History and Approaches (2-4%)

- Psychology is derived from physiology (biology) and philosophy

**EARLY APPROACHES**
- Structuralism – usedintrospection (act of looking inward to examine mental experience) to determine the underlying structures of the mind
- Functionalism – need to analyze the purpose of behavior

**APPROACHES KEY WORDS**
- Psychoanalytic/dynamic – unconscious, childhood
- Behavioral – learned, reinforced
- Humanistic – free will, choice, ideal, actualization
- Cognitive – perceptions, thoughts
- Evolutionary – genes
- Biological – brain, NTs
- Sociocultural – society
- Biopsychosocial – combo of above

**PEOPLE:**
- Mary Calkins: First fem. pres. of APA
- Charles Darwin: Natural selection & evolution
- Dorothea Dix: Reformed mental institutions in U.S.
- Stanley Hall: 1st pres. of APA 1st journal
- William James: Father of American Psychology – functionalist
- Wilhelm Wundt: Father of Modern Psychology – structuralist
- Margaret Flory Washburn – 1st fem. PhD
- Christine Ladd Franklin – 1st fem. Completed PhD at Johns Hopkins

**RANDOM TERMS**
- Basic research – purpose is to increase knowledge (rats)
- Applied research – purpose is to help people
- Psychologist – research or counseling – MS or PhD
- 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

- **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 are 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
- **Validation:** 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
    - **Negative Correlation** – as one variable increases the other decreases

- **The stronger the # the stronger the relationship REGARDLESS of the pos/neg sign**
  - **3rd variable problem** (lurking variable) – diff. variable is responsible for relationship (sales of ACs ↑ & drownings ↑ - 3rd variable: heat)
  - **Illogical 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
- **Measures of Central Tendency:**
  - **Mean:** Average (use in normal distribution)
  - **Median:** Middle # (use in skewed distribution)
  - **Mode:** occurs most often
- **Statistical Significance:** establishes significance (meaningfulness)
- **Ethical Guidelines (APA):**
  - Confidentiality: names kept secret
  - Informed Consent: must agree to be part of study
  - Debriefing: must be told the true purpose of the study (done after for deception)
  - Deception must be warranted
  - No harm to mental/physical

**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
  - **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)

- **Sensory neurons – receive signals**
- **Afferent neurons – Accept signals**
- **Motor neurons – send signals**
- **Effector neurons – signal Exits**
- **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:** Aroused by fight/flight (generally activates – sympathetic to you getting eaten by a tiger helps you run away)
- **Parasympathetic NS:** establishes 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
  - **Epinephrine & Norepinephrine:** sympathetic NS arousal
  - **Endorphins:** pain control
  - **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
    - **Cerebellum:** movement/balance
      - (picture walking a tightrope balance a bell)
    - **Medulla:** vital organs (HR, BP)
    - **Pons:** sleep/arousal (Ponzzzzzz)
  - **Midbrain**
  - **Reticular formation:** alertness
  - **Forebrain:** higher thought processes
    - **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
    - **Thalamus:** relay center for all but smell (you MUST (thalaMUST) use your thalamus, unless it MUSTY – smell)
    - **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
    - **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?)
    - **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 (and vice versa), patient can verbally identify what they saw

- **BRAIN PLASTICITY:** Brain can “heal” itself
  - **NATURE VS. NURTURE: ANSWER IS BOTH**
    - **Twin Studies:**
      - Identical twins – Monozygotic (MZ)
      - Fraternal twins – Dizygotic (DZ)
    - **Genetics:** MZ twins will have a higher percentage of also developing a disease
    - **Environment:** MZ twins raised in different environments show differences
  - **ENDOCRINE SYSTEM:** sends hormones throughout the body
    - **Pituitary Gland:** Controlled by hypothalamus. Release growth hormones
    - **Adrenal Glands:** related to sympathetic NS: releases adrenaline

- **BRAIN IMAGING:**
  - **EEG:** brain activity – not specific
  - **XRAY:** not useful, doesn’t show tissues
  - **CT / MRI:** shows structures
  - **PET:** glucose shows brain activity (when in doubt pick this one)
  - **fMRI:** glucose shows activity: real time
  - **lesion – brain damage**

- **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) two stimuli must differ by a constant minimum proportion. (Can you tell a change?)**
  - **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
  - **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 its spoken, when you weren’t previously paying attention

- **VISUAL SYSTEM:**
  - **Pathway of vision:** light → cornea → pupil/iris → lens → retina → rods/cones → bipolar cells → ganglion cells → optic nerve → optic chiasm → occipital lobe
  - **Cornea:** protects the eye
  - **Pupil/iris:** controls amount of light entering eye
  - **Lens:** focuses light on retina
  - **Fovea:** area of best vision (cones here)
  - **Rods:** black/white, dim light
  - **Cones:** color, bright light (red, green, blue)
- Bipolar cells – connect rods/cones and ganglion cells
- Ganglion cells – opponent-processing occurs here
- Blind spot – occurs where the optic nerve leaves the eye
- Feature detectors – specialized cells that see motion, shapes, lines, etc. located in occipital lobe (experiments by Hubel & Weisel)

**THEORIES OF COLOR VISION:**
- **Trichromatic** – three cones for receiving color (blue, red, green)
  - Explains color blindness - they are missing a cone type
- Opponent Process – complementary colors are processed in ganglion cells
  - explains why we see an **after image**
- **Visual Capture:** Visual system outweighs 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 → ear drum (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)
- **Inner Ear:** cochlea – like COCHELLA (sounds 1st processed here)

**THEORIES OF HEARING:** both occur in the cochlea
- **Place theory** – location where hair cells bends determines sound (high pitches)
- **Frequency theory** – rate at which action potentials are sent determines sound (low pitches)

**OTHER SENSES:**
- Touch: Mechanoreceptors → spinal cord → thalamus → somatosensory cortex
- Pain: Gate-control theory: we have a “gate” to control how much pain is experienced
- Kinesthetic: Sense of body position
- Vestibular: Sense of balance
- 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:**
  - **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

**THEORIES OF HEARING:**
- **Convergence:** image helps us determine depth
- **Retinal Disparity:** tracking
- **Linear Perspective:** parallel lines
- **Texture Gradient:** similar in size, the smaller one is further away
- **Interposition:** overlapping images appear near each other
- **Proximity:** objects appear into figures objects (figures) that stand apart from surrounds (back ground)

**STATES OF CONSCIOUSNESS** *(2 – 4%)*
- 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:**
- **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

**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**
Learning
(7–9 %)

- **CLASSICAL CONDITIONING**: Pavlov!
  - Unconditioned Stimulus (UCS): brings about response w/o needing to be learned (food)
  - Unconditioned Response (UCR): response that naturally occurs w/o training (salivate)
  - Neutral Response (NS): stimulus that normally doesn’t evoke a response (bell)
  - Conditioned Stimulus (CS): once neutral stimulus that now brings about a response (bell)
  - Conditioned Response (CR): response that, after conditioning, follows a CS (salivate)
  - Contiguity: Timing of the pairing, NS/CS must be presented immediately BEFORE the US
  - Acquisition: process of learning the response pairing
  - Extinction: previously conditioned response dies out over time
  - Spontaneous Recovery: After a period of time the CR comes back out of nowhere
  - Generalization: CR to like stimuli (similar sounding bell)
  - 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!
    - 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: 
    - Pos. Reinforcement: Add something nice to increase a behavior (gold star for turning in HW)
    - Neg. Reinforcement: Take away something bad/annoying to increase a behavior (put on seatbelt to take away annoying car signal)
    - Pos. Punishment: Add something bad to decrease a behavior (spanking)
    - Neg. Punishment: Take away something good to decrease a behavior (take away car keys)
    - Primary Reinforcers: innately satisfying (food and water)
    - Secondary Reinforcers: everything else (stickers, high-fives)
  - Token Reinforcer: type of secondary- can be exchanged for other stuff (game tokens or money)
  - Generalization: respond to similar stimulus for reward
  - Discrimination: stimulus signals when behavior will or will not be reinforced (light on means response are accepted)
  - Extinction / Spontaneous Recovery: same as classical conditioning
  - 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)
  - Shaping: use successive approximations to train behavior (reward desired behaviors to teach a response – rat basketball)
  - Continuous Reinforcement schedule: Receive reward for every response
  - Fixed Ratio schedule: Reward every X number of response (every 10 envelopes stuffed get $5)
  - Fixed Interval schedule: Reward every X amount of time passed (every 2 weeks get a paycheck)
  - Variable Ratio schedule: Rewarded after a random number of responses (slot machine)

- **Variable Interval schedule**: Rewarded after a random amount of time has passed (fishing)
- **Variable schedules are most resistant to extinction** (how long will keep playing a slot machine before you think its broken?)
  - **SOCIAL (OBSERVATIONAL)** LEARNING: Bandura!
- Modeling Behaviors: Children model (imitate) behaviors. Study used BoBo dolls to demonstrate the following
  - Prosocial – helping behaviors
  - Antisocial – mean behaviors
  - **MISC LEARNING TYPES**
    - 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
  - Insight learning (Kohler!) – some learning is through simple intuition (chimps with crates to get bananas)
  - 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

- **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
  - Stimulants: Amphetamines, Cocaine, MDMA (ecstasy), Caffeine, Nicotine
    - Increase sympathetic NS activation, highly addictive
  - Hallucinogens: LSD, Marijuana
    - Causes hallucinations, not very addictive

- **Tolerance**: Needing more of a drug to achieve the same effects
- **Dependence**: Become addicted to the drug – must have it to avoid withdrawal symptoms
- **Withdrawal**: Psychological and physiological symptoms associated with sudden stoppage
  - Unconditioned Response (UR): response that naturally occurs w/o training (salivate)
  - Unconditioned Stimulus (US): stimulus that now brings about a behavioral response (bell)
  - Conditioned Response (CR): response that, after conditioning, follows a CS (salivate)
  - Conditioned Stimulus (CS): once neutral stimulus that now brings about a response (bell)

- **TRIAL LEARNING**: John Horndike:
  - Reward every X amount of time passed (every 2 weeks get a paycheck)
  - Fixed Interval schedule: Reward every X amount of time passed (every 2 weeks get a paycheck)
  - Variable Ratio schedule: Rewarded after a random number of responses (slot machine)

- **Encoding aids in 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
    - **Acronym**: 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
- **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 life time
  - 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)
- **Repessed 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)

- **Proactive interference**
  - OLD blocks new
- **Retroactive interference**
  - NEW blocks old
- **Misinformation effect:** distortion of memory by suggestion or misinformation (Lofus – lost in the mall, Disney land)
- **Anterograde amnesia:** amnesia moves forward (forget new info – 50 first dates)
- **Retrograde amnesia:** amnesia moves backwards (forget old info)
- **ALZHEIMER’S DISEASE:** caused by destruction of acetylcholine in hippocampus

**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 over use 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:** short cut 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 (over estimating 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)
  - Primary drive: unlearned drive based on survival (hunger, thirst)
  - Secondary drive: learned drive (wealth or success)
• **OPTIMUM AROUSAL:** humans aim to seek optimum levels of arousal — easier tasks require 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)

• **Signals of hunger:**
  - Stomach contractions tell us ‘we’re hungry’
  - Glucose (sugar) level is maintained by the pancreas (endocrine system).
  - Insulin decreases glucose. Too little glucose makes us hungry.
  - Orexin is released by the hypothalamus — telling us to eat.
  - Other chemicals include ghrelin, obestatin, and PPY
  - 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.)
  - Ventromedial hypothalamus: when stimulated you feel full, when destroyed you will never eat again (fat woman and cake)
  - Leptin: leptin signals the brain to reduce appetite

• **Obesity:**
  - Increased risk of heart attack, hypertension, atherosclerosis, diabetes
  - Can be genetic — adopted children resemble their biological parents
  - Set point: there is a control system that dictates how much fat you should carry — every person is different

• **Eating Disorders:**
  - Anorexia: weight loss of at least 15% ideal weight, distorted body image
    - **Causes:** overly critical parents, perfectionist tendencies, societal ideals
  - Bulimia: usually normal body weight, go through a binge-purge eating pattern (eat massive amounts, then throw up)
    - **Causes:** same as anorexia

• **Biology of sex:**
  - Hypothalamus: stimulation increases sexual behavior, destruction leads to sexual inhibition
  - Pituitary gland: monitors, initiates, and restricts hormones
    - **Males** → testosterone
    - **Females** → estrogen
  - Sexual Response Pattern: Excitement phase, plateau, orgasm, refractory period (resolution phase) (cannot “fire” again until you reset, guys only)
  - Alfred Kinsey: 1st researcher to conduct studies in sex, suggested that people were very promiscuous. Studies lacked a representative sample, created scale of homosexuality
  - Homosexuality: biological roots: differences in the brain, identical twins more likely to both be gay, later sons more likely to be (hormones from mom)

• **THEORIES OF EMOTIONS**

  - **JAMES-LANGE:** stimulus → physiological arousal → emotion
  - **CANNON-BARD:** stimulus → physiological arousal & emotion simultaneously
  - **SCHACTER TWO FACTOR:** adds 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
  - 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)
    - **Alarm:** body/you freak out in response to stress
    - **Resistance:** body/you are dealing with stress
    - **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:**
  - 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: manger 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. Some happiness
  - Calling — work because you love it. Lots of happiness

• **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.
- Schemas – concepts or frameworks that organize info
- Assimilation: incorporate new info into existing schema (assimilation – 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
- Lack Object Permanence: objects when removed from field of view are thought to disappear (peek-a-boo)
- 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
- Lack Conservation: recognize that substances remain the same despite changes in shape, length, or position (girls with juice in glasses)
- Lack Reversibility: cannot do reverse operations (count out both 4+2 and 2+4)
- 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 to discrete, dev. differs b/w kids

VYGOTSKY’S THEORY: cognitive development is a social process too, need to interact w/others
- 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 (preceptor 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
- Secure Attachment (60% of infants): upset when mom leaves, easily calmed on return. Tend to be more stable adults
- Avoidant Attachment (20% infants): actively avoids mom, doesn’t care when she leaves
- Ambivalent attachment (10% infants): actively avoids mom, freaks out when she leaves
- Disorganized attachment (5%): confused, fearful, dazed – result of abuse

BAUMRIND: Parenting styles
- Authoritarian: rules & obedience, “my way or the highway” – kids lack initiative in college
- Permissive: kids do whatever – no rules – kids lack initiative in college
- Authoritative: give and take w/ kids – kids become socially competent and reliable

KOHLBERG’S MORAL DEV
- Preconventional morality: children: they follow rules to avoid punishment
- Conventional morality: adolescents: follow rules b/c rules exist to keep order
- 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
- Trust vs Mistrust (birth – 18 months): if needs are dependably met infants develop basic trust
- Autonomy vs Shame and Doubt (1-3 yrs): toddlers learn to exercise their will and think for themselves
- Initiative vs Guilt (3-6 yrs): learn to initiate tasks and carry out plans
- Industry vs Inferiority (6 yrs to puberty): learn the pleasure of applying themselves to tasks
- Identity vs Role Confusion (adolescence thru 20s): refine a sense of self by testing roles and forming an identity
- Intimacy vs Isolation (20s—40s): form close relationships and gain capacity for love

GENDER DYNAMICS: sex = chromosomes, gender = what you identify as yourself as
- GENDER ROLES: expected behaviors (norms) for men/women
- SOCIAL LEARNING THEORY: we learn gender roles and identity from those around us

AGING
- CELLULAR CLOCK THEORY: cells have a maximum # of divisions before they can’t divide anymore
- FREE-RADICAL THEORY: unstable oxygen molecules w/in cells damage DNA
- OVER TIME SKILLS DECREASE (reaction time, memory)

CROSS-SECTIONAL STUDY: studies ppl of different ages at the same point in time
- Adv: inexpensive & quick
- Disadv: can be differences due to generational gap

LONGITUDINAL STUDY: studies same ppl over time
- Adv: eliminates groups differences, lots of detail
- 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

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)
• super ego: 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 super ego (its you! – conscious and preconscious)
When ego cannot mediate b/w the id and super ego, 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 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:
  ▪ Free Association: say aloud everything that comes to mind w/o hesitation
  ▪ Transference: looks for feelings to transferred to psychoanalyst
  ▪ Dream interpretation: analyze the manifest (seen message) and latent (hidden messages) content
  ▪ 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
  ▪ Openness: imaginative, independent, like variety
  ▪ Conscientiousness: organized, careful, disciplined
  ▪ Extraversion: sociable, fun-loving, affectionate (opposite it introversion: shy, timid, reserved)
  ▪ Agreeableness: soft hearted, trusting, helpful
  ▪ 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

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**Individual Theories about Intelligence**

- **Galton**: 1st to suggest intelligence was inherited. Intelligence based on muscle strength, size of head, reaction time, etc.
- **Cattell**: 2 clusters of mental abilities
  - **Crystallized intelligence**: reasoning and verbal skills - what you learn in school – the cold hard (like crystals) facts
  - ** Fluid intelligence**: spatial abilities,rote memory, things that come natural to you – can’t learn in school. Also decrease over time
- **Spearman’s G Factor**: said a general intelligence (g) underlies all mental abilities (typical IQ of today)
- **Gardner**: multiple intelligences (8): linguistic, logical-mathematical, musical, spatial, bodily-kinesthetic, intrapersonal (self), interpersonal (social), naturalist
- **Sternberg**: **Triarchic Theory**
  - **Analytical**: mental components to solve problems, what IQ tests assess (book smarts)
  - **Practical**: ability to size up new situations and adapt to real-life demands (street smarts)
  - **Creative**: intellectual and motivational processes that lead to novel solutions, idea, products
- **Binet**: developed 1st intelligence test, combined with **Terman** – developed the **Stanford-Binet IQ Test**

\[
IQ = \frac{\text{mental age}}{\text{chronological age}} \times 100
\]

- Chronological age = actual age
- Mental age = tested age compared to other of that age
- 100 is average
- **Wechsler**: developed the WAIS and WISC – most commonly used today
- **Flynn Effect**: IQ has steadily risen over the past 80 years – probably due to education standards and better IQ tests
- **Extremes of Intelligence**: high IQ = above 135; intellectual disability = below 70
- **Causes of Intellectual Disability**:
  - PKU – liver fails to produce an enzyme needed to breakdown chemicals – leads to brain damage
  - Down syndrome – extra copy of 21st chromosome
  - Fragile X – higher chance in boys due to ONE X chromosome
- **Influence on IQ**:
  - Genetics: MZ twins have similar IQ, adopted kids more similar to biological parents
  - Environment: early neglect leads to lower IQ, good schooling to higher IQ
- **Types of Tests**:
  - **Aptitude**: predicts your abilities to learn a new skill (ASVAB)
  - **Achievement**: tests what you know (SAT)
- **Test Creation**:
  - **Standardization**: administer a test to a representative sample of future test takers to establish a basis for meaningful comparison (test it out 1st)
  - Should be **reliable**: same results over time
    - Split-half reliability: compare two halves of the test
    - Test-retest reliability: use the same test on 2 different occasions
  - Should be **valid**: test is accurate – measures what it is intended to
    - Content validity: test measures what you want it to (an IQ test actually measures IQ)
    - Predictive validity: test is able to accurately predict a trait (high math scores predicts good engineer)
  - Standardized tests establish a normal distribution
  - Standard deviations are used to compare scores.

**Abnormal Behavior**

(7 – 9%)

- **Defining abnormal behavior**:
  - Requires “clinically significant” disturbance in cognition, emotional regulation or behavior AND
  - Significant distress or disability social situations, occupations or other important activities

**Historical causes**: biology, psychological issues, supernatural issues (demons)

**Medical model**: emphasizes treatment of disorders, as they have a biological origin. Came through the reformation of institutions in U.S. (DORTHEA DIX)

**Biopsychosocial model**: currently used model – stress biological, psychological, and social causes

**Diagnosing abnormal behavior**:
  - **DSM**: manual listing all currently accepted psychological disorders. Classifies them based on criteria – provides no explanation of causes or treatments

- **Anxiety Disorders**
  - Most common disorders in the U.S.
    - Generalized Anxiety Disorder (GAD): person is generally anxious, all the time, for NO REASON
    - Panic Disorder: person is prone to frequent panic attacks (feeling like you’re having a heart attack). Can come w/ **agoraphobia**: anxiety about being in places you cannot escape (fear of public spaces / people)
    - **Phobias**: irrational fear that disrupts your life

**Causes of Anxiety Disorders**:

- **Psychodynamic**: repressed thoughts & feelings manifest in anxiety and rituals
- **Behaviorist**: fear conditioning leads to anxiety, which is then reinforced. Phobias might be learned through observational learning

**Biological**: natural selection favored those with certain phobias (heights). Twins often share disorders. Often see less GABA in the brain

- **Obsessive-compulsive Disorders (OCD)**: person is overwhelmed with both:
  - Obsessions: persistent unwanted thoughts (did I leave the stove on?)
  - Compulsions: senseless rituals (hand washing)

- **Post-traumatic stress disorders (PTSD)**: characterized by flashbacks, problems w/ concentration, and anxiety following a traumatic event (war, natural disasters)

**Somatoform Disorders**

- Psychological disorders w/ no apparent physical cause
  - Conversion disorder: loss of feeling or usage of a limb or body part (sight) – absolutely no physiological cause though
  - **Illness Anxiety Disorder**: person interprets normal symptoms as a major disease – must disrupt their life

**Dissociative Disorders**

- **Dissociative Identity Disorder**: formerly multiple personalities – person fractures into several distinct personalities who normally have no awareness of each other.
  - **Not Schizophrenia**!
  - Usually caused by traumatic childhood abuse
  - Legitimacy is doubted by some, more common in those w/ good health insurance
  - **Major Depressive Disorder**: extreme sadness and despair, apathy towards life, w/ no known cause
• **Disruptive mood regulation disorder:** Frequent temper tantrums inconsistent with developmental level
• **Seasonal Affective Disorder (SAD):** form of depression that occurs typically winter – found mostly in Northern areas (Alaska, Ireland) UNIQUE TREATMENT = LIGHT THERAPY

**BIPOLAR DISORDERS**
• **Bipolar disorder:** bouts of severe depression & manic episodes
  o **Mania:** heightened mood, characterized by risky behaviors, fast talking, flights of ideas

**CAUSES OF DEPRESSIVE AND BIPOLAR DISORDERS**
• **Biologic:** lower levels of serotonin & norepinephrine linked to depression, higher levels of norepinephrine linked to mania. Runs in families suggesting GENES. Twin studies also support this.
• **Cognitive:** negative thought patterns leads to depression

**SCHIZOPHRENIA**
• **NOT MULTIPLE PERSONALITIES! THEY HAVE ONE PERSONALITY!**

**SYMPTOMS**
  o **Positive Symptoms (not good – means something added)**
    ▪ **Hallucinations:** sensory experiences w/o sensory stimulation (seeing and/or hearing things)
    ▪ **Delusions:** fixed, false beliefs (people are out to get them, grandiose thoughts (I am God)
    ▪ **Disorganized thinking, Disorganized speech**
  o **Negative Symptoms (something taken away)**
    ▪ **Flat affect:** lack ability to show emotions
    ▪ **Impaired decision making, inability to pay attention**
  o **Catatonia:** become frozen over periods of time (exhibit waxy flexibility: can move them into new positions)

**CAUSES OF SCHIZOPHRENIA**
  o **Brain abnormalities:** enlarged ventricles (atrophy), smaller frontal cortex
  o **Genetics:** runs in families, MZ twins at higher risk
  o **Dopamine hypothesis:** too much dopamine in the brain
  o **Diathesis – Stress:** individual has a genetic predisposition, disease must be “turned-on” by environmental stimuli (like stress) – most commonly developed during college years

**PERSONALITY DISORDERS**
• **Marked by disruptive, inflexible, enduring behavior patterns – makes this very difficult to treat!**

**Treatment of Psychological Disorders (5-7%)**

• **PSYCHODYNAMIC APPROACH:** SEE PERSONALITY SECTION
• **HUMANISTIC APPROACH:**
  o **Client-centered therapy:** (developed by CARL ROGERS) techniques include active listening, accepting environment, focuses on patient growth (you figure out what needs to change and do it)
• **COGNITIVE APPROACH:**
  o **Rational-emotive therapy:** (developed by ELLIS) techniques include analyzing self-defeating behaviors to change thought patterns – and then change behaviors associated w/ said patterns
  o **Best for anxiety disorders**
  o **Very confrontational**
  o **Cognitive therapy:** (developed by BECK) illogical thoughts → psychological problems, challenges those thoughts
  o **Best for depression**
  o **Self-directed – you figure out your errors**

**BEHAVIORAL APPROACH (typically used for anxiety disorders / phobias)**
  o **Classical Conditioning:**
    ▪ **Counterconditioning** Little Albert & Watson
    ▪ **Aversive conditioning:** associate an unpleasant experience (e.g. nausea w/ an unwanted behavior (e.g. drinking alcohol)
  o **Exposure therapy:** slowly expose people to whatever it is that makes them anxious
  o **Systematic desensitization:** associate a pleasant relaxed state w/ gradually increasing anxiety triggering stimuli (create a desensitization hierarchy – ex. List of things about flying that makes you nervous – step through each one till you can do it)
  o **Intensive exposure therapy (Flooding):** force someone to experience the fear (afraid of drowning, throw you in a pool)

• **Operant Conditioning:** use behavior modification (reward good behaviors w/ token reinforcers). Used in schools, w/ autistic children, etc.

**OTHER THERAPIES:**
• **Family therapy:** treats the family as a system, individual behaviors are influenced by family dynamics
• **Group therapy:** therapy through a group – lets patients see “they’re not alone”

**BIOLOGICAL APPROACH: CALLED BIOMEDICAL THERAPIES**
• **Drug therapies (psychopharmacology):**
  ▪ **Anti-psychotics:** decrease dopamine: treats schizophrenia
  ▪ **Side effects:** TARDIVE DYSLINENIA: hand tremors (similar to Parkinson’s due to lack of dopamine), worsening of negative symptoms, extreme sedation
  ▪ **Drug names:** thorazine, clozapine
  ▪ **Anti-depressants:** increase serotonin through REUPTAKE inhibition
  ▪ **Side effects:** drowsiness, anxiety, can increase suicide risk in teens
  ▪ **Drug names:** SSRIs (selective serotonin reuptake inhibitors) like Prozac, Zoloft, Paxil. SNRIs (selective norepinephrine reuptake inhibitors) Cymbalta, Effexor
    o **Mood stabilizers:** used in the treatment of BIPOLAR disorder: LITHIUM
    o **Anti-anxiety drugs:** depress the central nervous system (dangerous in combo w/ alcohol) Xanax, Ativan
      o **Electroconvulsive therapy (ECT):** send electricity to induce minor seizures. Used (rarely) to treat depression (when nothing else works). Thought to “reboot” the brain
    o **Psychosurgery (frontal lobotomy):** frontal lobe is surgically destroyed. Used to treat depression or violent individuals – almost never used anymore

**Social**
• **(8-10%)**
  o **Attribution theory:** we explain others behaviors by crediting the situation or the person’s disposition (they only passed b/c they cheated)
  o **Fundamental attribution error:** tendency for observers to underestimate the importance of the situation and overestimate the impact of personal disposition (that guy cut me off b/c he’s a jerk – not that his wife could be in labor)
  o **Central route to persuasion:** change people’s attitudes through logical arguments and explanations. Leads to long term behavior change
  o **Peripheral route to persuasion:** change people’s attitudes through incidental cues
(like a speaker’s attractiveness). Leads to temporary behavior changes

- **Foot in the door phenomenon**: complying w/ a small request then leads to going along w/ a larger request (can I have $5? Yes. Now can I have $25?)
- **Door in the face phenomenon**: a large request is turned down, then when leads you to be more likely to comply w/ a small request (can I have $100? Heck no! How about $20? Okay)
- **STANFORD PRISON EXPERIMENT (ZIMBARDO)**: classic “experiment” where individuals were assigned to be guards / prisoners. w/in days they took on their roles and went too far. Highly unethical
- **Cognitive dissonance (FESTINGER)**: two opposing thoughts conflict w/ each other, causing discomfort (dissonance), which makes us find ways to justify the situation (cult that was going to be abducted by aliens, smokers)

**SOCIAL INFLUENCE**

- **Conformity**: classic experiment done by ASCH – showed lines of different lengths, confederates gave wrong answers to see if others would go along w/ it
  - **Normative social influence**: we conform to gain approval or to not stand out from the group (be part of the norm)
  - **Informational social influence**: we conform to others b/c we think their opinions must be right
- **Obedience**: classic experiment done by MILGRAM: participants were to “teach” another individual using shocks. 60% of participants would administer lethal shocks to another person simply b/c they were told to

**GROUP INFLUENCE**

- **Social facilitation**: perform better on simple or well learned tasks in the presence of others
- **Social loafing**: tendency for ppl in a group to exert less effort when pooling their effort together (tug of war)
- **Deindividuation**: loss of self-awareness and self-restraint occurring in group situations that foster arousal and anonymity (mob mentality)
- **Group polarization**: the more time spent w/ a group the more similar (polarized) their thoughts / opinions will become
- **Groupthink**: desire for harmony w/in a group leads to everyone going along w/ the same thinking, ignoring other possibilities or bad ideas
- **Risky shift**: groups make riskier decisions together rather than alone

**PREJUDICE**

- **Ingroup**: “US” – ppl w/ whom we share a common identity
- **Outgroup**: “them” – ppl perceived as different or not part of the group
- **Ingroup bias**: tendency to favor our own group
- **Scapegoat theory**: prejudice offers an outlet for anger by providing someone else to blame
- **Ethnocentrism**: tendency to see your own group as more important than others
- **Just-world phenomenon**: tendency for ppl to believe that the world is just and therefore ppl get what they deserve
  - **AGGRESSION**
  - **Genetic influence**: runs in families, can breed for in animals
  - **Lower serotonin, higher testosterone**
  - **Environmental influence**: social learning theory (BANDURA) – observing violence in others makes us more violent for a time
  - **Also**: pollution, crowding, heat, humidity
- **Frustration-aggression hypothesis**: frustration creates anger, which leads to aggression
  - **Mere exposure effect**: repeated exposure to novel stimuli increases liking of them (the more time you spend around something the more you like it)
  - **Physical attractiveness**: pretty ppl are thought to be more credible, less likely to do bad things
  - **Similarity**: we prefer ppl similar to us
  - **Passionate Love**: Early stage of romance – intense pos. obsession w/ another (due to arousal)
  - **Compassionate Love**: Later stage – deep attachment to someone who your life is intertwined w/ - best with equality and self-disclosure (revealing intimate details about self)

**ALTRUISM**

- **Altruism**: unselfish regard for the welfare of others
- **Bystander effect**: the more ppl around the less likely we are to help someone in need (Kitty Genovese)
- **Social exchange theory**: social behavior (helping) is an exchange process – aim is to maximize benefits and minimize cost
- **Reciprocity norm**: we give so we can get

**CONFLICT**

- **Social trap**: conflicting parties pursue their own best interests, which can result in destructive results (prisoner’s dilemma – game theory)
- **Approach approach conflict**: win – win situation; conflict is which win you have to choose (you can eat at ONE of your two favorite restaurants – you can only choose one though)
- **Approach avoidance conflict**: win – lose situation; outcome has positive and negative aspects (marriage)
- **Avoidance avoidance conflict**: lose – lose; both outcomes are bad but you have to choose one (clean your room or do your homework)
- **Multiple approach avoidance conflict**: two (or more) win-lose situations; conflict is which to choose (College A is good for your major but no scholarship, College B is bad for your major but has a scholarship)

**SOCIAL SELF**

- **Self-concept bias**: what we consider important in ourselves is what we consider important in others
- **False-consensus effect**: we overestimate the degree to which everyone else thinks / acts the way we do
- **Self-fulfilling prophecy**: a belief that leads to its own fulfillment (I expect you all to pass, you know this, you study – fulfilling my prophecy)
- **Self-serving bias**: readiness to perceive ourselves as favorably
- **Spotlight effect (self-objectification)**: tendency of an individual to overestimate the extent to which others are paying attention to them

**FRQ TIPS**: Define then Apply the term. B.S. what you don’t know!

[Adapted from C.Thompson]