
- **superego:** our moral conscious (*angel on your shoulder, all 3 consciousness*)
- **ego:** reality principle, has to deal w/ society, stuck mediating b/w the id and superego (*its you! – conscious and preconscious*)

When ego cannot mediate b/w the id and superego, we use **defense mechanisms**

- **Repression:** push memories back into the unconscious mind (sexual abuse is too traumatic to deal w/ so you repress it)
- **Projection:** attribute personal shortcomings & faults on to others (man who wants to have an affair accuses his wife of having one)
- **Denial:** refuse to acknowledge reality (refuse to believe you have cancer)
- **Displacement:** shift feelings from an unacceptable object to a more acceptable one (can't tell at teacher, go home and yell at the dog)
- **Reaction formation:** transform unacceptable motive into his opposite (woman who fears sexual urges becomes a religious zealot)
- **Regression:** transform into an earlier development period in the face of stress (during exam week you start to suck your thumb)
- **Rationalization:** replace a less acceptable reasoning with a more acceptable one (don't get into your college – justify it was a sucky college anyway)
- **Sublimation:** replace unacceptable impulse w/ a socially acceptable one (man w/ strong sexual urges paints nudes. Dexter)

FREUD'S PSYCHOSEXUAL STAGES

- **Oral stage (0-18 months):** pleasure focuses on the mouth (id)
- **Anal stage (18 – 36 months):** pleasure involves eliminative functions (ego forms)
- **Phallic stage (3 – 6 yrs):** pleasure focuses on genitals (superego forms)
 - **Oedipal complex:** young boys learn to identify w/ their father out of fear of retribution (castration anxiety)
 - **Electra complex:** young girls learn to identify w/ their mother b/c they cannot with their father (penis envy)
- **Latency stage (6 yrs to puberty):** psychic time out – personality is set
- **Genital State (adulthood):** sexual reawakening – oedipal and electra “feelings” are repressed, turn sexual wants onto an appropriate person
- **FIXATION:** can become “stuck” in an earlier stage – influences personality (oral stage smokes/drinks, anal is “anal retentive”, phallic is promiscuous)

What's wrong w/ Freud theory? – unverifiable, descriptive not predictive

What's good about it? – 1st theory about personality sparked psychoanalysis

How do we test this approach?

- **Psychoanalysis:** analyze a person's unconscious motives thru the use of:
 - o **Free Association:** say aloud everything that comes to mind w/o hesitation
 - o **Transference:** looks for feelings transferred to psychoanalyst
 - o **Dream interpretation:** analyze the manifest (seen message) and latent (hidden messages) content
 - o **Projective Tests:** ambiguous stimuli shown to look at your unconscious motives (**THESE SUCK B/C THEY ARE VERY SUBJECTIVE**)
 - Thematic apperception test (TAT) : tell a story about a picture (when someone has a tattoo (tatt) you ask what it means)
 - Rorschach inkblot: show an inkblot

NEO-FREUDIANS

- **CARL JUNG:** believed in the *collective unconscious* (shared inherited reservoir of memory – explains common myths across civilizations & time)
- **KAREN HORNEY:** said personality develops in context of social relationships, NOT sexual urges (security not sex is motivation, men get womb envy)

TRAIT PERSPECTIVE

- **Traits** are enduring personality characteristics, people can be described by these – have strong or weak tendencies. They are stable, genetic, and predict other attributes.
- Use **factor analysis** to find these: statistical procedure used to identify similar components
- **TRAIT THEORIES:**
- **Big Five:** (by Costa & McCrae) (acronym OCEAN) You vary on each of these
 - o Openness : imaginative, independent, like variety
 - o Conscientiousness: organized, careful, disciplined
 - o Extraversion: sociable, fun-loving, affectionate (opposite is introversion: shy, timid, reserved)
 - o Agreeableness: soft hearted, trusting, helpful
 - o Neuroticism (emotional stability): calm, secure

What's wrong with trait theory? – ignores the role of the situation in behavior

What's good about it? - identifying traits gives us perspectives about careers, relationships, health

How do we test this approach?

- **MMPI** – helpful for mental health and job placement
- **Myers Briggs** – gave you 4 letter combo

What's wrong w/ these tests?

- They're long, social desirability can be an influence, and they're too broad

HUMANISTIC PERSPECTIVE

- Emphasized personal growth and free will. You don't like yourself? So change!
- **CARL ROGERS:** talked about our *self-concept* (*idea of who we are*). Your self-concept is the center of your personality

- o **Actual (social) self:** what others see
- o **Ideal (true) self:** who you WANT to be
- o A *positive* self-concept makes us perceive the world positively (optimist)
- o A *negative* self-concept makes us feel dissatisfied and unhappy

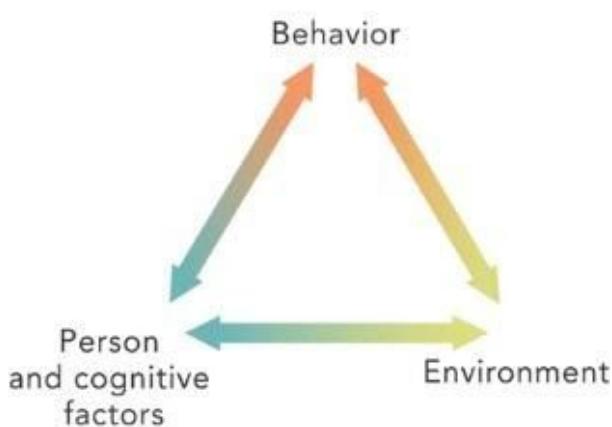
What is wrong with humanistic theory? - too optimistic about human nature, abstract concepts are difficult to test

What's good about it? – emphasizes conscious experiences and change

- **Individualistic Cultures:** give priorities to own goals over group goals. Define your identity in terms of you (American society)
- **Collectivistic Cultures:** give priority to the goals of the group, your identity is part of that group (China)

SOCIAL-COGNITIVE PERSPECTIVE

- Behavior is a complex interaction of inner process and environmental influence – which influences personality
- Emphasizes conscious awareness, beliefs, expectations, and goals
- **BANDURA!** Talked about ***RECIPROCAL DETERMINISM***: interaction of behavior, cognitions, and environment make up *you*.



- [I'm outgoing (*behavior*), I choose to teach b/c it lets me be outgoing (*environment*), and I have thought this through which is why I teach despite making less money (*cognitive*)]
- **Self-efficacy:** belief that one can succeed, so you ensure you do
- **Internal locus of control:** you control your own fate
- **External locus of control:** chance / outside forces control your fate

What's wrong with social-cognitive? – Too specific, cannot generalize

What's good about it? – Highlights situations, and cognitive explanations of personality

How do we test it? – Observations & interviews (time consuming)

What is psychology?

It's a science...but what do we study?

How is it different from other sciences?

II. Key People

Wilhelm Wundt- Structuralist (structure of your unconscious..uses INTROSPECTION to understand the structures of your mind)

William James- Functionalism (purpose/function of your unconscious and behavior), father of modern psychology

Edward Titchener

G. Stanley Hall- 1st president of APA

Sigmund Freud psychoanalyst

Mary Whiton Calkins 1st female president of APA

Margaret Floy Washburn 1st female PhD

Dorothea Dix- reformed mental institutions in US

Charles Darwin- natural selection and evolution

III. Eight Approaches/Perspectives in Psychology

Psychodynamic (Freud/unconscious)

Evolutionary (Darwin, natural selection of traits)

Biological/Neuroscience- involves the brain and neurotransmitters

Behavioral- learned and reinforced, things you can SEE someone do

Cognitive - perceptions, thoughts, memories

Humanistic- free will, choice, self-actualization, living your best life

Socio-cultural- society and influences from your environment

Biopsychosocial (combination of biological, social and internal factors...most modern)

IV. Specialties

Clinical psychologist-

Industrial/organizational psychologist-

Psychiatrist (goes to med school and can prescribe medication)-

Research Methods 8-10%

I. Research Terms

Confirmation bias- a tendency to search for information that supports our preconceptions and to ignore or distort contradictory evidence.

Overconfidence- the tendency to be more confident than correct—to overestimate the accuracy of our beliefs and judgments.

Hindsight bias- the tendency to believe, after learning an outcome, that one would have foreseen it

Researcher bias- occurs when a researcher unconsciously affects results, data, or a participant in an experiment due to subjective influence.

Participant bias- tendency of participants in an experiment to consciously or subconsciously act in a way that they think the experimenter or researcher wants them to act

Hawthorne effect- the inclination of people who are the subjects of an experimental study to change or improve the behavior being evaluated only because it is being studied

II. Experiments (determine cause and effect) PsychU Link

Hypothesis- A testable prediction, often implied by a theory

Replication-operational definitions allow for replication, creating reliability of results)

Sample-random and representative eliminates bias

Random Sample-method for choosing participants that minimizes bias and allows all people equal opportunity to be chosen

Population-all of those whom you want to know something about

Random assignment-each participant has an equal opportunity to be in control or experimental group

Operational definition-clear, precise and quantifiable definition of variables to allow replication by others

Independent variable-what is manipulated by the researcher, given to the experimental group

Dependent variable-what is measured by the researcher

Confounding variable- things not related to the IV that may impact the DV

placebo/placebo effect- given to control group/ shows behaviors associated with the experimental group when having the placebo

Double blind procedure- experiment where neither the experimenter nor the participant knows who is in which condition

III. Descriptive Research (CANNOT determine cause/effect)

Naturalistic observation (observe people in natural setting with no manipulation of environment, good for real world validity but bad because there's no way to determine cause and effect)

Surveys and wording effects

Case study- looks at ONE person (or situation) in great detail when it's a rare occurrence, good because you can get lots of information, bad because it doesn't tell cause and effect

IV. Correlational Research (Can show RELATIONSHIPS but NOT cause/effect)

Correlation: how much one variable predicts the outcome of another variable

Positive: both variables increase or decrease together

Negative: one variable increases while the other decreases

Correlation is a PREDICTION and DOES NOT EQUAL CAUSATION

Correlation coefficients

Measured from -1.0 to +1.0, closer to 1 or -1 is a stronger relationship

Illusory correlation- perceiving a relationship when none exists

Scatterplots- graph used to plot correlations, show positive, negative or illusory correlations

V. Descriptive Statistics

Measures of central tendency

Mean- average (best to use when there are no outliers, use for normal distribution)

Median- middle # in a distribution (best to use when there are outliers or graph is skewed)

Mode- number appearing the most in a distribution

Normal Curve (68, 95, 99.7)

Standard deviation- average amount that scores deviate from the mean. Large standard deviation means lots of difference, small means the scores are clustered around the mean

Positive skew- means outliers are throwing off your data with there being one (or a small number) of very high scores, use the median rather than the mean

Negative skew- means outliers are throwing off your data with there being one (or a small number of very low scores use the median rather than the mean

Statistical significance- if data possesses statistical significance, we can assume causation

P value = or > .05

Means there's less than 5% chance that the results are due to chance, and thus is statistically significant

Range- distance between the highest and lowest score in a set of data

VI. Inferential Statistics

Establishes significance (meaningfulness), Significant results are NOT due to chance

Can you infer the same about all members of the population?

VII. Ethics

Informed consent (can lead to participant bias)-

Debriefing (after experiment)-

Voluntary participation-

Confidentiality -

Deception is OK ONLY when no harm can be done or the good outweighs the bad

Must present studies to Institutional Review Board (APA) for approval before starting

Animal Research (must be fed, well cared for, appropriate housing, etc)

Biological Bases of Behavior 8-10%

I. Types of Neurons

Motor neurons (efferent neurons)- info from brain to muscles to move

Sensory neurons (afferent neurons)- info from skin to brain

Interneurons- connect sensory/afferent and motor/efferent neurons for quick transmission

Mirror neurons- involved in copying emotions, behaviors of others

II. Neural Transmission

ORDER-> cell body (soma)- axon- axon terminal- neurotransmitter- synapse- to dendrites of next neuron.

Soma- also called cell body, contains nucleus

Axon- action potential travels down

Myelin sheath- speeds up signal as it goes down axon, deterioration is a result of multiple sclerosis

Axon terminals- release NT's, send signal to dendrites of next neuron

Dendrites- receive incoming signal

Synapse- gap between neurons where the signal “jumps”

How does the neuron fire to the next neuron?

Action potential- movement of sodium and potassium ions across a membrane and sends an electrical charge down the axon

“All-or-none” response- signal must stimulate the AP past its threshold, but it doesn’t increase the intensity of the fire. (either fires or it doesn’t)

Refractory period- time when neuron is recharging and can’t fire

III. Nervous System

Central Nervous System (CNS) (brain and spinal cord)

Peripheral Nervous System (everything but the brain and spinal cord)

Somatic Nervous System (skeletal--controls voluntary movements)

Autonomic Nervous System (controls automatic functions, organs and glands)

Sympathetic nervous system (arouses in cases of stress or emergency)

Parasympathetic nervous system (calms after emergency or pacifies)

IV. Neurotransmitters

You need to know what happens when there is too little or too much of each

Dopamine- attention/mood/movement, reward

Endorphins- pleasure/pain control

Acetylcholine (ACh)- memory/muscle contraction

Serotonin- mood/hunger/sexual behavior, emotion

Epinephrine/Norepinephrine- fight or flight, arouses sympathetic nervous system

GABA- slows the brain (alcohol), major inhibitory NT

Glutamate- speeds up the brain, major excitatory NT

V. Things impacting Neurotransmitters

Agonist- drugs that mimic the neurotransmitter (Morphine/heroin are endorphin agonists)

Antagonist- drugs that blocks the reuptake of the neurotransmitter (cocaine is an antagonist for dopamine)

Reuptake- the leftover NTs are taken back up into the sending neurons, SSRIs (selective serotonin reuptake inhibitors) block reuptake--used as a treatment for depression

Blood-brain barrier- only certain things can pass through to your brain. Dopamine cannot

L-Dopa- form of dopamine that can pass the blood-brain barrier

VI. Structures of the Brain

Know the order of evolution of the regions of the brain, major structures and functions, what would happen if each region was lesioned or removed. How would it impact one's behavior?

Hindbrain (oldest part of brain):

Medulla-breathing and heart rate...autonomic functions, vital organs

Reticular formation-arousal and attention

Brainstem- Controls the flow of messages between the brain and the rest of the body

Pons- sleep, breathing

Cerebellum-balance and coordination, fine motor

Limbic System (near midbrain):

Amygdala-anger, aggression, fear responses

Hypothalamus- 5 F's (fight, flight, fahrenheit, feeding, fornicate)

Thalamus- sensory switchboard except smell, then goes to correct region of brain

Hippocampus- explicit memory formation

Pituitary gland- master gland that directs other glands in endocrine system

Forebrain: It is the front of the brain.

Association areas- areas of higher level thinking

Cerebral cortex- thought region; decision making

Frontal lobe- motor cortex, Broca's area (ability to PRODUCE speech), information processing, decision making, judgement, planning, personality, contains motor cortex

Parietal lobe- somatosensory cortex (body sensations), math processing

Occipital lobe- visual cortex, located in back of the head

Temporal lobe- auditory cortex, Wernicke's area (ability to UNDERSTAND speech)

Corpus callosum- connects two hemispheres, allows for communication between two halves, can split for relief of seizures. Know how information is processed in split brain patients (experiments done by Sperry and Gazzaniga)

Images shown to the right hemisphere will be processed in left and vice versa, patient can verbally identify what they saw

Brain plasticity- brain's ability to rewire itself to accommodate from loss in another area; better the younger a person is.

VII. Brain Imaging

CT (CAT)- Structure via x-rays

MRI- structures via magnets

PET- function via radioactive glucose injected in brain

EEG- function via electrical signals from brain; only good for studying sleep and seizures

fMRI- structure AND function via magnets and oxidized blood

VII. Endocrine System

Pituitary gland- master gland, regulates hormones, controlled by hypothalamus

Adrenal gland- releases epinephrine and norepinephrine, adrenaline, related to sympathetic nervous system

Thyroid gland- thyroxine, associated with weight and metabolism. Not enough thyroxine and you are lethargic and gain weight

Hormones- chemical messengers released by glands, move slower than neurotransmitters

Oxytocin- love/bonding, “cuddle hormone”

VIII. Genetics (ALSO IN DEVELOPMENT UNIT)

Adoption and twin studies tell us quite a bit about the nature v. nurture debate. You MUST know what it tells us.

Identical twins- monozygotic

Greater chance of both developing a disease

If raised in different environments, shows differences

Fraternal twins- dizygotic

Dominant genes and recessive genes (review of genetics class)

Prenatal environments (and teratogens...things that cross the placental barrier and cause harm to the developing fetus)

What traits are inherited v. learned (nature v. nurture)

IX. Evolutionary Psychology (ALSO IN DEVELOPMENT UNIT and in PERSONALITY UNIT)

This perspective argues that our behavior is the result of our inherited traits because those traits contributed to the survival of our ancestors

Natural selection/Darwin: Only successful traits get passed on. (Survival of the fittest)

Genetic predispositions

Living to an age at which one can reproduce is essential for the survival of the species

Sensation and Perception 6-8%

I. Sensation- taking information from the environment through the various sense organs

Sensory adaptation- UNCONSCIOUS process, becoming used to a sensation and being unable to detect it after a period of time (don't notice the water in the pool is cold after a while, no longer notice a strong smell, no longer notice how loud the concert is. BUT you can't re-notice it if someone calls your attention to it)

Sensory interaction- when your senses combine together at the same time (taste and smell interact to create flavor)

Impact of sensory deprivation- can cause a failure to form neural connections in that sense, especially in children. Brain plasticity will help strengthen other senses

II. Vision

Rods- see black and white, in the dark, responsible for peripheral vision, located in retina OUTSIDE of the fovea

Cones- see color, clarity, located in center of fovea, help us see fine detail. HD receptors for your brain

Opponent-process theory- Each color has an opposing color: red-green, blue-yellow, black-white. Think COLOR WHEEL, responsible for after-image effect, complementary colors are processed in the ganglion cells

Young-Helmholtz trichromatic theory (also just referred to as trichromatic OR Young-Helmholtz)- there are three cone color receptors: blue, red, green. All colors we see are a result of combinations of these cones being activated.

Subtractive color- each color takes away something from other colors (like paint mixing) and the result is black

Additive color mixing- each light wave adds something to the other light waves, resulting color is white

Visual capture- visual system overwhelms all others which is why you become nauseated in a 3D movie

Structures and functions of Eye

Cornea- protects the eye

Iris- controls amount of light entering eye

Pupil- allows light in

Lens (accommodation--focusing image on retina)

Retina (rods- black/white and dim light, cones-color, bright light, fovea- area of best vision...where the cones live)

Bipolar cells--connect rod/cone to ganglion cells-- transmit rod/cone info via action potential to the brain

Blind spot- optic nerve leaves eye, no rods/cones

Optic nerve- takes message to brain

Feature detectors- specialized cells that see motion, shapes, lines, etc.

Know correct passage of light from outside eye to the brain.

(light->cornea->pupil/iris->lens->retina->rods/cones->bipolar cells->ganglion cells->optic nerve->optic chiasm-> occipital lobe

III. Hearing

Conduction deafness- damage to tiny bones- hammer, anvil, stirrup. Can be helped with hearing aides

Sensorineural deafness- damage to hair cells in cochlea. Cannot be helped with hearing aide, but can be helped with a cochlear implant

Nd

Structures and functions of the ear

Outer Ear

Pinna (ear flaps)

Auditory canal

Middle ear

Eardrum (tympanic membrane)

Hammer (malleus), anvil (incus), stirrup (stapes) HAS

Inner Ear

Cochlea-where sound is first processed

Basilar membrane and hair cells

Semicircular canals

Pathway of sound- sound->pinna->auditory canal->ear drum (tympanic membrane)->hammer, anvil, stirrup (HAS)->oval window->cochlea->auditory nerves->temporal lobe

Theories of Hearing: both occur in cochlea

Place theory- location where hair cells determine sound (high pitches)

Frequency theory- rate at which action potentials are sent determines sound (low pitches)

IV. Touch

mechanoreceptors->spinal cord->thalamus->somatosensory cortex

Gate control theory of pain- intense pain causes the “gate” to close, which prevents further pain signals from going to the brain

Phantom limb- thalamus sends sensation signals to the sensory cortex from the missing body part

Memories of pain- we tend to remember the events at the beginning and the end most vividly

V. Chemical Senses

Smell (olfaction)

Registers in olfactory bulb

Certain scents can cue memories involving the hippocampus

Does NOT route through the thalamus

Taste (gustation)

5 taste receptors on tongue and in less concentration in rest of mouth: bitter, salty, sweet, sour, umami (savory)

VI. Kinesthesia

Sense of body position and awareness of body parts

Proprioceptors are the receptor cells: located in muscles, tendons and joints

VII. Vestibular Sense

Sense of balance

Semicircular canals in the ear provide the receptors

I. Perception

How our brain MAKES SENSE of the information that our senses provide.

II. Processing

Sensation without perception is called prosopagnosia (face blindness)

Bottom-up processing- starting at the sensations and forming a perception as you get more information. You might hear something, but you aren't quite sure what it is, you get closer to it (or it gets louder) and you are able to make out that it's a song, then you can make out words which lead you to form a perception of WHICH song you are hearing.

Top-down processing- starting with the perception and then confirming what you know. This happens when you have expectations about something that impact how you perceive it.

Parallel processing- sensing and interpreting more than one thing at a time.

III. Thresholds

Absolute threshold- smallest amount of information needed for a sensation to occur

Difference threshold- smallest amount of change needed to know there was a change in strength of the stimulus

Weber's law (just noticeable difference, jnd) the amount of change needed to detect a difference is proportional to the size of the original stimulus. If the stimulus is small, a smaller amount of change will be needed. If it is large, a larger amount of stimulus will be required.

Subliminal messages- occur below your absolute threshold, not consciously perceived

IV. Selective Attention

Cocktail party effect- when there is a lot of noise, we are able to select the items on which we focus. Lets us hear our name called in a loud room, when lots of conversations are occurring simultaneously.

Signal detection theory- when we anticipate a stimulus, we are more likely to detect it (your phone vibrating is easy to detect because you expect notifications)

Figure-ground (visual and auditory)- our ability to pick out the figure from the background

Inattentional blindness-failure to notice something because you're so focused on another task (the gorilla video)

V. Perception Terms

Perceptual constancies- utilize top down processing

Shape constancy-the tendency to perceive an object as having the same shape regardless of its orientation or the angle from which we view it. For example, when we look head-on at a rectangular picture frame hanging on the wall, it appears as a rectangle.

Size constancy-refers to the fact that our perceptions of the size of objects are relatively constant despite the fact that the size of objects on the retina vary greatly with distance.

Color constancy-perceiving familiar objects as having consistent color, even if changing illumination alters the wavelengths reflected by the object. (Myers Psychology for AP 3e p. 192

Perceptual adaptation- ability to adapt to an environment and tune out distractions because there is no need to interpret those distractions

Perceptual set- tendency to use surrounding information to help interpret what we experience in the world.

VI. Depth Perception

Visual cliff- at about 8 months, children develop depth perception, not based on experience

Binocular cues- used by both eyes to perceive 3D

Retinal disparity- each eye gets a slightly different image, but your brain combines them together

Convergence- ability of your eyes to turn inward to see things really close to your face

Monocular cues- used by only one eye to perceive depth, used to see 3D image in a 2D image

Interposition- something in front of another object, lets you know the front object is closer

Relative size- closer=larger, farther away= smaller

Relative height- farther away=higher in visual field, closer= lower in visual field

Relative clarity- hazy objects appear farther away

Texture gradient- coarser objects are closer

Linear perspective- two “parallel” lines farther apart= closer, lines getting closer to each other= farther away (like railroad tracks)

VII. Other Terms

Phi phenomenon- motion is perceived because lights blink to make you perceive movement--marquee signs operate on this principle

Stroboscopic movement- motion is produced by rapid succession of slightly varying images (animations and flip books)

Gestalt- Perceiving the whole is greater than the sum of the parts

Figure-ground- we organize things into figures (objects) that stand out from surroundings (background)

Proximity- things that are close to one another appear to belong to the same group

Closure- our brain fills in the gaps to close off an object, even if it isn't closed (dot-to-dots)

Continuity- we perceive a flow of items, so it appears to go on, even if it doesn't, we like a flow

Similarity- we group things that are similar to one another into the same groups

Connectedness - we group things that are touching one another

States of Consciousness 2-4%

I. Sleep

Restorative- we need it to process our memories and reboot our body/brain

Circadian rhythm- sleep/wake cycle, operates on 24-25 hour cycle, responsible for jet lag, controlled by the suprachiasmatic nucleus (SCN) in the brain

Body temp decreases as we prepare for sleep and rises as we wake up

Babies and teens need more sleep than any other group--most changes occurring (physical and mental growth)

Sleep Stages (awake=alpha waves)

Stage 1= relaxation, feeling as though you are falling, hypnagogic jerks (alpha-theta waves)

Stage 2= sleep spindles (little bursts of brain activity)

Stage 3=deep sleep- Delta waves, sleepwalking, sleep talking, night terrors, bedwetting

REM= dreaming, paradoxical sleep (brain is very active but body is not)

Each CYCLE (going through all of the stages) takes about 90 minutes, REM lasts longer each time you enter it.

Sleep disorders

Insomnia- inability to fall asleep or stay asleep

Narcolepsy- sleep attacks throughout the day, inability to stay awake

Sleep apnea- inability to get a good night's sleep because you stop breathing throughout the night usually due to obesity.

Night terrors- happen in stage 3

Sleep walking- due to fatigue, drugs, alcohol

II. Dreams

Freud's wish fulfillment: dreaming lets us live out our dreams

Manifest content- the plot/story line of the dream

Latent content- the underlying meaning/interpretation of the dream that is in your unconscious (Freudian)

Activation synthesis- brain produces random bursts of energy which stimulates lodged memories and your brain is trying to make sense of these random firings, thus weaving together a “story” for your dream

III. Hypnosis

It can: reduce pain, induce relaxation

It can't: make you do things you wouldn't normally do, make you regress, or give you superhuman strength

Power of suggestion- those who are suggestible are best candidates

Recovered memories- difference between fact and fiction

Dissociation- going from one level of consciousness to another

Hilgard's Hidden Observer- the level of consciousness you go to

Social influence theory- if you are in front of a crowd, you are more likely to do what the hypnotist suggests

Posthypnotic suggestion- instructions you follow AFTER hypnosis

IV. Drugs

Psychological dependence (think you need it) v. physical dependence (body does need drug for homeostasis maintenance)

How genetics impacts drug addiction

Categories and effects

Stimulants: cocaine, caffeine, amphetamines, nicotine

Increases sympathetic NS activation, highly addictive

Depressants: heroin (opiates), alcohol, barbiturates, tranquilizers

Decreases sympathetic nervous system activation, highly addictive

Hallucinogens: marijuana, LSD, Ecstasy

Tolerance- the longer you use the drug, the more you need to produce the “high”

Withdrawal- unpleasant effects of not having the drug when you are dependent on the drug for homeostasis

Addiction (Dependence)- need the drug in order to feel “normal” and avoid withdrawal symptoms

Learning 7-9%

I. Important People/Experiments

Ivan Pavlov (Russian Physiologist)

Classical conditioning- conditioned dogs to salivate at the sound of a bell

Classical conditioning focuses on INVOLUNTARY behavior

John Watson (FIRST behaviorist)

Little Albert- classically conditioned infant to fear white rats (and later other white furry things)

Showed that fear responses could be conditioned in humans

BF Skinner (behaviorist)

Skinner Boxes (operant chamber)- operationally conditioned pigeons to respond correctly to given stimuli, taught them to be superstitious, focused on using rewards to influence VOLUNTARY behavior

Schedules of reinforcement

Albert Bandura (social learning)

Bobo doll- children who watched adults behave aggressively with the Bobo doll were more likely to copy/imitate/model that behavior when given access to the Bobo doll.

Observational learning and modeling

EL Thorndike (law of effect)

Behavior that is rewarded will be repeated, behavior that is punished will not be repeated

Cats in puzzle boxes

II. Associative Learning Theories

Classical conditioning (UNCONSCIOUS and INVOLUNTARY)

Neutral stimulus (NS)- doesn't elicit any response because it is meaningless (Pavlov's bell)

Unconditioned Stimulus (UCS or US)- stimulus that elicits a response without training (food)

Unconditioned Response (UCR or UR)- the reflex like response (naturally occurring) to the unconditioned stimulus (salivation)

Conditioned Stimulus (CS)- neutral stimulus that when paired with the unconditioned stimulus elicits a response (bell associated with food)

Conditioned Response (CR)- response that occurs to the conditioned stimulus, same as or very similar to the unconditioned response (saliva)

Acquisition- process of learning the response pairing

Generalization- associating other neutral stimuli with the unconditioned stimulus

Discrimination- being able to only respond to the conditioned stimulus...not other similar ones

Extinction- when the stimulus is absent for a period of time, the association goes away

Spontaneous recovery- once a response has become extinct, being presented with that stimulus again, the response reappears

Contingency model of classical conditioning

Rescorla and Wagner- classical conditioning involves cognitive processes

Conditioned taste aversion (one-trial learning) John Garcia- we have innate predispositions that allow classical conditioning to occur in one trial (think food poisoning)

Operant conditioning (CONSCIOUS and VOLUNTARY)

Positive reinforcement- giving something desirable to increase the repetition of behavior (sticker for turning in homework)

Negative reinforcement- removing something unpleasant to increase the repetition of a behavior (seat belt noise goes away when you buckle seatbelt)

Positive punishment- adding something bad to decrease the likelihood of a behavior (spanking)

Negative punishment- removing something desirable to decrease the likelihood of a behavior (take away your phone when you get bad grades)

Schedules of reinforcement (partial)-

Fixed ratio- reward after a SET NUMBER of behaviors, easiest to acquire a behavior, but fastest to extinct

Variable ratio- reward after a VARIED NUMBER of behaviors

Fixed interval- reward after a SET AMOUNT OF TIME

Variable interval- reward after a varied amount of time; slowest to acquire a behavior, but harder to extinct

Variable schedules are most resistant to extinction

Continuous schedule- reinforced EVERY single time the behavior occurs

shaping/ successive approximations- rewarding for each behavior that goes closer to the desired behavior. Start small and build up to the big behaviors

Chaining- tying together several behaviors

Primary reinforcer (satisfies a basic need- food, water, shelter) v. secondary reinforcer (also called conditioned reinforcer) which is something you've been taught to value

Partial reinforcement (doesn't occur every time) v. continuous reinforcement (occurs every time)

Immediate reinforcer (happens right after the behavior...best when teaching a new behavior)
v. delayed reinforcer (happens sometime after the behavior...you have to wait for it like your paycheck!)

Generalization (as related to VOLUNTARY behavior) respond to a similar stimulus for a reward. Ex. child receives \$1 for making his bed. Starts making all of the beds in the house hoping for \$

Discrimination (as related to VOLUNTARY behavior) a stimulus signals when a behavior will or will not be reinforced

Premack Principle- pairing something you dislike with something you like, will make you do the disliked activity more. Ex. dog hates walking loose on a leash, but LOVES playing fetch. Play fetch when walking loose on a leash, it will increase loose leash walking

Overjustification Effect- reinforcing behaviors that are intrinsically motivating causes you to stop doing them. Ex. if you give a child \$5 to read and they already like to read, they will stop reading because it's not about enjoying it anymore, it's about the reward

Social Learning/Observational Learning/Modeling (different names for the same thing)

We repeat the behaviors of others if they are people we admire and if they are rewarded for the behavior (Bandura and the Bobo Doll)

Prosocial behaviors- helping behaviors

Antisocial behaviors- mean behaviors

Other concepts

Cognitive maps- mental representations of your surroundings (you know how to get somewhere based on mental pictures)

Latent learning (Edward Tolman)- unconscious learning that shows up suddenly when needed, this was learned through rats in mazes that were reinforced halfway through

Insight learning (Wolfgang Kohler)- some learning is through simple intuition, like chimps knowing how to eat bananas

Mirror neurons- neurons that copy another's emotions. Essential with observational learning

Learned helplessness (Martin Seligman...shock the puppies)- no matter what you do, you don't get the results you want, so you give up and stop trying

Memory, Language and Cognition 8-10%

I. How memories are formed (encoding, storage, retrieval)

Encoding

Sensory memory takes in iconic (visual) or echoic (sound) information

If you use selective attention on the stimulus, you begin the encoding process

Then move into visual, acoustic and semantic (adding meaning to the stimulus) encoding

Automatic encoding- happens without effort, you know what you ate for breakfast without having to process it as you eat.

Effortful encoding/effortful processing- requires attention (school stuff, work)

Shallow, intermediate, and deep processing: the more emphasis you put on the MEANING of something, the deeper the processing and the better you will remember it!

Imagery-attaching images to information makes it easier to remember

Self-referent encoding- we remember stuff we are interested in better

Dual encoding- combining different types of memory aids in memory

Storage

Effortful processing involves putting effort into remembering information

Automatic processing involves memories that occur without any effort

Working memory- your sensory memories are processed into your short term memory, then to long-term potentiation, and finally goes into long term memory.

Remembering

Rehearsal

Mnemonic device- shortcut to help us remember something

Acronyms (PEMDAS)

Chunking- break it into smaller pieces to help you remember it better

Method of loci- putting things you must remember in a specific location in a familiar place

Spacing effect/distributive practice- study a little bit at a time over a longer period of time.
OPPOSITE of cramming.

Ebbinghaus' forgetting curve- forgetting occurs rapidly at first. Each day you don't practice, the more you forget.

Serial position effect (primacy-recency effect) we forget what's in the middle of the list

Primacy- remember things at the beginning of the list

Recency- remember things at the end of the list

Short term memory capacity is 7 + or - 2 items, so 5-9 things.

Retrieval

Explicit (declarative) memories (conscious)

flash bulb, episodic, factual, semantic memories

Created in the hippocampus

Implicit (non-declarative) memories (unconscious)

Procedural-tying your shoes, riding a bike

Created in the cerebellum

Recognition (picking from choices, i.e. multiple choice test) and Recall (no cues, i.e. essay)

Mood-congruent- you remember something better when you are in the same mood in which you encoded that information

State-dependent (encoding specificity principle)- the physical state you were in when learning is the way you should be when testing

Context-dependent- where you learn something is best remembered in the same context.

Priming- using previous knowledge/experience to retrieve a memory

Retrieval cues- things that help you recall a memory

Context effects- using surrounding information to help you process memories

De ja vu- feeling that you've experienced something before, because you have experienced some aspect of it.

Memory construction

confabulation- your brain tries to fill in gaps in memory, causing you to remember things that never happened

Loftus' research (false memories)- how things are worded can impact how you "remember" something, information can get "planted"

Misinformation effect- when memories change with the passing of time or with new information

Sensory memory->Short Term/working memory->long term memory

Memory construction

Forgetting

Encoding failure- the information never made it to storage

Amnesia- memory loss due to injury to the brain

Repression- highly stressful events are pushed into one's unconscious, usually because they are too painful/distressing to remember

Proactive interference- old memories interfere with formation of new memories

Retroactive interference- new memories interfere with the recall of old memories

Ebbinghaus' forgetting curve- you didn't study enough/encode for long term potentiation to occur

Anterograde amnesia- amnesia from injury onward

Retrograde amnesia- amnesia from injury backward

Alzheimer's disease-caused by destruction of acetylcholine in hippocampus

II. Memory Organization and Memory Storage

Hierarchies- Memory is stored according to hierarchies

Semantic networks- linked memories are stored together

Schemas- preexisting mental concept of how something should look. Memories fit into schemas.

III. Biological Parts of Memory

Long-term potentiation- repeating information to strengthen neural connections to the material

Alcohol's impact on memory- alcohol slows the brain and can prevent deep sleep (in excess) so memories are tough to form

Epinephrine's impact on memory- epinephrine is tied to intense arousal, which is tied to intense emotion, and emotions strengthen memories

Hippocampus- where explicit memories are formed, acetylcholine helps store memories

Cerebellum- where implicit/procedural memories are created

Synaptic changes as a result of learning- dendrites grow longer when you use a neuron; more recall and recognition practice causes more synapses; more synapses means faster recall of memories

I. Language

People and theories

BF Skinner- (Behaviorist)- we are reinforced by our environment to say some words and word combinations and not others. Theory does not explain overregularization/overgeneralization that children do when first learning to speak.

Noam Chomsky- we are born with a language acquisition device which means we are genetically programmed to speak, BUT we have to have contact and stimulation during a critical period (up to age 7) where we learn the rules of grammar. If no contact/stimulation, you will be unable to learn the rules of language. Also explains why people have accents when learning a foreign language after the critical period.

Benjamin Whorf- Linguistic relativity or linguistic determinism: your culture influences your language and your language influences your culture. If you have no word for bluish, greenish, purple, you won't be able to perceive that color.

Stages of language development

Babbling- 0-1 year; make nonsense noises, can reinforce those to assign nonsense noise to things and people

One-word- 1-2 years, one word statements to communicate "ball", "more", "mine"

Two-word- 2+, puts two nouns or verbs together

Telegraphic speech: put a noun and verb together in the later stage of the two-word stage, beginning to understand syntax

Grammar

Semantics- meanings of words

Syntax- order of words in sentences, follow rules of grammar

Morpheme- smallest unit of MEANING

Phoneme-smallest unit of SOUND in the word

Lexicon- your vocabulary, increases with experience and practice

overgeneralization/over-regulation- applying grammar rules universally where they don't apply. "Him are going at the store."

I. Thinking and Problem Solving

Concept- overarching category or schema that helps us organize mental information, group based on events, characteristics, etc.

Prototype- your best representation of an object- robin is what comes to mind when you think of a bird

Both contribute to representative heuristic

II. Problem solving techniques

Insight (Wolfgang Kohler)- a sudden realization of the solution to a problem

Algorithm- following a formula or considering all options to ensure that you arrive at a solution, step by step process. Takes a while, but it's effective

Heuristic- mental shortcut to arrive at an answer. Fast, but can be wrong.

Inductive reasoning- data driven decisions, general to specific

Deductive reasoning- driven by logic, go from specific to general

Divergent thinking- ability to think about many things at once, generate many possible solutions

III. Obstacles to problem solving

Availability heuristic- something that immediately pops to mind...based on something that you've recently experienced; it's a short cut and it can lead to errors in problem solving, overestimating the instances of plane crash deaths because you've recently heard about a plane crash

Representative heuristic- using a prototype to help make a mental shortcut to solve a problem. You need help at Target and see a man wearing a red polo shirt, so you ask him for help, not realizing he doesn't actually work there, assuming a 6'4" 300 lb 25 year old is an NFL player

Confirmation bias- finding and interpreting information that goes along with your thoughts/beliefs, even though it's wrong (thinking all blondes are dumb and pointing out dumb things that blondes do, while ignoring dumb things that non-blondes do)

Belief bias- tendency to let preexisting beliefs distort logical reasoning by making invalid conclusions.

Belief perseverance- clinging to beliefs even when faced with convincing, contradictory evidence

Framing- depending on the wording of a problem, you might come to an incorrect solution

Mental set- inability to think outside the box

Functional fixedness- inability to think outside the box when it comes to using an object. You don't have a screwdriver and you need to fix a battery pack, so you just leave it un-fixed. Overcoming functional fixedness would mean you use a fork or a butter knife, or a paper clip to put the screw back in.

Motivation and Emotion 6-8%

I. Motivation

Theories

Maslow's Hierarchy of Needs- pyramid structure, goal is self-actualization, but you must meet the lower level needs first.

Homeostasis- natural resting state of the body, we are motivated to maintain homeostasis

Drive reduction theory- we have needs that push us to do things (eat, drink, sex)

Primary drive- unlearned and based on survival

Secondary drive- learned (wealth, success)

Instinct theory- we behave in ways without thinking, maybe for survival, complex behaviors have fixed patterns and are not learned. Not really apparent in humans, mostly explains animal motivation and can be seen with Lorenz's imprinting

Incentive theory- external and environmental factors pull us to do something

Arousal theory- we all have different levels of ideal arousal, some do more thrill seeking activities than others because they need higher levels of arousal

Yerkes-Dodson Law- there is an inverted "U" function relationship between arousal and performance; both high and low levels of arousal produce lower performances than does a moderate level of arousal

Optimal arousal theory- we do things to maintain our ideal level of arousal, easier tasks require more arousal, harder tasks require less.

Factors influencing optimal arousal - fatigue, sleepiness, stress, anxiety

Belongingness- we need to belong because reward centers in our brain release endorphins when we are in groups (can be evolutionary or biological)

Achievement Motivation - Achievement motivation typically refers to the level of one's motivation to engage in achievement behaviors, based on the interaction of such parameters as need for achievement, expectancy of success, and the incentive value of success.

Affiliation motivation- the need to be with others (friends, family, spouse, etc.). This motivation is aroused when people feel threatened, anxious, or celebratory

High achievement motivation- set challenging BUT attainable goals

Extrinsic motivation- doing something for the outside reward, or environmental reasons

Intrinsic motivation- doing something because you WANT to do it

Hunger

Glucose- sugar from food is broken down by insulin to be used for energy, low glucose makes you hungry, high glucose makes you feel full

Insulin- hormone produced by the liver that breaks down sugar. High insulin makes you hungry, low insulin makes you feel full.

Associated with diabetes

Lateral hypothalamus- triggers hunger (Large Hunger)

Ventromedial hypothalamus- lets you know you are full (Very Minute Hunger)

Orexin- released by hypothalamus telling us to eat.

Leptin- signals brain to reduce appetite

Obesity- increases risk of heart attack, hypertension, diabetes

Can be genetic

Set-point theory- our metabolism increases or decreases to maintain your set-point (preferred body weight); increases with age and long term weight gain

Eating disorders

Anorexia- starve, refusal to eat or eat very little, weight loss of at least 15% of ideal weight, distorted body image

Causes- overly critical parents, perfectionist tendencies, societal ideals

Bulimia- eat and then vomit, usually have a normal body weight

Causes- overly critical parents, perfectionist tendencies, societal ideals

Binge eating disorder- eat large amounts of food in one sitting, then vomit

Sex

Hypothalamus- stimulation increases sexual behavior, destruction leads to sexual inhibition

Pituitary gland- monitors, initiates and restricts hormones

Males- testosterone

Females- estrogen

Masters and Johnson sexual response cycle - Excitement, plateau, orgasm, resolution (refractory)

Alfred Kinsey- first researcher to conduct studies in sex, suggested that people were promiscuous, but studies lacked a representative sample

Homosexuality- has biological roots, differences in the brain. In identical twins, both are likely to be gay, later sons are more likely to be gay

II. Emotion

Theories of Emotion- involves detecting a stimulus, experiencing a physiological response and a feeling of emotion

James-Lange Theory- the physiological response occurs BEFORE the feeling of emotion

Cannon-Bard Theory- body responds physiologically at the same time that you feel the emotion.

Two-Factor Theory (Schacter-Singer)- physiological response first, then we make a cognitive label, THEN we feel the emotion

Joseph LeDoux's Theory: some emotional reactions, especially fears, likes, and dislikes, develop in a "low road" through the brain, skipping conscious thought. These are instantaneous reactions.

Evolutionary Theories (primary emotions): psycho-evolutionary theory of emotion- made up of pairs of opposites: joy/sadness, fear/anger, surprise/anticipation, acceptance/disgust

Non-verbal communication and emotion

Facial feedback effect- our ability to read another person's facial expression proves greater empathy. Women are way better at this than men.

Facial feedback hypothesis- being forced to smile will make you happier, facial expressions influence emotion

Facial expressions as universally understood language- several facial expressions exist in all cultures, those who can read nonverbal cues have greater survival

Nonverbal communication- we can tell a real smile from a fake smile

Emotions that occur in all cultures- happiness, anger, sadness, surprise, disgust and fear)

Emotion and behavior

Adaptation-Level Phenomenon- when feeling something, we eventually get used to it (you get a new job, excitement, but you eventually stop feeling excited)

Catharsis- relieve anxiety/stress (usually through screaming, crying or putting energy elsewhere)

Relative deprivation theory- comparing ourselves to others, we view ourselves as worse off than others

Feel good, do good phenomenon- if you feel good about yourself, you will do good for others

Biological basis for emotion- AMYGDALA- aggression can override all other emotions (survival), Some emotions are routed directly to the amygdala and can skip the frontal cortex

III. Stress

Stressors- anything that causes anxiety/stress

Sympathetic nervous system- Speeds up in Stressful situations (increases heart rate, breathing and blood pressure)

Parasympathetic nervous system- Pacifies or calms you down after stress and return to homeostasis, (slows heart rate, breathing and blood pressure)

General Adaptation Syndrome (GAS Hans Seyle)- 3 step process to deal with stress. Alarm (arousal in face of stress), Resistance (dealing with stress), Exhaustion (can't take anymore and give up, or get sick) then return to homeostasis.

Epinephrine- released in fight or flight (stressful) situations

Type A (more stressed) v. Type B (more laid back) personalities

Psychophysiological illness- your thinking can impact your stress levels, which can then make you sick

Biofeedback- biological data from tests (heart rate, blood pressure) that you can learn to control to lower stress levels

Perceived control- the more control we think we have over a situation, the less stressed we feel. Having little to no control over a situation leads to a higher level of stress.

IV. Industrial/Organizational Psychology

I/O Psychologist- psychology in the workplace, focuses on recruiting employees, placement, training, satisfaction and productivity.

ergonomics/human factors- where engineering and psychology meet. Focuses on safety and efficiency of human and machine interactions

Hawthorne effect-people work harder, perform better when being watched

Theory X management- manager controls the employees, enforces rules. Good in lower level jobs.

Theory Y management- manager gives employees responsibilities, seeks input, good for high level jobs

Personality 5-7%

I. Personality characteristic pattern of thinking, feeling and behaving, consistent across most situations

Psychoanalytic Approach- involves urges/drives of which we are unaware (FREUD had first theory of personality)

Free association- client relaxes and says whatever comes to mind, with no editing for relevance. Goal is to reveal those unconscious desires that are causing you distress

Transference- transfers feelings on to the psychoanalyst

Dream interpretation- analyze manifest and latent content of dreams

Levels of consciousness

Id- pleasure principle, inner UNCONSCIOUS desires that are typically inappropriate, devil on your shoulder

Superego- morality principle, angel on your shoulder, responsible for feelings of guilt, develops around age 4

Ego- reality principle, mediates needs of id and superego, conscious part of your personality.

Psychosexual stages of development

Fixation- being stuck in a stage, energy gets tied up there later in life

Oral stage- 0-1- conflict is with weaning, fixation = mouth activities like smoking, pen chewing, overeating

Anal stage- 1-3- conflict is with toilet training, fixation = anal retentive or anal explosive

Phallic stage- 3-6 (preschool)- discovery of genitals, Oedipus/Electra complex

Latency stage- 6-11- sexual desires are dormant, kid learns to play and be a child

Genital stage- puberty on- focus is on intimacy with others

Defense Mechanisms- the ego's way of protecting itself from the conflicts of id/superego. Defense mechanisms are the only real part of Freud's theory that still stands

Regression- going back to an earlier developmental stage when stressed/upset (thumb sucking, bed wetting)

Reaction formation- acting in the opposite way of how you feel (gay man gay bashes)

Displacement- putting the stress/anger onto a less threatening person/object. (angry with your boss, punch the door)

Sublimation- putting stress into a socially acceptable activity. **HEALTHY** defense mechanism. You don't make the drill team, so you volunteer at the animal shelter for 20 hours a week.

Projection- accusing someone else of having your anxiety producing thoughts/behaviors (cheating on your spouse, but accusing them of cheating on you)

Intellectualization- taking a cold, clinical approach to anxiety producing news (You are told you have cancer, so you start researching cancer treatments without crying about it)

Rationalization- coming up with a reason why you did something that caused you anxiety (You don't get your car tagged because you are mad at the county for paying the police who give you too many speeding tickets)

Repression- pushing the anxiety producing memory out of awareness (not remembering a traumatic event)

Denial- acting as if the stressful event never occurred (you get rejected by your dream school, but show up to enroll anyway)

Neo-Freudians- broke with Freud mostly because there was too much focus on childhood sexuality (ew)

Carl Jung- Freud's "protege" known for the collective unconscious (memories, etc that we share with ancestors), explains common myths across civilization and time

Alfred Adler- inferiority complex- we behave in ways that help us feel superior. The focus is on SOCIAL behavior not sexual behavior

Karen Horney- women aren't inferior to men, critical of Freud's focus on men, basic anxiety, personality develops in context of social relationships, NOT sexual urges

B. Trait Approach

Traits- enduring personality characteristics, people can be described by these terms--have strong or weak tendencies and predict AVERAGE of behaviors, found using factor analysis

Hans Eysenck- 16 traits, focused on Introversion--extraversion and stability--instability

Gordon Allport- Big 5- OCEAN

Openness: imaginative, independent, enjoy variety

Conscientiousness: organized, careful, disciplined

Extraversion: sociable, fun-loving, affectionate (opposite of introversion: shy, timid, reserved)

Agreeableness: soft hearted, trusting, helpful

Neuroticism (emotional stability/instability): calm, secure

Major criticisms of trait theory- overestimates how consistent personality is across situations, Barnum Effect- we like to see positive in ourselves so we view things as true if they paint us in a positive light, even if it's a bunch of baloney.

C. Humanistic Approach- self determinism, free will, be the best you that you can be

Carl Rogers-

Unconditional positive regard- treat another with respect and care regardless of their behavior

Actual self v. ideal self (what you want to be). We work hard to be our ideal self. If there's a big gap between real self and ideal self, problems can occur

Self concept- figure out who you are, a positive one helps us see the world positively

Abraham Maslow-

Hierarchy of needs--goal is to reach self actualization. Those who are self actualized have strong internal locus of control

Self-esteem- your feeling of self-worth

Self-serving bias- helps your self-esteem--we attribute positive events to our own selves and negative events to others or situations outside our control

Major criticisms

Underestimates capacity for evil, too optimistic

Underestimates social influence on behavior

BUT, it's good because it emphasizes conscious experience and change

D. Social-Cognitive Approach

Internal locus of control- you are in control of your life/destiny

External locus of control- your fate is in the hands of others/outside forces

Reciprocal determinism- your environment impacts your personality and your personality impacts your environment (Bandura)

Learned helplessness (Seligman)- you are going to fail no matter what, so you give up and stop trying

Self-efficacy- your belief in your ability to do accomplish a task.

Major criticisms-

Underestimates the importance of inner traits

Too specific and can't be generalized

Positives of perspective-

Highlights situations and cognitive explanations of personality.

Collectivist cultures-give priorities to the group over the individual, your identity is that of being part of the group (Asian societies like China and Japan)

Individualist cultures- focus is on YOUR goals over the group goals. Your identity is defined in terms of who you are and who you want to be. (US and other western cultures)

E. Behavioral Approach

BF Skinner- personality is the result of reinforcement. Traits that are reinforced will show

F. Personality Testing

Projective tests (used to assess unconscious processes)

Thematic Apperception Test (TAT)

Inkblots

Trait theory: Personality tests that are SCIENTIFICALLY (EMPIRICALLY) created: MMPI

Testing and Individual Differences 5-7%

I. Intelligence: ability to learn from experience, solve problems and adapt to new situations

Key people-

Sir Francis Galton- 1st to suggest that intelligence was inherited, but thought intelligence was based on muscle strength, size of head, reaction time, etc.

Raymond Cattell (personality guy)- 2 clusters of mental abilities: fluid intelligence and crystallized intelligence

Charles Spearman- g factor general intelligence

Robert Sternberg- triarchic theory- analytical, practical and creative intelligences

Howard Gardner- 8 multiple intelligences (linguistic, logical-mathematical, musical spatial, bodily-kinesthetic, intrapersonal (self), interpersonal (social), naturalist/environmental) criticized for being skills rather than intelligences

Emotional Intelligence: ability to perceive, understand and manage emotions

II. Measuring Intelligence

Aptitude tests- predicts how well you will do at something in your future, ACT is an aptitude test

Achievement tests- tell how much you know about a topic (most tests you take in subjects in school)

Binet and Terman's Tests

Designed to identify children who might have difficulty in school

Mental age/chronological age x 100 (know how to calculate it)

Measured reasoning skills

Best measure for younger children

Stanford-Binet test

WAIS/WISC

Verbal and performance scores

Most widely used intelligence test

Normal distribution 68, 95, 99

Flynn Effect- IQ goes up with each generation, probably due to education standards and better IQ tests

Intellectual disability- score below 70 on IQ test, AND have challenges caring for oneself.
Most fall in “mild” category.

III. Test Construction

Factor analysis- identifies clusters of closely related items

Standardized tests- scores are compared to pre-tested representative sample

IQ Scores form a normal curve, mean is 100, 15 is SD

Reliability- are scores consistent?

Test-retest

Inter-rater

Split-halves

alternate-forms

Validity- does test measure what it's supposed to measure?

Predictive validity- does the test accurately predict behavior it's designed to predict

Content validity- does the test measure the content you want it to measure

Standard deviation- how much the scores vary from the mean. The percentages stay the same in every curve.

Developmental Psychology 7-9%

I. Prenatal and early development

Zygote(0-14 days)--embryo (up to 9 weeks, vital organs being formed)--fetus (9 weeks to birth overall development occurs)

Teratogens- anything harmful to the fetus, things that cross the placental barrier

smoking=low birth rate

alcohol= fetal alcohol syndrome, causes mental delays and facial deformities

drugs= baby can be born addicted

Habituation- stop paying attention to a stimulus after a period of time, indicates that cognition occurs even in infants

Maturation- natural process of development (Piaget), things will develop in a certain order regardless of our environment (walking, sitting up, rolling over, etc.)

Reflexes-innate responses we are born with

Rooting, sucking, swallowing, grasping, etc

Visual cliff- babies have to learn depth perception so they will cross a “cliff”

Development of senses- vision doesn't fully develop until a year, other senses are fairly developed early on, taste is strongest first sense.

II. Jean Piaget (believed that children thought in different ways than adults)

Schema- mental category for organization, we add to and change our schema as we learn more, allows for heuristics

Assimilation- putting something in an existing schema without changing the schema (Same...two S's)

Accommodation- changing a pre-existing schema to fit something new (Change...two C's)

Piaget's Stages of cognitive development

Sensorimotor- birth to 2ish

Object permanence develops, sense of an object existing even if it's not in your immediate presence. Develops around 8 months

Separation anxiety- develops when object permanence does

Stranger anxiety (Ainsworth's strange situation and attachment)

Develop sense of self (by age 2, can recognize self in mirror_

Preoperational- 3-7 yrs

Egocentrism- everyone sees the world as they do, when playing hide and seek, would hide head because if they can't see you, you can't see them. 3-5 yrs old

Representational thought- using symbols to learn language

Lack reversibility- can't reverse operations

Theory of mind (opposite of egocentrism) ability to see something from another's perspective, 6-7 yrs

Concrete operational 7-12 yrs

Law of Conservation- knowing mass or volume stay the same regardless of shape, occurs during this stage

Formal operational-12+ years

Abstract and hypothetical thinking occurs

III. Parenting

Temperament-patterns of emotional reactions and babies (precursor to personality)

Attachment- Ainsworth's study of secure and insecure attachment

Secure attachment-upset when mom leaves, easily calmed when she returns. More stable adults

Avoidant attachment-actively avoids mom, doesn't care when she leaves

Ambivalent attachment- actively avoids mom, cries when she leaves

Disorganized attachment- confused, fearful, dazed (result of abuse)

Harlow's monkeys- monkeys preferred comfort over food (sought the cloth mother when scared)

Baumrind's parenting styles

Permissive- laid back, let kids do whatever, don't make or enforce rules

Authoritarian- my way or the highway, no negotiation by children, very strict with rules and consequences

Authoritative- balanced and democratic, parents make and enforce rules, but children can negotiate within reason

IV. Other Stages

Vygotsky- focused on how the environment impacts cognitive development

Zone of proximal development- what you can do with help v. what you can do alone. We develop faster if we do things with help first

Opposed Piaget because the stages were too "set"

Kohlberg's stages of morality: concerned more with the REASONS for decisions rather than the actual choice

Preconventional- want a reward or to avoid punishment

Conventional- want approval of peers/others or to follow the law

Post-conventional- want to do what you choose to be best, even if it goes against society

Carol Gilligan- said moral reasoning and moral behavior were two different things, what you say isn't always what you actually do. Also said that men and women reason differently in moral situations.

Erikson's stages of psychosocial development

Stage 1- (infancy-1.5) Trust v. Mistrust

Stage 2- (1.5-3 yrs) autonomy v. shame and doubt

Stage 3- (3-5 yrs) initiative v. guilt

Stage 4- (5-12 yrs) industry v. inferiority

Stage 5- (12-18 yrs) identity v. role confusion

Stage 6- (18-40 yrs) intimacy v. isolation

Stage 7- (40-65 yrs) generativity v. stagnation

Stage 8- (65+ yrs) integrity v. despair

V. Puberty (rapid skeletal and sexual maturation)

Primary sex characteristics- necessary for reproduction

Secondary sex characteristics- non-reproductive characteristics that develop during puberty

Frontal lobe isn't fully developed until about age 25

VI. Gender Development sex=chromosomes, gender=what you identify yourself as

Gender roles- expected behaviors for men and women

Social learning theory- we learn gender roles and identity from those around us

VII. Your brain as it ages

Fluid intelligence- ability to problem solve- decreases with age

Crystallized intelligence- ability to use life experience and recall facts- increases with age

Memory declines with age...recall is impacted, recognition is not

Alzheimer's disease (memory loss and disorientation, can begin with dementia)
deterioration of neurons producing acetylcholine

VIII. Descriptive Stats

Longitudinal studies- study the same group of people over a long period of time. VERY expensive, time consuming and you run the risk of participants dropping out

Cross sectional studies- observing groups of people from several different ages at the same time. Less expensive, less time consuming

IX. Stages of Grief (complete nonsense, but whatever)

Denial: "this isn't happening"

Anger: "why me? This isn't fair!"

Bargaining: "let me live until some big event"

Depression: "it's pointless, why even bother?"

Acceptance: "it's just a part of life and everything will be fine"

TYPES OF GRAPHS ON THE AP PSYCHOLOGY EXAM

Correlational Coefficient (Survey)

- Shows the relationship between two or more variables.
- Has a value between -1 & +1
- The positive and negative represents the type of relationship.

A positive correlation can be either two factors increasing

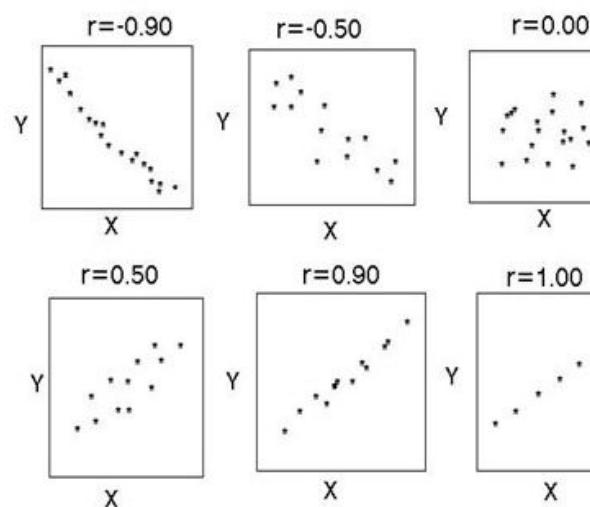
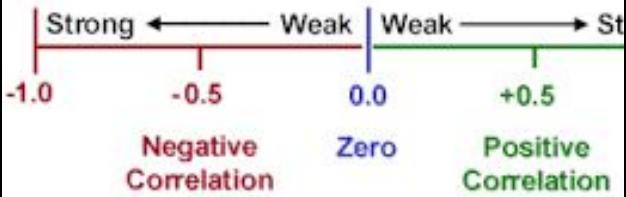
OR two factors decreasing. Both variables go in the same direction.

A negative correlation or inverse relationship has one variable that increases, as the other decreases.

- In statistics, the **correlational coefficient** is represented by a lower case r.
- The graph is called a **scatterplot**.

CORRELATION NEVER MEANS CAUSATION

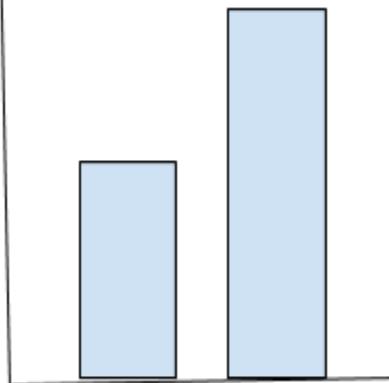
Correlation Coefficient Shows Strength & Direction of Correlation



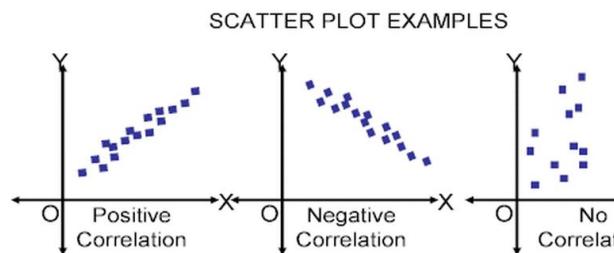
PRACTICE GUESSING THE CORRELATIONAL COEFFICIENT
<https://istics.net/Correlations/>

What is statistical significance?

- It means your findings are not due to chance!
- It means, "The sample averages are reliable and the difference between the experimental and control group is relatively large."
- In an experiment, you are looking for a P less than .05 ($P < .05$)
- In a correlational study, you are looking for a correlational coefficient (r) closer to +1 or -1. It should be above $r > +.5$ OR $r < -.5$



Control Experimental Group
There is a large difference
between the two groups that it is
not due to chance.



The closer the plots(dots) are to forming a straight line the stronger the correlational coefficient and the closer the number is to +1 or -1.

A NOTE FROM AN AP GRADER:

If you are asked to draw a graph. Keep it simple. More bars on your histogram does not make it better!

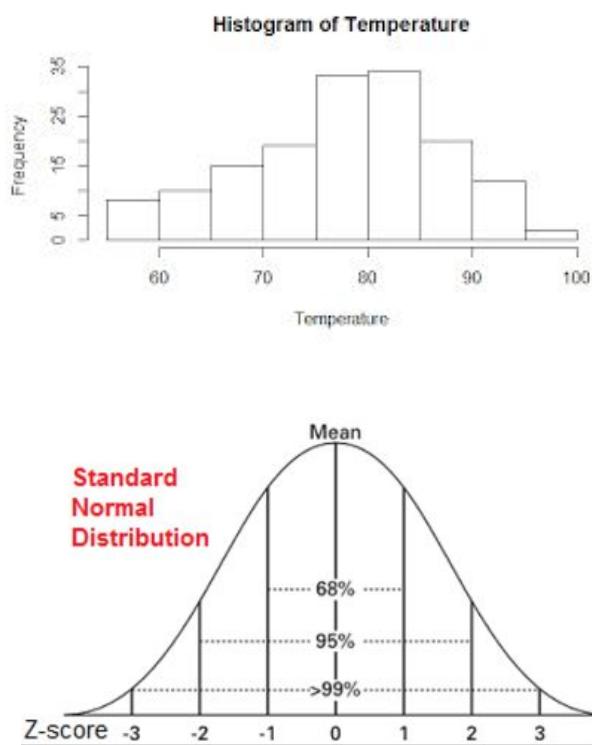
Draw it as you see here!

Frequency Distribution

- This graph is called a **histogram** or

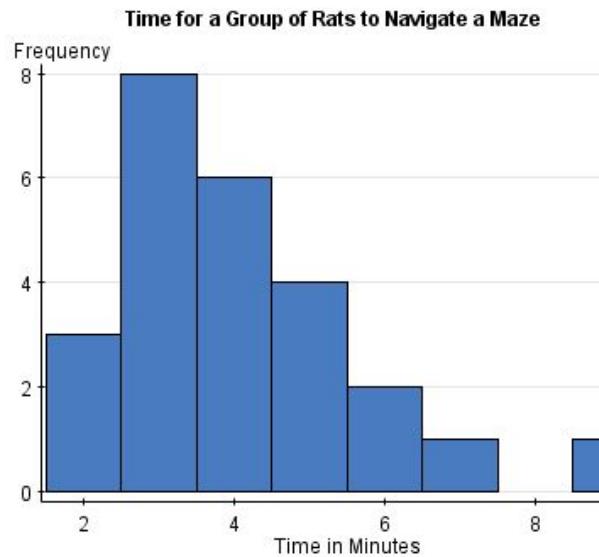
bar graph.

- On the Y-Axis is the number of participants. On the X-axis is what is being measured or the **dependent variable**.
- Notice that the shapes of both graphs are a **normal distribution**.
- The **Measures of Central Tendency** (Mean, Median, Mode) fall in the center of the normal curve. The Mean, Median and Mode are all very similar in a normal distribution.

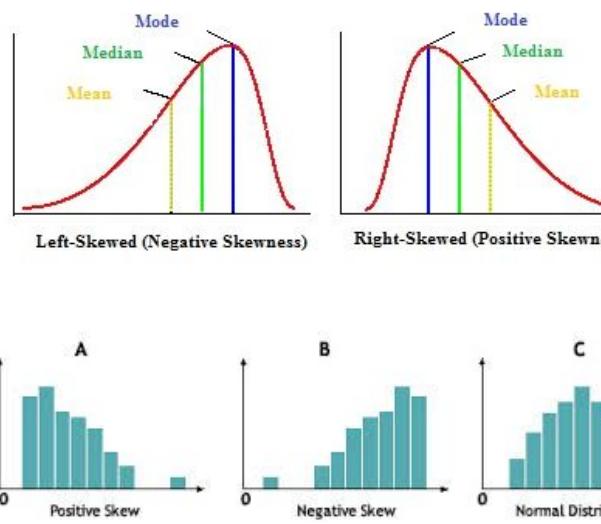


Positively and Negatively Skewed Distribution

- A **positively skewed distribution** is caused by an extremely high score in a frequency distribution. The high score or outlier causes a graph with a tail to the right.
- A **negatively skewed distribution** is caused by an extremely low score in a frequency distribution. The low score or outlier causes a graph with a tail towards the left.
- The **Measures of Central Tendency** are then changed. The **Mean** will be



pulled towards the tail making it less representative of all scores. The **Mode** will still be in the middle and be the most representative of all the scores. The **Median** will still be in the middle.



Question 1: 25 minutes, 5 minutes to submit. Weighted as 55% of total score

- Focuses on concept application
- “Question 1 assesses students’ ability to explain behavior and apply theories and perspectives in authentic contexts.”

Question 2: 15 minutes, 5 minutes to submit. Weighted as 45% of total score

- Focuses on research methods
- “Question 2 assesses students’ ability to analyze psychological research studies, including analyzing and interpreting quantitative data.”

How to write an FRQ:

1. Read before answering. Carefully read both of the questions before you start to write anything. Decide which question you are more comfortable with and answer that one first. Watch your time carefully because you have only 50 minutes to answer both questions.

2. Determine the question’s intent. Contrary to what you may have read, the free-response section does not always include a question on experimentation. So, do not try to turn every question into a methodology question and set up an experiment.

3. Follow the questions within the question. It may be helpful to underline key verbs or phrases in the questions that identify what exactly the question is directing you to do. Note that if a question asks you to explain or apply a specific psychological concept to an

understanding of a person's behavior but does not ask you to define the term, you should not waste your time defining the term.

4. Make a list. Spending a few minutes on prewriting is beneficial. Immediately after reading the question, jot down the key definitions, ideas, examples, terms, researchers, or experiments that will be part of your answer.

5. Check it off the list. Cross off the bullet points or different parts of the question as you answer them. This will ensure that you do not forget to address any of the tasks the question has given you.

6. Maintain order. You should answer each of the components of a free-response question in the order in which it appears within the question. Resist the temptation to begin your essay with your most salient point or the point you know best. Instead, begin by writing on the first concept that appears in the question and then move on to the next. By following the order of the concept that appears in the question you are less likely to overlook one. Using this strategy to organize your response makes it Reader-friendly by providing needed context for what you have written.

7. Write to the points. Read each question carefully to determine its point value and then focus on writing to these points. The free-response questions are evaluated with very specific scoring guidelines. Readers award points only for what is correct; points are not deducted for incorrect information. However, this does not mean you should write down anything and everything that comes to mind. The information you provide must relate to the question. Figure out how many points the essay will be worth and then write to each of those points.

8. Avoid contradictions. Although points are not deducted for incorrect information, you will not be awarded points for directly contradictory information. For example, you will not receive credit for defining negative reinforcement as both "taking away a negative stimulus to increase an animal's behavior" and "imposing a negative consequence to decrease behavior" in the same essay.

9. Write an essay. Use complete sentences and paragraphs to respond to the question. Readers do not score any information that is in outline form or answers that are presented solely as lists.

10. Skip the introduction and the conclusion. A formal introduction and conclusion are not necessary because your essay is scored only for its ability to respond to the specific points in

the question. An introduction and conclusion rarely hit on any of the key points of the question and thus waste valuable writing time.

11. Demonstrate your knowledge. Use psychological language and concepts in your answers.

**Underline those terms for ease of spotting.

12. Be specific. Avoid making vague statements. For example, when asked to indicate the value of diagnostic labeling, you might be tempted to write, “They are helpful to psychologists,” an answer that is insufficient. Instead, you should fully explain each point and use specific examples to illustrate them. A correct response would be, “Diagnostic labels can be useful to psychologists because they help mental health professionals communicate with each other about specific disorders.” It is a good idea to assume that the Reader is not an expert on the topic, and therefore, everything must be explained thoroughly.

13. Use your time. Use all of the available time for the free-response section. If any time remains after you have finished writing, reread your answers and make sure they are legible, clear, and actually answer the question that has been asked. If you discover there is something you need to add, do it. Sometimes these last-minute revisions can earn you points. If you need to add a substantial amount of information, you can simply draw an arrow off to the side of the page, or insert an asterisk and refer the Reader to the end of the essay.

**Always answer both questions!!!!!!

“Cogent” means clear

Pretty cool Quizlet of the Top 54 FRQ terms from 2010-2018:

<https://quizlet.com/391398319/frq-terms-2010-2018-flash-cards/>

“PsychExamReview” YT channel:

<https://www.youtube.com/channel/UCjbEShquzC7RPDYdzyOIjKQ/featured>

Psych Review Powerpoint:

https://docs.google.com/presentation/d/1RoIuhTnCVN1WOjs7YoynP6wRP9zeoArG7ml7_EFdorw/edit#slide=id.p1

“Ultimate Psych Review”:

<https://docs.google.com/presentation/d/1ekHwWWtF9vYhqEGjVLicrECtJgsjax4PKQvKV9GFuLI/edit#slide=id.p>