PSYC 100: Winter Study Guide

Week 13: Language

Describe the differences between language and communication.

Language is a form of communication, however for communication to be considered language, it must obey the following principles:

- **Generativity**: the ability to combine words or symbols of a language using rules of composition and syntax to communicate an almost infinite variety of ideas using a relatively small vocabulary
- **Displacement**: ability to convey messages that are not tied to the immediate time and/or place
- **Semanticity**: the extent to which a language can use symbols to transmit meaningful messages

Describe the components of language: phonemes, morphemes, syntax, semantics, and pragmatics.

Phonemes: basic distinctive units of speech sounds in a language that distinguish one word from another; minimum units of sound
Morphemes: combination of phonemes that are the smallest unit of meaning within a language
Syntax: also termed syntactical rules; grammar rules of a particular language for combining words to form phrases, clauses and sentences

- Syntax is learned implicitly and there are several cues that aid this learning
    - Word order
    - Word class
    - Function words
    - Content words
    - affixes

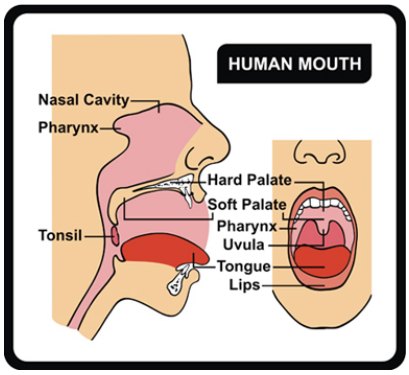
Semantics: meaning of words and the rules that govern those meanings, crucial for comprehension
Pragmatics: social rules of language that allow people to use language appropriately for different purposes and in different situations; help you interpret what others say to you

Discuss the categorical perception of phonemes.

Categorical perception: tendency of perceivers to disregard physical stimuli differences and perceive them as the same. Categorical perception allows us to perceive sounds as one phoneme or another when the sound may be ambiguous. After a year of age, we can only distinguish phonemes that are relevant to our native language.

- Continuous change in physical attribute is perceived not as continuous, but as a discrete change at a category boundary
- Depends crucially on whether you see adjacent items as the same thing or different thing
    - Harder to perceive the changes between two stimuli you perceive as categorically the same
- Phonological rules govern how phonemes can be combined
- Phonemic discrimination refers to how perception of phonemes is affected by the sounds that follow them

Explain how speech is produced, and what this might mean for how speech is represented in the brain (i.e. speech sounds are not sequentially produced, but the system must anticipate and accommodate upcoming sounds in motor programming at the same time as current sounds are being articulated).



Articulators (mouth structures that make speech sounds) create very rapid movements to assemble the sequence of phonemes.

Co-articulation: overlap of phonemes that is required for the creation of speech and as such are not produced in a discrete sequence; articulators are effectively shaping multiple sounds at any given time

Identify the skills required in learning how to read.

Reading can be approached in one of two ways: phonetic reading and 'reading by sight', or 'whole word reading'. In phonetic reading, the word is 'sounded out' by breaking it into phonemes, whereas in reading by sight, the reader reads the entire word. Knowledge of morphology can aid in comprehension by breaking down a non-sense word into structural units. The reader's vocabulary also aids in comprehension, as well as knowledge of the world for interpreting language in context, including information about purpose, style of writing and media. Learning to read requires first that visual symbols can be mapped on to the auditory symbol system.

- First, learning the alphabet and the sounds each letter makes
- Second, analyzing phonemes not necessary for language comprehension
    - Saccades: rapid jumps as we read and we perceive things during brief fixations
    - Semantic priming: we recognize words more quickly if they have a meaning related to a previously mentioned word

Describe the sequence of language development milestones (cooing, babbling, single word and two word stage).

1. Crying: after birth this is the only form of verbal communication
2. Cooing: around 8-10 weeks of age, long drawn-out vowels, made seemingly for their own amusement
3. Babbling: around 7 months of age, mix consonant and vowel sounds. As infants become more competent babblers, speech takes on more sounds, rhythms and intonations of spoken language.
4. Single word stage: around 8-16 months of age, for example: up, mama, papa
5. Two-word stage: around 24 months, for example: go potty
    a. Telegraphic speech: convey meaning with necessary words, without function words
    b. Vocabulary spurt: time of great word learning
    c. Language becomes more complex using function words
6. Full grammatical sentences (5-6 years old)

Interpret what under- and over-extension and overgeneralization tell us about how children learn language.

Overextension: use of words in contexts that are wider than appropriate

i.e. use of 'dada' to any man the child sees

Under-extension: limit context for generalized words to a certain specific meaning

i.e. use of 'ball' may refer only to their ball, not any other spherical toys

This tells us that children learn language through trial and error of assigning categories of certain objects, at first without success.

Overgeneralization: the process of overextending the application of a rule to items that are excluded from it in the language norm, as when a child uses the regular past tense verb ending –ed of forms like *I walked* to produce forms like *I goed* instead of *I went*

Describe theories of language acquisition (nativist vs. interactionist theories).

Nativist (Noam Chomsky): children are born with an innate knowledge of universal grammar and the basic features that are part of every language via a language acquisition device (LAD)

- Based on the proposition that the development of language encompasses a process too complex to be the product of environmental learning alone
- In favour of a system in the brain that develops after first exposure to language and therefore no learning is involved in early language acquisition
- Evidence: critical periods: specific times when people must be exposed to something for normal development to occur
    - Genie was isolated for 13 years, barely spoken to and often abused. When she was rescued, she had no knowledge of how to speak and could not learn.

Interactionist: language acquisition is the product of the infant's social interactions or by learning experience guided by the infant himself

- Recognize biological factors are involved in language development but place more emphasis on environment and learning
- Language is the result of growth of infant's capacity for cognition
- Grammar is a property that emerges from complexity of vocabulary
- Evidence: we are prepared to learn any language

Interpret evidence from language learning in atypical environments (wild/isolated children; creolization, e.g., Nicaraguan Sign Language) with respect to theoretical debates.

- Zero exposure to language in the first years of life (i.e. the critical period of language development) are unable to produce language later on in life
    - Genie was locked in a room sometime before her 2nd birthday and was kept there for 11 years. She was rarely fed or spoken to and was regularly physically abused. She was rescued at 13, but she was not toilet trained, had a shuffling awkward walk, and could not speak properly.
- Younger children introduced to informal Nicaraguan Sign Language in deaf school rapidly mastered the older students' signs and spontaneously imposed a structure and grammar system

Interpret outcomes of animal language learning studies (Washoe, Kanzi, Alex) with respect to animals' capacity to develop language-like system of communication and the uniqueness of the human capacity for language.

- Songbirds construct communication in song that is both highly structured and communicative. They use their song to attract mates, challenge rivals and communicate with flocks about potential danger. Some birds have as many as 1000 songs they will sing. The birds have specialized areas in their brains for producing songs and processing the songs of others.

- **Washoe** was a female chimpanzee that lived in a human family like a human child from the age of 2 to 7. The family taught Washoe ASL as vocalization with chimpanzees in the past had been unsuccessful.
- **Kanzi** was another chimpanzee that was trained to respond to spoken language rather than ASL by pressing small lexigrams on a screen to produce spoken sounds.
- **Alex** was an African Grey Parrot that lived for approximately 30 years and in that time learned about 150 words, which he could use in response to questions.

Week 14: Genetics and Intelligence

Define DNA, genes, and chromosomes.

DNA: genetic material of all organisms that makes up chromosomes; resembles a double-helix, with strands of sugar and phosphates connected by rungs made of nucleotide molecules of adenine, guanine, cytosine and thymine
Genes: regions of chromosomes that encode particular proteins
Chromosomes: threadlike structures in the nuclei of cells that contain genes

Differentiate genotype and phenotype.

The genotype refers to the genetic makeup of a trait, whereas the phenotype refers to how the trait is expressed physically.

Describe dominant and recessive traits including homozygous and heterozygous alleles.

Because genes come in pairs, the gene is not necessarily at the same locus (point on a chromosome where the particular gene is located) on the other chromatid. If the gene is at the same locus for the two chromatids, the gene is said to be homozygous at that locus. If not, the gene is said to be heterozygous. Pairs of genes at a given locus are called alleles. If the alleles are different, one allele will be dominant over the other, recessive allele and will always be expressed. Recessive alleles can only be expressed if both alleles present are recessive.

Define polygenic inheritance.

Polygenic: trait that is influenced by more than one pair of genes

- Some behaviours are inherited based on many genes, which causes a continuum of behaviour
- Polygenic inheritance can be studied by using identical and fraternal twins
    - Concordance: both express the same trait or both do not express the same trait = high concordance; the degree to which phenotype is similar in individuals; high concordance suggests that there is a strong genetic component to this trait

Explain how behavioural genetics are studied.

Behavioural genetics is the study of genetic influences on behavior. This includes the heritability of certain traits within a population, as well as epigenetic influences on how a gene is expressed.

- Heritability: estimated variability in a given trait in a population
    - May not be generalizable to other social groups; an isolated population will have higher heritability rates because there is less genetic variability
- The more a trait is influenced by genetic factors, the greater its heritability
    - However, important to note that heritability refers to a population, not an individual

Discuss whether it is possible to separate the influences of nature and nurture on development.

The influences of genetic and environmental influences on development can be studied to a limited extent using twin studies. Concordance refers to the expression of similarity in traits in twins. High concordance suggests that the trait has a genetic component when comparing identical twins to fraternal twins. Influences can also be measured in adoption studies where twins are reared in varied environmental contexts with identical genetic influence. However, the expression of genes is influenced by the environment, thus it is hard to separate the influence into two distinct arguments.

Describe some of the misconceptions about heritability.

Heritability is a statistic that measures genetic influence within a given population. It describes a proportion of observed variance that can be attributed to genetic differences among individuals. An inherited trait can have high or low heritability, but a trait that has not inherited has zero heritability. Often times, people consider heritability on an individual scale, but rather it a measurement of variance within a group or population.

Explain what intelligence is and how it is measured, as well as some of the controversies surrounding intelligence testing.

Intelligence: ability to think, understand, reason and cognitively adapt to and overcome obstacles

- In the past, intelligence tests such as the Binet-Simon IQ test and other standardized tests have attempted to quantitatively measure intelligence, although this is difficult as it is hard to conceptualize intelligence
- Gardner theory of multiple intelligences postulates that there are many forms of intelligence, for example verbal-linguistic, mathematical-logical, etc.
- Most intelligence test focus a great deal on crystallized intelligence, that is largely based on cultural context of what is deemed important to learn, thus some intelligence tests can have a cultural bias

Define the concept of "g".

Spearman defined 'g' as general intelligence; a common factor of intelligence that reflects all positively correlated measures of intelligence.

Compare fluid vs. crystallized intelligence and explain how they change with age.

Crystallized intelligence: involves knowledge that comes from prior learning and past experience; culturally-dependent

> Example: information such as vocabulary and information learned in school, what a person has accomplished with fluid intelligence

Fluid intelligence: the ability to perceive relationship independent of previous specific practice or instruction regarding those relationships

With age, crystallized intelligence increases and fluid knowledge decreases.

Define mental age and intelligence quotient.

Mental age: description of a child's score in comparison to score of the average child at a particular age

Intelligence quotient: initially a ratio of mental age to actual chronological age, revised by Binet-Simon scale to Standford-Binet scale as IQ. However, it was noted that as chronological age increases, mental age most likely reaches a threshold and thus over time, IQ would consistently decrease as this mental age threshold was reached. To solve this problem, the deviation IQ was developed as an IQ score relative to the age group, where 100 was the average expected score for an individual of a

certain age group. For each standard deviation away from the normal score, IQ score increased or decreased by 15 points.

Discuss the heritability of intelligence and explain why heritability seems to increase with age.

Heritability refers to the amount variation in a given trait in a population can be attributed to genetic variability. Currently, the heritability estimate for intelligence is 0.5, as environment plays an important role. As the individual grows, their ability to choose a specific environment for their further development is largely based on their previous experiences of shared environment and intelligence from genetic factors such that this heritability increases. John Locke proposes that children come out as a blank slate that can be formed with behavioural cues and feedback. Furthermore, he suggests that the environment is completely responsible for intelligence.

Discuss the controversy surrounding ethnic differences in IQ scores.

Stereotype threat: if people have made comments about what group you belong to, your behaviour is likely to live up to their expectations, a bias that can impact us all
Some intelligence tests also focus a great deal on crystallized intelligence, that is most often culturally dependent. This creates a cultural bias between what information has been learned in culture-specific contexts.

Week 15: Development

Describe the stages of prenatal development (zygote, embryo, fetus).

Conception takes place when a single sperm fuses with a female ovum in a process called germination. The sperm and ovum are gametes with only half of the organism's genetic material that when fused create a **zygote**. The **zygote** divides multiple times to produce multiple copies in a spherical shape known as the **morula**. The **morulla** travels down the fallopian tube into the uterus where the cells begin to differentiate forming two layers called the **inner cell mass and** the **trophoblast**. Differentiation signals graduation of **morula** to a **blastocyte**. The embryo consists of several hundred cells. In the embryonic period, the **trophoblast** develops into 2 parts: the **amniotic sac** where the embryo resides and the **placenta**, which acts as a protective barrier between mother and child, as well as a nutritional filter. The embryo then separates into three layers: the **endoderm**, which develops into the digestive system, lungs and urinary tract, the **mesoderm**, which will later form the muscle, bone and circulatory system, and the **ectoderm**, which will later form the skin, teeth, hair and central nervous system. In the embryonic period, the embryo will also grow a heart and begin to pump blood, develop most organs, begin to grow arms & legs and begin to sense and respond to audio stimulation. In the foetal period, the majority of organ development is complete. After 10 weeks, the foetus makes breathing-like chest movements that provide muscular and neural development for breathing. By the end of the fourth month, sleep and wake patterns emerge and movements are detectable by the mother. The vestibular system develops in the fetus by the 5th month.

Describe prenatal brain development (neural tube differentiation, cell migration; role of teratogens).

The neural tube is the embryo's precursor to a central nervous system. It forms a small tube of ectoderm inside the embryo in a process called neuralation. Neural migration is the process by which neurons move, grow and connect as the brain develops from the basic neural tube to a more structure. Teratogens are external compounds that can cause extreme deviations if introduced to the developing organism. The susceptibility of a developing organism depends when the organism is exposed and the degree to which the teratogen affects the organism depends both on the mother and

the fetus. The greater the amount of teratogen and exposure, the more drastic the effect is likely to have.

Describe prenatal perceptual/behavioral development (role of experience in hearing/vision (de Casper & Spence in auditory perception); rest/activity cycles).

Shortly after birth, babies recognize their mothers' voices. DeCasper and Spence had 16 pregnant mothers read the Dr. Seuss book *The Cat in the Hat* to their fetuses twice a day for the last 6.5 weeks of pregnancy. Again they used the nonnutritive nipple to measure the babies' responses. When the babies were born, DeCasper and Spence used their sucking test again. This time, the babies could suck to hear a tape recording of their mothers reading *The Cat in the Hat* or to hear the mothers reading another children's book, *The King, the Mice, and the Cheese*, which is also a poem but which has a very different meter. The babies sucked to hear *The Cat in the Hat*. This provides evidence that shortly after birth, babies are able to recognize the voice of their mothers.

Define reflexes providing definitions of key reflexes.

Reflexes are a good indication of neural development at birth. Infants are born with behaviour important to survival, some last up to death, while others are replaced by voluntary action.

- **Rooting reflex**: infant moves head and opens mouth when cheek is stroked in preparation for feeding
- **Sucking reflex**: if infant's mouth is open and something enter it, they automatically begin sucking
- **Babinski reflex**: having foot stroked causes toes to curl and fan
- **Tonic neck reflex**: extend arm in direction head turns, flexing other side's arm and knee
- **Moro reflex**: infants throw out arms and grasp if feel dropped unexpectedly
- **Grasping reflex**: when pressure is applied to palms, infants automatically close palm

Describe the development of reaching/grasping.

The development of reaching and grasping begins with the grasping reflex as described above. From this reflex, pre-reaching develops: an uncoordinated arm movement towards interesting visual stimulus. At 3 months, the grasping reflex is replaced by intentional grasping, using visual feedback to guide movement accordingly. At 7 months, the infant begins to make smooth reaches towards objects of interest with understanding of reaching towards a goal.

Describe motor milestones and role of experience in achieving them.

Motor milestones are important in shaping how infants view and interact with the environment, this influencing development further.

1. 5-7.5 months: able to sit up without support
2. 9 months: able pull themselves up and stand with support
3. 10 months: able to walk using furniture to cruise around
4. 11-12 months: walk around unsupported
5. 16 months: pick up and carry toys while walking, walk up stairs with help
6. 2 years: walk, run, kick, eat with utensils, drink from cups

These milestones represent typical development in North America. If used more, these can be achieved earlier and if under-utilized, can be developed later.

Describe physical changes in adolescence (puberty, hormones, sexual characteristics).

Puberty: the time at which the body begins to enter sexual maturation, marking the beginning of adolescence characterized by more pronounced sex differences and sudden increases in height.

- Begins when hypothalamus starts secreting hormones that stimulate the gonads (ovaries or testes) to mature further and sex hormones (estrogen/progesterone, testosterone) to be secreted, causing further rapid maturation of sex organs
- This results in development and maturation of the ova and production of sperm, which is essential in reproductive ability
- Secondary sex characteristics also develop as a result of the hormones
    - In females, breast growth and widening of the pelvis
    - In males, muscular development, facial hair and deep voices emerge

Menarche: female's first menstruation, occurring around 12-13 depending on diet, body fat, health and stress level
Semenarche: male's first ejaculation, usually around 13

Describe CNS development in childhood and adolescence (pruning, myelination and late maturation of executive functioning regions; brain plasticity).

Myelination: process of developing myelin sheaths (fatty coating resulting from glial cells wrapping around the axon) around neurons

- degree of myelination can be used to determine relative maturity of areas of brain
- myelination occurs at first sight before birth but continues up to early adulthood

pruning: selective elimination of neural synapses

- through reducing the overall number of synapses, order is imposed on the brain
- synaptic pruning occurs throughout development: in some underutilized areas of the brain, humans will lose ~40% of their synapses
- neurons undergo apoptosis triggered by low neuronal activity

synaptic plasticity: at neuronal level, further reduction in the number of synapses occurs; neuron can both grow and shed connections to other neurons in response to its own activity levels

- the connections we keep and grow simply reflect the types of tasks we use our brains to accomplish
- **experienced-based plasticity**: ability of the nervous system to wire and rewire itself in response to lasting changes in experience
- **experience-expected plasticity**: development that will not happen unless a particular experience occurs during the critical period

Identify key cognitive changes in adulthood.

Even at age 20, some areas of the brain are still forming, namely the **frontal lobe** (**prefrontal cortex**), which is one of the last regions to finish myelination. The **dorsolateral prefrontal cortex** is an area important for controlling impulses, in planning complex actions, in foreseeing consequences and for working memory (all components of **executive functioning**: functions involved in goal-directed behaviour, planning and problem-solving). Tasks involving executive functioning are the last to develop in humans and still remain difficult.

The body continues to change with age as endurance declines, muscle strength declines, and sensory experience decline depending on earlier health and fitness levels. Menopause refers to the end in a woman's fertility, varying with SES around early fifties, as well as health. In normal aging, there are slight decrements in speed of processing, memory and other cognitive abilities, however when these impairments become severe, the individual may be suffering with dementia. Factors that affect aging include telomere shortening, chronological age, oxidative stress and glycation.

Explain the functional significance of the nature and timing of developmental changes.

Timing is everything during key stages of development. During infancy and childhood, exposure to specific types of environmental stimulation is critical to healthy development. For example, to become fluent in their native language, infants need to be exposed to speech during their first years

of life. A sensitive period is a window of time during which exposure to a specific type of environmental stimulation is needed for normal development of a specific ability. Long-term deficits can emerge if the needed stimulation is missing during a sensitive period.

Week 16: Major Theories of Developmental Psychology

Compare and contrast the major theories and frameworks of human development.

Erikson's framework:

Social development over a longer span, series of stages defined by resolutions to crises faced by developing child. Because conflicts with physical and social environments last into adulthood, so too does development.

1. **Trust vs. Mistrust**: infant relies on others to meet his needs
    a. If needs are met, trust is gained and the child can move on to the next crisis
2. **Autonomy vs. Shame**: ability to interact with environment drastically increases
    a. If met with excessive scrutiny, the child will adopt self-doubt
3. **Initiative vs. Guilt**: begin to set goals for self
    a. Positive outcomes lead to confidence;
    b. Negative outcomes lead to guilt and feelings of lack of control over future
4. **Industry vs. Inferiority:** marked by transition to structure
    a. Adapting to structure leads to sense of accomplishment
    b. Inability to adapt leads to feelings of inferiority
5. **Identity vs. Role Conflict**
    a. Form concrete ideas about who they believe themselves to be to form a concrete identity
    b. Remain confused about role in life
6. **Intimacy vs. Isolation**: people learn to share themselves with other
    a. Success leads to feelings of intimacy and people are able to maintain relationships
    b. Failure leads to sense of isolation
7. **Generativity vs. Stagnation**: people develop meaningful relationships and create valuable worth
    a. Sense of accomplishment
    b. Isolate themselves leading to feelings of boredom or meaninglessness
8. **Integrity or Despair**
    a. Positive resolutions to early stages in life leads to sense of completeness
    b. Those who have not resolved earlier stages experience despair or lack of meaning

Bronfenbenner's Ecological System:

Developing person exists within a number of overlapping systems

- **Microsystem**: you and your relationships with immediate surroundings (family, friends, peers)
- **Mesosystem**: connections between different relationships
- **Exosystem**: settings you may not directly be experiencing but are influenced by
- **Macrosystem**: larger social constructs that less directly shape environment
- **Chronosystem**: historical changes that influence development and systems that surround us

Piaget's Little Scientist:

Humans develop through a series of four stages that approximately map onto key ages. This theory emphasizes the importance of interaction between environmental and maturational factors. Children

of similar ages have similar cognitive abilities and thus all children make the same errors in problem solving. Progression through stages of development is marked by the building and re-building of **schema** (mental framework or body of knowledge that organizes and synthesizes information)

- **Assimilation:** the incorporation of new data into schema without the need to revise scope of schema
- **Accommodation:** incorporates new data into schema although it is not explainable by rules of schema, thus slightly adjusting parameters to see information as exception
- **Equilibration:** accommodate information to the point where original schema no longer holds true

Vygotsky's Socio-cultural theory

This theory places emphasis on environmental factors, including cultural influence to explain development.

- **Intersubjectivity**: understanding between two individuals of the topic they are discussing
- **Joint attention**: ability to share attention with another towards the same object
- **Social referencing**: tendency of an individual to look to another or an ambiguous situation to obtain clarifying cues
- **Zone of proximal development**: difference between what a child can learn on their own and what he or she can do with help from a more knowledgeable person

Vygotsky viewed language as the driving force for development, whereas Piaget saw language as a product of development.

Core Knowledge

From birth, the brain has mechanisms that pre-dispose humans to learn specific skills very quickly or to understand certain phenomenon in specific ways. These brain mechanisms allow babies to learn skills very quickly and understand phenomena. Evolution puts these core knowledge mechanisms in place.

Theory Theory

Children hypothesize about how the world works and thus learn and develop knowledge the same way that scientists do; not concerned with stages, but rather development as a continuous process.

Apply learning theory to developmental psychology (operant conditioning, Watson's Little Albert, Bandura's Bobo doll).

- Albert Bandura's experiment where children observed adults abusing the Bobo doll
    - Some adults were punished for this behaviour, while others were rewarded
    - Children who viewed the violence were more likely to replicate it than those who saw no violence towards the doll, while children who saw the violence being rewarded were the most likely to reproduce the violence.
- Little Albert: Watson and Rayner exposed an 8-month old baby Albert to a number of stimuli to elicit a fear response when the baby reached for a white rat. The fear response was elicited by a loud noise that scared Albert. The child then displayed a fear response when the rat appeared without the loud noise and similarly when other rat-resembling animals appeared
- Operant conditioning occurs when a child learns the connections between a particular behaviour and the consequence through a system of reinforcement and punishment

Evaluate Piaget's theory of human development (assimilation, accommodation, and equilibration) and differentiate among Piaget's 4 stages of development.

1. **Sensorimotor Stage of Cognitive Development:** This stage last from birth to age two and is marked by orderly progression of increasingly complex cognitive development. From this, the child is able to build an understanding about the environment through sensory and motor abilities. Reflexes fade as they are replaced by voluntary behaviour.
    a. **Object permanence:** feature of this stage whereby infants understand that objects do not disappear when out of sight
    b. **A-not-B error:** when object is hidden from the baby in location A, then visibly moved to location B, the infant will still look in location A
2. **Pre-operational stage**: inability to perform operations, or reversible mental process at this time (age 2-7). Development in symbolic representation and beginnings of logical reasoning begins in this stage.
    a. **Conservation**: quantity of something remains constant when container changes
    b. **Egocentrism**: belief that others see the world the same way as they do
3. **Concrete Operational Stage**: In this stage, children aged 7 to 12 are able to master conservational issues with increased ability to consider more than one variable. They have an increased ability to adopt other perspectives and comprehend complex cause and effect relations. The use of logic remains challenging in transferring ideas from one context to another. They often approach problem solving in non-systemic fashions, ignoring information that doesn't support their assumptions.
4. **Formal Operational Stage**: This stage lasts from the end of the concrete stage into adulthood. Children gain the ability to think about abstract concepts, as well as formulate or test hypotheses. Reaching this stage is not universal, and if an individual did reach this stage, it was not in all areas of expertise.

Evaluate the role of the environment in the major theories of development.

Our social environment is the basis for our first exposure to everything we encounter in life. We grow up speaking the languages that are spoken by parents, friends, and teachers around us. Much of how we learn comes from the words and actions of these people and our siblings, and other relatives.

Identify the characteristics of a good theory

A good theory must embody the ability to be disproven by evidence or upheld by research. Without this ability, a theory is merely a framework, like Erikson's Stages of Life. It must also be reliable (over multiple trials produces the same conclusions/observations), valid (measures what it sets out to measure) and generalizable (can be applied to different social and cultural contexts).

Week 17: Self and Others

Define empathy and altruism.

Altruism: a motive to increase another's welfare without conscious regard for one's self-interests
Empathy: the vicarious experience of another's feelings; putting oneself in another's shoes

Describe the development of pro-social behaviors.

Pro-social behaviour is the positive, constructive, helpful behaviour that is beneficial to others, usually at a cost to oneself. An understanding of helping and the production of these types of behaviours begin to emerge in the first two years of life. By 12 months, the infant is able to form expectations about the relationship between actions and friendships. By 14 months, some infants will begin to provide spontaneous aid to others themselves.

Critically evaluate Kohlberg's theory of the development of moral reasoning.

Through extensive longitudinal studies, Kohlberg proposed 7 stages of moral reasoning that people develop as they mature.

1. **Pre-conventional morality**

   a. Heteronymous morality (pre-school age): avoid punishment
   b. Instrumental morality (7-8): fairness of exchange
2. **Conventional morality**
   a. 'Good child' (11-12): begin to view others' opinions as important and want to be seen as good
   b. Law & Order (late adolescence): concern with good of society, laws uphold and protect us from immoral behaviour of others
3. **Post-Conventional morality** (few reach)
   a. Social contract: aware that people hold various ideals and recognize obligation to law
   b. Universal ethical problems: abide by personally chosen set of ethical principles that reflect universal justice
   c. Cosmic orientation: grapple with importance of morality, construct natural theology based on experience and have mythical or spiritual experiences

Explain how parenting affects moral development.

Through parenting, parents pass on successful moral development on to their children. Western cultures emphasize individuality while other cultures emphasize group cohesion and respect for authority. Higher levels of prosocial behaviour are associated with moral development.

Explain the evolutionary advantage of altruism and aggression.

The earliest humans were bands of hunters and gatherers. The early emergence of infants' understanding and production of helping behaviour suggests that altruism was a very important survival trait, and thus were evolutionary advantageous to develop early in life. Although altruism may have reduced survival fitness for the altruists themselves, it increased fitness and survival of their genes to be passed on to future generations.

Describe the cognitive, social and cultural influences on the self-concept.

The self-concept refers to one's perception of self-including knowledge, feelings and beliefs about oneself that are used as a basis for how one describes oneself. With increases to autobiographical memory, the self-concept grows. Socially, the self-concept changes with social comparisons as one evaluates one's abilities and opinions by comparing oneself to others, considering how they differ. The self-concept is also influenced by whether the individual resides in an individualistic culture or a collectivist culture. In an individualistic culture, people are more likely to think of themselves in terms of characteristics that define their personality, whereas in collectivist cultures, people are more likely to define themselves in terms of how they are related to others. The self-concept also increases with cognitive language skills around 3 or 4 when children are able to describe themselves verbally and further around age 8 when children are able to use knowledge about themselves to evaluate and modify behaviour.

Define "theory of mind" and describe theory-of-mind tests.

The theory of mind refers to expectation concerning how experience affects mental states, especially of others. It is a reasoning pattern that attempts to predict how others might think or behave based on their needs, motives and goals. Theory of mind can be tested with false-belief tests where, for example, children are asked to guess what is in a container based on the outside and adjust as they learn the truth. Without theory of mind, when children are asked what another person would think what was in the container after it being revealed, they answer what is actually inside the container rather than what the exterior represents. Another test of theory of mind is the displacement test that explores the process by which children reason through a change in location from two different perspectives.

Describe the precursors to theory of mind.

- **Intersubjectivity**: ability to share focus of attention with others
- **Habituation**: learning the goals of others
- **Consistent lying**: many children around the age of 3 will start to lie, however will not be able to maintain the lie and give correct answers to subsequent questions

Describe the factors that contribute to the development of children's theory of mind (siblings, executive functioning).

- **Executive functioning**: capacity to control impulses, plan complex actions, foresee consequences and use working memory
    - Preservation: inability to switch strategies as new info is presented. Although initial strategy may work, when a change is called for, the strategy remains the same.
- Theory of mind appears to be facilitated if a child has older siblings as they have more opportunities to reason about mental states more similar to their own
- ToM also develops when parents explicitly ask their children to think about the feelings of the victims of their actions

Discuss biological underpinnings of theory of mind using autism.

Autism Spectrum Disorder (ASD) is characterized by difficulty understanding social situations, forming interpersonal relationships and often by preservative behaviours and high sensitivity to sound and touch. Some theorize that theory of mind develops out of the same cluster of genetic and epigenetic processes as autism does.

Describe findings of theory of mind research with animals.

In chimpanzees, theory of mind exists, but is limited to very clear situations or to a limited number of objects to keep track of. Corvids (ex crows) have cognitive abilities of making tools, passing the mirror test and remembering up to 30 000 places of hiding food.

Describe how the rouge test is used to reveal a sense of self.

The rouge test determines development of self by using a dot of red colour on the nose of a child or animal. The subject is then placed in front of a mirror and observed to see if recognition occurs. Children are able to pass the rouge test after 15-24 months.

Describe findings of animal research on sense of self.

After extended periods of time, chimpanzees were able to recognize their reflection as self to accomplish tasks such as grooming. Not all primates possess this ability, however other species such as elephants, orangutans, gorillas, dolphins and some birds do.

Describe the changes in the sense of self across the course of childhood and adolescence.

In adolescence, a stronger sense of identity emerges with a concern with how they are perceived by others.

- **Imaginary audience**: adolescent thought process whereby they are constantly on a stage and everyone is watching the, attending to their every move and mistake

Week 18: Social Development

Describe Inductive discipline as it compares to punishment.

Caregivers should employ several styles of discipline, but 'induction' was most responsible for empathetic and moral development. Inductive discipline highlights to the child the consequences of their actions on others while disciplining them.

Describe Baumrind's four styles of parenting and their effect on child development.

1. **Authoritarian**: highly demanding of children, inflexible about deviations from expected behaviour and less responsive to child's need
    a. Children may be unhappy and lack social competence and social confidence
2. **Authoritative**: highly demanding of children and highly responsive to child's needs; more likely to explain reasons for rules laid out
    a. Children tend to be socially competent and self-confident, feel supported by their parents and have the best overall outcomes
3. **Permissive**: places few demands on child, but are highly responsive to child's needs' believe children learn best on their own, without adult structure
    a. Children are often impulsive and react more intensely to conflict situations; report high self-confidence but are more likely to engage in substance abuse
4. **Rejecting**: neglectful parents that do not set expectations and are not responsive to their children, simply disengaged
    a. Children may have low self-perceptions, feel less competent, lack self-regulation and are prone to substance abuse and depression

Explain how parenting can affect an infant's genes.

There is growing evidence from epidemiological studies in humans for the persistent effects of the early life experience of abuse, neglect, and variations in parenting style, which suggest that multiple neural may be subjected to modulation via the social context of development. Although multiple molecular and cellular pathways are implicated in mediating the link between early life experiences and long-term changes in phenotype, recent evidence has highlighted the role of epigenetic mechanisms, such as DNA methylation and posttranslational modifications to histone proteins within the nucleosome. (Champagne and Curley, 2011).

Describe effects of peers and culture on moral development.

Peers offer another source of learning about what is right and what is wrong, and what aspects of life are most important. The first process for learning moral behavior is Morality of Constraint. Through this approach, children learn that "doing the right thing" is valuable because it demonstrates respect for an authority figure. Here, obeying the rules is valued highly and the child learns to recognize the social forces that are deserving of respect and then to behave in accordance with those forces. For the most part, children practice Morality of Constraint in response to parents, teachers and other significant adults. In Morality of Cooperation, children learn to "do the right thing" based on mutual understanding among equals, and an acceptance of rules in order to maintain the life of the group. For the most part, children practice Morality of Cooperation in response to peers. (Victor Valley College)

Compare the four attachment styles and explain how parenting and a child's temperament contribute to the development of a child's attachment style.

Parental sensitivity also contributes to the development of an infant's attachment style.

- **Securely attached**: react positively to the stranger when caregiver is present, but unhappy when left alone with stranger

    - Parent responds promptly and appropriately
- **Disorganized/disoriented attached**: no standard way of reacting to strange situation
    - Caregiver interferes with infant's behaviours, exhibits fearful and disoriented behaviours themselves
- **Insecure-resistant**: uncomfortable and stay close to caregiver, appearing nervous throughout
    - Caregiver is impatient with infant, more interested in their own behaviour
- **Insecure-avoidant:** less solid relationship with caregiver and may either ignore or avoid stranger
    - Caregiver appears insensitive to infant's needs

The child's temperament also plays a role in how they respond to their environment.

- Easy baby: playful, calm, adaptable
- Difficult baby: slow to adjust, negative reactions
- Slow-to-warm-up: low activity level, seems difficult at first but eventually brightens up

Development of attachment:

1. **Pre-attachment**: begins at birth; infant is reliant on caregivers for food, protection and comfort infants do not show distress when placed in care of someone other than primary caregiver
2. **Attachment in making**: begins at 6 weeks; infants begin to treat people differently showing preferential treatment to familiar people, may become nervous with unfamiliarity
3. **Clear-cut attachment**: starts around 6-8 months; infants actively seek comfort from their caregivers, may display separation anxiety
4. **Reciprocal relationship**: begins around 18-24 months; begin to feel comfortable spending increasing amounts of time separated from caregivers, attachment relies on both parties taking on an active role

Differentiate between gender identity, gender roles, and gender stereotypes and explain how socialization encourages gender stereotypes.

Gender identity: one's sense of being male or female; consists primarily of the acceptance of membership in a particular group
Gender role: culturally specific expectations to the types of activities each gender should engage in and the way that gender should think
Gender stereotypes: beliefs about differences in personality traits, cognitions, skills and behaviours about males and females

- Biologically, girls exhibit earlier verbal abilities and more effective expression/understanding of emotion; are also more compliant
- Boys have stronger spatial skills, are more aggressive and take more risks

It is common that these gender roles be placed on the child first by their parents, in ascribing gender-stereotyped characteristics, gender-appropriate toys and through subtly different treatment.

Explain the evolutionary importance of play and the changing role of friendships.

Play is important for cognitive, physical and social development by learning to function effectively un groups, share and socialize while also learning to resolve conflict with others. Our choices in friends are based on social and physical **homophily** (the tendency to choose to associate with those who are similar to us in some way). In adulthood, homophily extends to political and cultural circles.

- Infants make more sounds, smile and laugh when near children of the same age
- Around 12-18 months, children begin to understand give and take interactions
- Around 24 months, children are more comfortable in social situations with a familiar peer
- Around 4 years, much play is alone or parallel until this age

Factors affecting choice of friends

- Physical factors (decreases with age)
- Social similarities
- Gender (until late adolescence)
- Common activities
- Clear communication and conflict resolution

Week 19: Heritability and Evolutionary Psychology

Explain the role of genetics and evolution in the development of depression and anxiety.

Depression

- Rumination: thinking about something over and over again
    - Analytical style of thinking that can be productive
    - Rumination is further encouraged with social isolation and anhedonia
- Social-risk management: temporarily reduce social risk-taking that could result in exclusion
- Protection against infection: fever, fatigue, inactivity and social avoidance can reduce the risk of infection

Anxiety

- Subtypes of anxiety may have developed to cope with various situations and problems
- Each symptom is evolutionary significant
    - Hypersensitive to sounds, hyper vigilant, restless, increased HR, preferential attention to threat cues
    - Insomnia, aversion to avoidance
    - Interpretation of ambiguous information as threatening

Describe the common misunderstandings with regards to natural selection.

Evolution has no pre-determined plan or foresight. People are not more highly evolved than other animals, but have rather adapted to deal with different conditions in our environment. The characteristics that have been produced by evolution can have good, bad, or neutral effects and are often influenced by the environment. Genes cause the organism to act differently in different environmental contexts. Epigenetic modification refers to changes in cellular inheritance that can occur due to the environment with the possibility that an acquired characteristic could be inherited by offspring.

Describe the empirical findings from evolutionary psychology for sex differences and relationships (as it relates to sexual motivation, mate selection, promiscuity, homosexuality, jealousy, etc.)

- **Parental-investment theory**: the time, energy, resources and opportunity cost associated with producing offspring is considered when selecting a mate
    - **Polygyny**: high female and low male investment
    - **Monogamy**: shared parental investment
    - **Polyandry**: high male and low female investment
    - **Polygyandry**: group parental investment (common in primates living in colonies such as chimpanzees)
- **Mating opportunity cost**: effort and costs incurred in securing and preserving mating opportunities
    - Sex that has higher potential reproductive rate is under greater selection pressure to compete for access to members of the opposite sex
- **Promiscuity**: multi-male mating has been observed in many species, as promiscuity confuses paternity and could therefore defer infanticide
    - Avoid sexual harassment

    - Increase likelihood of pregnancy
    - Increase quantity and quality of offspring
- **Sexual motivation**: maximizes attraction to and motivates behaviour toward reproductively viable partners
- **Homosexuality**
    - **Kin selection**: instead of reproducing, they secure the future of their genes by investing in parenting, thus passing on their genes indirectly and thus a trade-off occurs from mating effort to parenting effort
    - **Tipping point model**: genes are associated with homosexuality are beneficial in their heterosexual carriers as homosexual males display many features attractive to females. If many alleles are inherited, male preferences become feminized and if it carries over the tipping point, men are instead attracted to men.

Explain the sociobiological approach to altruism.

Altruism is characterized in terms of evolutionary consequences – any trait that increases the fitness of others and reduces one's own fitness. In any quid pro quo agreement, a cheater should gain an advantage. Hamilton's Rule states that an individual will perform an altruistic act when the product of relatedness and benefit are greater than the cost of the altruistic act.

- Kin directed altruism: individuals who display altruistic behaviour are less likely to have children, but altruistic genes can be selected for through natural selection
- Inclusive fitness: reproductive success of those who share a common gene because the gene is the unit of selection, not the individual
- Reciprocal altruism: people behave altruistically towards a non-relative with confidence that these acts will be reciprocated if they are in need

Week 20: Motivation and Emotion

Describe the terms motivation and drive and differentiate between regulatory and non-regulatory drives.

Motivation is the general term for phenomena that affect the nature, strength and persistence of an individual's behaviour, whereas a **drive** refers to a reversible internal condition that affects the nature, strength and persistence of an individual's behaviour. Intrinsic motivation results from an internal need, whereas external motivation results from an external reward. When behaviour that was previously motivated by intrinsic motivation is externally motivated with incentives, the strength of the internal incentive decreases (over justification effect). **Regulatory drives** include homeostatic variables like sleep, thirst, and hunger and **non-regulatory drives** fulfill some other evolutionary purpose such as reproduction, safety, cooperation, social or education.

Describe the reward systems and mechanisms in the brain.

The pleasure pathways that are excited when the reward is received reinforce these drives. The reward system is linked to the limbic system, particularly the basal forebrain. The medial forebrain bundle and nucleus accumbens of the basal ganglia make up of the neural reward systems.

Evaluate the drive-reduction theory and the optimum-level hypothesis.

A drive produces an unpleasant state that causes an organism to engage in motivated behaviours, thus reduction of drive is satisfying. The optimum-level hypothesis suggests that we seek an optimum level of arousal; too much and we seek to decrease this, however too little and we seek to increase it.

Explain the central-state theory of drives

Certain hubs in the brain detect imbalances; involve decision-making and motor output. The hypothalamus acts as one such hub that sense internal states, responds to hormone levels, and is connected to pituitary gland to orchestrate the release of hormones.

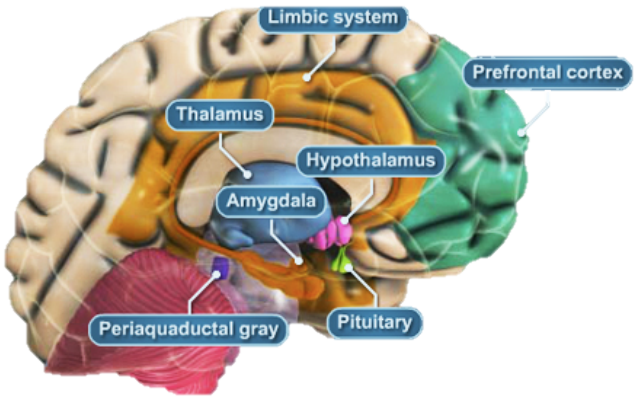
Analyze the pleasure principle and the hedonic nature of motivation.

Hedonic motivation refers to the influence of a person's pleasure and pain receptors on their willingness to move towards a goal or away from a threat. This is linked to the classic motivational principle that people approach pleasure and avoid pain, and is gained from acting on certain behaviors that resulted from esthetic and emotional feelings such as: love, hate, fear, joy, etc. According to the hedonic principle, our emotional experience can be thought of as a gauge the ranges from bad to good and our primary motivation is to keep the needle on the gauge as close to good as possible.

Describe and compare the James-Lange, Cannon-Bard, and Schachter Two-Factor theories of emotion.

James-Lange: Emotional response occurs after the autonomic-nervous system response. Each emotion has its own pattern of ANS arousal and the brain reads this pattern to interpret the current emotional state.
Cannon-Bard: Emotional communication starts with the autonomic nervous system, which communicates a quality of an emotion to the brain. The brain control emotion; the ANS response is coincidental to emotion.
Schachter Two-Factor: We label autonomic nervous system responses cognitively. Aroused, then label the emotion associated with the arousal according to the situation we are in.

Describe the biological/neurological underpinnings of emotion, including the roles of the amygdala and prefrontal cortex in emotion.



Research shows that the amygdala plays a role in negative emotions such as fear and anger. The amygdala is a cluster of nuclei underneath the cerebral cortex in the temporal lobe. It is a part of the limbic system. Research also shows that the prefrontal cortex plays a role in our conscious experience of emotions and more deliberate thoughtful responses to those emotions.

Describe research, including cross-cultural studies, on human expression and recognition of emotion.

The Facial Feedback theory postulates that if you want to feel happy, put on a happy face. People who are coached to show an emotional expression show the physiological signs that are consistent with that emotion. Social setting amplifies emotion. Emotional expression is universal. Some argue expressions may not be emotional signals, but social tools used for communication. Some cultures recognize certain emotions accurately because these emotions are important to them.

Describe how emotions and other forms of affect can influence judgments about the self and others.

The affect infusion model (Forgas 1995), based on a multi-process approach to social judgments, identifies 4 alternative judgmental strategies: (a) direct access, (b) motivated, (c) heuristic, and (d) substantive processing. The model predicts that the degree of affect infusion into judgments varies along a processing continuum, such that judgments requiring heuristic or substantive processing are more likely to be infused by affect than are direct access or motivated judgments.

Describe important individual differences in emotion that have been identified by personality and social psychologists.

Individuals differ in their use of emotion regulation strategies such as ***reappraisal*** (changing the way one thinks about a potentially emotion-eliciting event)
and ***suppression*** (changing the way one responds behaviorally to an emotion- eliciting event*)*, and these individual differences have implications for affect, well being, and social relationships. (Berkley Personality Lab, 2007).

Week 21: Personality

Distinguish between personality types and traits.

Personality type refers to the psychological classification of different types of individuals, which are often classified by different traits (smaller grouping of behavioural tendencies).

Explain research to identify personality traits by Allport, Cattell, and the five-factor model.

Allport suggested that traits could be classified as cardinal traits (most powerful determinant of personality, but rare), central traits (less influential than cardinal traits, but capture important characteristics) and secondary traits (minor influences on consistency of behaviour).

Cattell postulated that personality is a composite of oppositional personality dimensions. He identified 16 factors from Allport's bank of traits that he termed 'source trait'.

The Big Five Model suggests that personality can be described by the following:

- **Openness to experience**: individual's willingness to participate in new experiences, having a wide set of interests and begin creative and imaginative
- **Conscientiousness**: how organized, meticulous, methodical, disciplined and motivated one is
- **Extraversion**: how talkative, outgoing and assertive one is
- **Agreeableness**: how kind, sympathetic, and affectionate one is
- **Neuroticism**: the extent to which one is anxious and tense

Explain the psychobiological approach to personality: the effects of heredity and environment and the brain mechanisms that may be responsible for differences in personality traits.

Research shows that reliable differences can be observed among infants beginning at about 3 months of age. Such characteristics are activity level, attention span, and adaptability to changes in the environment and general mood. Such mood related characteristics, called **temperament,** are building blocks for the individual's later personality. The early appearance of such characteristics suggests that they are determined in part by genetic factors inherited from the parents. This can also be influenced by environmental factors such as attachment style and parenting style. Some

personality traits are strongly heritable, however there is little evidence of an effect of common family environment. Extraversion correlates to a high sensitivity to reinforcement, neuroticism correlates to a high sensitivity to punishment and psychoticism correlates to a low sensitivity to punishment and high optimal level of arousal.

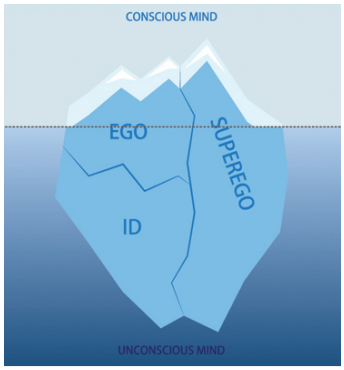
Summarize the social-cognitive approach to personality.

The social cognitive theory postulates that the portions of an individual's knowledge acquisition can be directly related to observing others within the context of social interactions, experiences, and outside media influences. This perspective of personality emphasizes **self-efficacy** (an individual's belief about his or her ability to perform a certain task), situational influences and cognitive processes, as well as the importance of observational learning. Both the consequences of behaviour and an individual's beliefs about those consequences determine personality.

- **Observational learning:** learning by watching the consequences models receive for their behaviour
- **Reciprocal determinism:** behaviour, environment and person variables interact to determine personality
- **Situationism:** behaviour that makes up our personality are specific to a given situation and not the result of persevering traits
- **Person variables:** individual differences in cognition that account for differences in personality
- **Locus of control:** belief that one's actions are controlled by internal personal variables or by external, environmental variables
    - **Internal locus of control:** believes rewards are dependent on behaviour
    - **External locus of control:** see life as being controlled by external forces unaffected by behaviour
- **Optimism:** people are generally more successful when they believe in themselves and their abilities

Summarize the psychodynamic theory of personality.

Psychodynamic theories emphasize the relationship between the conscious and unconscious and of the interactions among various drives and forces within a person.



- **Id**: completely unconscious reservoir of psychic energy that strives to satisfy sexual and aggressive drives, operating on pleasure principle and demanding instant gratification
- **Ego**: largely conscious, mediating conflicts of the id and superego with reality. It strives to satisfy the id's desires in appropriate ways
- **Superego**: partly unconscious structure that strives to live up to internalized ideas and desires to follow rules and restrictions

<u>Defense mechanisms</u>

Immature defenses: distort reality most, lead to most ineffective behaviour

- Projection: deny one's own unacceptable desire and attribute them to others

Intermediate defenses: less distortion of reality

- Repression: keeps anxiety-provoking memories from our conscious awareness
- Reaction formation: replaces an anxiety-provoking idea with its opposite
- Sublimation: redirect pleasure seeking or aggressive instincts towards socially acceptable goals (often through music or the arts)

Mature defenses: least amount of reality distortion

- Rationalization: justifying an unacceptable action with a more acceptable (but false) excuse
- Conversion: convert an intraphysic conflict into a physical form

Summarize the humanistic approach to the study of personality and the contributions of Maslow and Rogers.

Humanist theories focus on aspects of human nature that separate us from other animals, such as our ability to create belief systems and to develop meaningful stories about ourselves and the world around us. The self-concept plays a crucial role in shaping one's **phenomenological reality** (how each person views his or her own world). The humanist approach to the study of personality believes that a person's behaviour stems from a motivation to reach his or her own potential.

Maslow's hierarchy of need pictured to the left postulates that the motivation for different activities passes through several levels of need, with entrance to subsequent levels dependent on first satisfying the needs of previous levels.

Rogers believed in unconditional positive regard whereby people should not place conditions on receiving positive regard to stimulate self-worth in others.

Describe psychopathy as a personality type and from an evolutionary perspective.

Psychopathic individuals lack remorse, shows manipulation, impulsivity, egocentrism, superficial charm, and shallow affect. Neurologically, the underdevelopment of the 'empathy circuit' including the frontal cortex, the ACC and the amygdala can lead to psychopathy. The personality deficits that psychopaths encounter can actually be seen as evolutionary beneficial. The lack of empathy, impulsivity lack of emotionality and coercion would be advantageous to survival. Psychopaths also elicit higher numbers of sexual partners with more short-term mating behaviour with little parental involvement, thus increasing genetic contribution to further generations.

Week 22 & 23: Social Psychology

Define self-concept and social cognition and explain the factors that guide our interpretation of our own and other people's behaviour (e.g., fundamental attribution error, in-group bias)

Self-concept: an individual's perspective of self, including knowledge, feelings and ideas about oneself. It is used as a basis for how we describe ourselves.
Social cognition: how people process, store and apply information about other people and social situations
Fundamental attribution error: tendency to overestimate the impact of personal factors and underestimate the impact of situational factors when attributing the causes of another's behaviour
In-group bias: the tendency to favour one's own particular group

Describe self-esteem and explain how people manage it.

Self-esteem refers to a person's overall sense of self-worth or personal value. People manage self-esteem by employing self-serving cognitions, such as the following:

- **Better-than-average effect**: on questionnaires about the self, most people will rate that they are better than the average person on a given dimension, although this is statistically impossible

- **Unrealistic optimism**: people generally believe that they will have a brighter future outlook than is realistic and will link their positive attributes to desirable outcomes
- **Self-serving attributions**: a failure is a product of the environmental or contextual characteristics, whereas a success is based on positive personal qualities
- **Self-discrepancy theory:** self-esteem is determined by how we see ourselves and how we want to see ourselves
    - **Ideal self**: self concept of what one desires to be
    - **Ought self**: self-concept of what one should be
    - **Actual self**: perception of self as reality dictates it

Describe personal and situational attributions and the types of information used in making such judgments.

Attribution is a concept in social psychology addressing the processes by which individuals explain the causes of behavior and events. In an internal, or personal, attribution, people infer that an event or a person's behavior is due to personal factors such as traits, abilities, or feelings. In an external, or situational, attribution, people infer that a person's behavior is due to situational factors. This is based on consistency of behaviours, distinctiveness and consensus.

Describe the heuristics used in social cognition and the fallacies associated with them.

Heuristics refers to experience-based techniques used for problem-solving , learning and discovery that gives a solution that is not guaranteed to be optimal.

- **Availability heuristic**: more likely to draw on information that you are more able to recall when considering a decision and consider this information as most important or most relevant
- **Representative heuristic**: classify a person into the category to which he appears most similar
- **Anchoring heuristic**: mental shortcut used to estimate value or size based on suggested starting point

Describe factors in impression formation and the process by which we reach impressions.

Impression formation in social psychology refers to the process by which individual pieces of information about another person are integrated to form a global impression of the individual (i.e. how one person perceives another person). Underlying this entire process is the notion that an individual expects unity and coherence in the personalities of others. Consequently, an individual's impression of another should be similarly unified. Two major theories have been proposed to explain how this process of integration takes place.

- **Gestalt approach** views the formation of a general impression as the sum of several interrelated impressions. Central to this theory is the idea that as an individual seeks to form a coherent and meaningful impression of another person, previous impressions significantly influence or color his or her interpretation of subsequent information
- **cognitive algebra approach** of information integration theory asserts that individual experiences are evaluated independently, and combined with previous evaluations to form a constantly changing impression of a person.

Differentiate between stereotypes, prejudice, and discrimination. Describe the cause and impact of each.

Stereotypes: organized sets of knowledge or beliefs about any group of people (cognition)
Prejudice: a negative feeling toward people based on their membership to a certain group (emotion)
Discrimination: negative behaviour directed towards people because of their group membership (behavioural)

Products of Prejudice

- Self-fulfilling prophecy: an expectancy based on stereotype that causes a person to act in a manner consistent with that stereotype
- Stereotype threat: fear among members of a group that they may confirm or be judges in terms of a negative stereotype
- Illusory correlation: an apparent correlation between two distinctive elements that actually don't exist
- Realistic conflict theory: out group hostility is caused by competition for limited resources

Compare and contrast different types of attitudes (explicit and implicit).

Attitudes can be either explicit and are directly reported or are implicit and can be assessed without people knowing their attitudes are being measured. The Implicit Association Task (IAT) is a flexible task designed to tap automatic associates between concepts and attributes. Attitudes become better predictors of behaviour with motivational relevance, accessibility, knowledge and certainty. As the attitude being measured becomes more specific, the person's behaviour is more predictable.

Describe models of attitude change.

- **Learning Theory of Attitude Change**: Classical conditioning, operant conditioning and observational learning can be used to bring about attitude change. Classical conditioning can be used to create positive emotional reactions to an object, person or event by associating positive feelings with the target object. Operant conditioning can be used to strengthen desirable attitudes and weaken undesirable ones. People can also change their attitudes after observing the behavior of others.
- **Elaboration Likelihood Theory of Attitude Change**: This theory of persuasion suggests that people can alter their attitudes in two ways. First, they can be motivated to listen and think about the message, thus leading to an attitude shift. Or, they might be influenced by characteristics of the speaker, leading to a temporary or surface shift in attitude. Messages that are thought provoking and that appeal to logic are more likely to lead to permanent changes in attitudes.
- **Dissonance Theory of Attitude Change**: As mentioned earlier, people can also change their attitudes when they have conflicting beliefs about a topic. In order to reduce the tension created by these incompatible beliefs, people often shift their attitudes.

Define affective forecasting. Explain common biases and methods to improve it.

Affective forecasting: predicting how one would feel about a future emotional event

- **Focalism**: failure to consider other events that have an effect on our affect and can reduce stress
- **Duration bias:** people overestimate the time needed to recover from an emotional event
- **Impact bias:** people overestimate the effect of a situation or decision on their lives

Evaluate the elements of conformity and obedience.

Conformity refers to adjusting one's attitudes and behaviours to coincide with the group norm. Conformity can be influenced by **informative influence** whereby individuals change their behaviour because they think others are right or by **normative influence** whereby they change their behaviour in order to avoid standing out. Similarly, **obedience** is a compliant behaviour produced by the commands of authority.

Explain compliance and the principles that are used to facilitate its occurrence.

Compliance is a change in behaviour elicited by a direct response request from another individual who is not an authority figure. Factors that affect influential behaviour include the following:

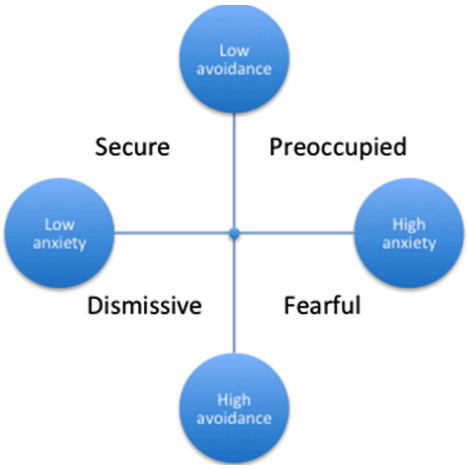
- **Consistency and commitment**: we have a strong desire for our attitudes to be consistent with our behaviour. Also, once a person has made a commitment, he or she usually feels inclined to follow through with it
- **Reciprocity:** we treat others how they have treated us, we feel obligated to repay acts of kindness even if they are unsolicited
- **Social proof:** we are inclined to follow the lead of others
- **Liking:** the more we like someone, the more likely we are to comply with their request
- **Authority:** the power of authority can be extremely influential
- **Scarcity:** people are more sensitive to losses than they are to gains, so if an item seems rare, we are more likely to value it more

Analyze pro-social behaviour.

Pro-social behavior, or "voluntary behavior intended to benefit another's a social behavior that "benefit[s] other people or society as a whole, such as helping, sharing, donating, co-operating, and volunteering." These actions may be motivated by empathy and by concern about the welfare and rights of others, as well as for egoistic or practical concerns. Evidence suggests that pro-sociality is central to the well being of social groups across a range of scales. Empathy is a strong motive in eliciting pro-social behavior, and has deep evolutionary roots.
Pro-social behavior fosters positive traits that are beneficial for children and society. It may be motivated both by altruism and by self-interest, for reasons of immediate benefit or future reciprocity. Evolutionary psychologists use theories such as kin-selection theory and inclusive fitness as an explanation for why pro-social behavioral tendencies are passed down generationally, according to the evolutionary fitness displayed by those who engaged in pro-social acts. Encouraging pro-social behavior may also require decreasing or eliminating undesirable social behaviors.

Evaluate factors affecting the beginning, continuation, and end of interpersonal relationships.

Beginning a relationship is largely based on the following factors: familiarity, positive evaluation, physical attractiveness, similarity, proximity and physiological arousal.



In relationships, according to **social exchange theory,** people are motivated t maximize benefits and minimize costs associated with the relationship. In this case, the benefits include love, emotional support and physical intimacy, whereas the costs include loss of independence and less time with friends. The average outcome in terms of costs and benefits people expect from a relationship, or the **comparison level**, will influence an individual's satisfaction in a relationship. Building on these ideas, the **investment model** suggests that people are likely to stay in unsatisfactory relationships if they feel there is nothing better. Commitment refers to the tendency to maintain a relationship and feel psychologically attached to it. Higher quality alternatives are associated with weaker commitment. **Investments** in the relationship, such as resources put into relationships that cannot be retrieved if the relationship ends, can also affect commitment.

Describe when attitudes do and do not influence behaviour.

Attitudes can also be explicit and implicit. Explicit attitudes are those that we are consciously aware of and that clearly influence our behaviors and beliefs. Implicit attitudes are unconscious, but still have an effect on our beliefs and behaviors.

We tend to assume that people behave in accordance with their attitudes. However, social psychologists have found that attitudes and actual behavior are not always perfectly aligned. After all, plenty of people support a particular candidate or political party and yet fail to go out and vote. Researchers have discovered that people are more likely to behave according to their attitudes under certain conditions:

- When your attitudes are the result of personal experience.
- When you are an expert in the subject.
- When you expect a favorable outcome.
- When the attitudes are repeatedly expressed.
- When you stand to win or lose something due to the issue.

In some cases, people may actually alter their attitudes in order to better align them with their behavior. **Cognitive dissonance** is a phenomenon in which a person experiences psychological distress due to conflicting thoughts or beliefs. In order to reduce this tension, people may change their attitudes to reflect their other beliefs or actual behaviors. (Cherry).

Describe social facilitation and social loafing and explanations for their occurrence.

Social facilitation: an increase in a person's performance of a task because of the presence of others

- Mere presence theory: the presence of others simply arouses an individual to alter their performance
- Evaluation apprehension: the performance is altered because others are evaluating our performance
- Conflict theory: aroused because having other people around is distracting

Social loafing: the tendency of individuals to put forth less effort when they are part of a group because all members of the group are pooling their effort to achieve a common goal

Analyze the elements of groupthink.

Groupthink is a mode of thinking that people engage in when the need for agreement becomes so dominant in a cohesive group that it tends to override realistic appraisal of alternate courses of action. Symptoms of groupthink include the following:

- Group overestimates its ability to make a good decision
- Group is closed-minded
- **Mind-guards**: members who protect the group from information that would call into question the effectiveness of a decision
- **Self-censorship:** members withhold or discount misgivings in order to avoid disagreement to consensus
- **Illusion of unanimity**: illusion created by self-censorship and pressure not to conform to the consensus

Groupthink occurs when the group does not have systematic procedures in place to guide decision-making, during stressful situations, within highly cohesive groups and when the group is isolated from the outside.