Psych intro notes (whole semester) – Lexi Moah

CHAPTER 1 NOTES

Facts:

- First Canadian university to establish a psych lab was UofT 1891 (james mark Baldwin)
- First Canadian university to offer a psych course Dalhousie 1883
- First Canadian university to have psych department mcgill 1924

Wilhelm Wundt

- Psychology emerged more than just a term by early 1800's and a separate discipline of science in 1832-1920 by the work of Wilhelm Wundt.
- Wilhelm Wundt successfully established the very first formal psychology Lab at the University of Leipzig in 1879. In 1881 he also published the first journal contributing to the research of psychology.
- He believed the methods for researching psych should be that of the same of other natural sciences and initially focused on consciousness.

Stanley Hall

- Stanley Hall brought the first psychology research lab to America under John Hopkins University in 1883.
- First president of APA (American Psychology Association)
- Launched Americas first journal for the research of psychology

John Watson (behaviourism)

- Believed that mental processes were not a proper scientific study because they are private events and no one can see or touch another's thoughts.

Sigmund Frued (unconscious)

- Developed psychoanalysis (psychoanalytic theory)
- Believed the most important part of psychology is studying the unconscious, it determines behaviour, emphasizes sexuality.
- Ideas met with resistance, criticism.

  Psychoanalytic theory – attempts to explain personality, motivation, and mental disorders by focusing on unconscious determinants of behaviour (dreams).

BF Skinner (behaviourism)

- Believed that free will is an illusion, behaviour is governed by the stimuli in the environment
- Believed that organisms are more likely to repeat and action if the result is positive rather than negative (pigeons & rats)

Donlad Hebb

- became chair of department of psychology at McGill (PHD)
- believed repeated stimulation would result in "cell assembly" which helps create behaviour
- helped pioneer neuropsychology as one of psychology's most important approaches to research

Scientific psychology vs. professional psychology

Applied psychology (professional services) - branch of psych concerned with every day, practical problems. Under that falls… (clinical, counselling, educational, industrial)

Structuralism - believes the task of psychology is to analyze consciousness into its basic elements and investigate how these elements are related. Structualist's based most of their research on a method of *Introspection*.

- **Introspection** - the careful, systematic self-observation, of ones own conscious experience. Self-report bias is usually an issue being there isn't an independent objective evaluation (only you know what you know)

Functionalism (fathered behaviourism) - the belief that psychology should investigate the function or purpose of consciousness, rather than its structure.

Behaviourism - a theoretical orientation based on the premise that scientific psychology should study only observable behaviour. Its mission is to relate overt (observable) behaviours "responses" to events in the environment.

Humanism - a theoretical orientation that emphasizes the unique qualities of humans, especially their freedom and their potential for personal growth.

Evolutionary psychology - patterns of behaviour are the products of evolutionary forces examines behavioural processes in terms of their adaptive value for members of a species over the course of many generations. Natural selection favours behaviours that enhance organisms' reproductive success. Gender differences are explained through spatial ability.

Positive psychology - uses theory and research to better understand the positive, adaptive, creative, and fulfilling aspects of human existence. (emotions, virtues, insitutions)

Clinical psychology - the branch of psychology concerned with the diagnosis and treatment of psychological problems and disorders. This area of profession rose greatly during WWII.

Natural selection - heritable characteristics that provide a survival or reproductive advantage are more likely than alternative characteristics to be passed on to subsequent generations and thus become 'selected' over time.

Stimulus - any detectable input from the environment

Unconscious - the unconscious contains memories, thoughts, and desires that are well below the surface of conscious awareness but none the less exert great influence on behaviour.

Cognitive psychology - an approach to psychology emphasising internal mental processes.

Cognition – the mental processes involved in acquiring knowledge (consciousness experience)

Ethnocentrism – the tendency to view one's own group as superior to others and as the standard for judging the worth or foreign ways.

New interest of culture in psychology – 2 factors

- advances in communication, travel, and international trade
- the ethnic make-up of the western world has become increasingly diverse/ multicultural

Positive psychology movement – introduced by Martin Seligman after being elected president of the APA. He believed psychology along with his own life was overly negative.

The 7 major research areas of psychology

1. Developmental psychology
2. social psychology
3. experimental psychology
4. physiological psychology
5. cognitive psychology
6. personality
7. psychometrics

Psychiatry – is a branch of medicine concerned with the diagnosis and treatment of psychological problems and disorders.

Psychology – is the science that studies behaviour, the physiological and cognitive processes that underlie it, and is the profession that applies the accumulated knowledge of this science to practical problems

7 Psychology themes

1. Psychology is empirical – of the senses, based on evidence
2. Psychology is theoretically diverse – many approaches
3. Psychology evolves in a sociohistorical context – views in psychology change depending on the era/what's going on at the time

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4. Behaviour is determined by multiple causes – not just one
5. Behaviour is determined by cultural heritage – the culture we live in
6. Behaviour is influenced jointly be hereditary and environment – experience/treatment
7. Peoples experience of the world is highly subjective – different ppl see differently

PSYCH chapter 2

Positively

Scientific research approaches:

Quantitive research – involves empirical observations of the world reported as numeric quantities

Qualititve research- researchers make empirical observations of the work and report these observations as narratives. (research is more personal, not just numbers)

Goals of scientific approach – psychologists and other scientists share 3 interrelated goals:

- **Measurement and description** – figure out a way to measure the phenomena under study. First goal of psychology is to develop measurement techniques that make it possible to describe behaviour clearly and precisely
- **Understanding and predictions** – an event is understood when the reasons for the occurrence can be explained. To evaluate their understanding scientists evaluate their predictions using hypotheses (hypothesis – tentative statement about the relationship between 2 or more variables)
- **Application and control** – attempting to apply research findings to practical problems (school, businesses) Theories are taken from the research findings which guides future research by generating new predictions, relating unrelated ideas, and suggests new lines of inquiry.

Advantages of scientific approach – clarity and precision, intolerance of error

Steps in a scientific investigation

1. **Formulate a testable hypothesis** – the variables under study must be clearly defined by providing an operational definition (describes the actions or operations that will be used to measure or control a variable)
2. **Select the research method and design the study** – putting the hypothesis into an empirical test. Choosing the best method (case study, survey, naturalistic observation) and participants/subjects (persons or animals whose behaviour is systematically observed in a study)
3. **Collect the data** – researchers use a variety of data collection techniques (procedures for making empirical observations and measurments)
4. **Analyze the data and draw conclusions** – observations are usually put in numbers which is raw data. Researchers use statistics to analyze and decide if their hypothesis is supported.
5. **Report findings** – scientific progress can only be achieved if researchers share their ideas.

Journal – a periodical that publishes technical and scholarly material, usually in a narrowly defined area of inquiry. An abstract outlines, methods, hypothesis, results ect. Introduction

EXPERIMENTAL RESEARCH –

Experiment – a research method in which the investigator manipulates a variable under carefully controlled conditions and observes whether any changes occur in a second variable as a result.

Experimental groups – participants that receive special treatment

Control groups – similar subjects who do not receive special treatment like the experimental group

Extraneous variable – factors besides IV that might affect the DV and thus need to be controlled also

Variations – allow you to have one group of subjects serve as their own control group, can manipulate more than one IV in a study, can use multiple DV.

Advantage of Experiment – cause & effect conclusions can be made but not applied to everyday behaviour outside the laboratory.

Disadvantage – manipulations and control often make experiments artificial, ethical issues make experiments harder to conduct.

Confounding variables – occurs when two variables are linked together in a way that makes it difficult to sort out their specific effects (IV closely related to Extraneous variable, cannot tell apart)

Random assignment – occurs when all subjects have an equal chance of being assigned to any group or condition in the study.

DESCRIPTIVE/CORRELATION RESEARCH –

Methods

- **Naturalistic observation** – careful systematic observation but no intervention with subjects
- **case study** – in-depth investigation of single participant, typically involving data from many sources
- **survey** – questionnaires and interviews are used to gather info about specific aspects of participants behaviour

Advantages – Broadens the scope of phenomena that psychologists can study, can also explore issues not able to be examined by an experiment.

Disadvantages – cannot demonstrate that two variables are casually related.

STATISTICS

Frequency polygons – graphs used to present data from a frequency distribution. Normal and bell-shaped distribution are common types.

3 measures of **central tendency**

- **Median (central score) -** Arrange numbers in order and find the middle number to find median. If there is not middle number find the mean of the two middle numbers. (add up, divide by 2)
- **mean (arithmetic average)** (tends to be most useful unless inflated by extreme scores) add up and divide by number of scores
- **mode (most frequent score)** most common number

Variability – how much scores vary from each other and the mean (low variability - ?)

Standard deviation – an index of the amount of variability in a data set.

Inferential statistics – used to interpret data and draw conclusions. Using probability, researchers use inferential statistics to evaluate if their results are due to chance.

Descriptive statistics – summarize the main features of a data set.

Hypothesis testing – making calculations to determine whether research results are statistically significant.

Statistical significance – occurs when probability that results are due to chance, are very low

Correlation – when two variables are related

Positive variable – when variables co-vary in the same directions

Negative variable – when variables co-vary in opposite directions

Correlation coefficient – numerical index of degree of relationship between two variables (+1.36)

Strength – the closer the correlation to either +1.00 or -1.00 the stronger the relationship.

Causation – correlation is not equivalent to causation

Meta-analysis – combines statistical results of many studies of the same question, and results yield an estimate of the size and consistency of a variables effects.

FLAWS IN RESEARCH

Sampling bias – when a sample is not representative of the population (specific case vs everyone)

Placebo effect – when participant's expectations lead them to experience some change even though they receive empty or fake treatment.

Distortions in self-report data – results from problems such as social desirability and happens when people give verbal accounts of their experiences.

Social desirability - the tendency for survey subjects to provide answers that make them look good to others

Experimenter bias – occurs when a researchers expectations or preferences about the outcome of a study influence the results obtained.

ETHICAL GUIDELINES FOR CANADA

- Principale 1 – respect for the dignity of persons
- Principle 2 – responsible caring
- Principle 3 – integrity in relationships
- Principle 4 – responsibility to society

Double-blind research – subjects and experimenters do not know who is in the controlled or experimental group

Operational statistics – describes the actions or operations that will be used to measure or control a variable

Anecdotal evidence – consists of personal stories about specific incidents and experiences. These stories can often sway people with vivid and memorable tales.

Normal distribution – is a symmetrical, bell shaped curve that represents the pattern in which many human characteristics are dispersed in the population

Psych ch 3

Communication in the nervous system

Neuron – individual cells in the nervous system that receive, integrate and transmit information

Key parts of the neuron =

Soma – (Cell body) contains the cell nucleus and much of the chemical machinery common to most cells

Dendrites – branching structures of neurons that receive signals from other cells

Axon - fibre that carries signals away from soma to other cells. Thicker ones can carry info more rapidly

Myelin sheath – insulating material that encases some axons

Terminal buttons - small knobs at ends of axons that release neuro-transmitters at synapses

Gila – are cells found throughout the nervous system that provide various types of support for neurons (insulation of axons, waste removal)

Synapses - the point at which neurons interconnect, a junction where info is transmitted from one neuron to another. (info is received at the dendrites, passed through the soma, then along the axon and is transmitted to the dendrites of other cells at meeting points called synapses.

Synaptic cleft – a microscopic gap between the terminal button of one neuron and the cell membrane of another neuron (presynaptic neuron – sends signal across gap | postsynaptic – receives signal/info)

Neurotransmitter – chemicals that transmit information from one neuron to another its release is triggered by the action potential reaching the axons terminal buttons

Synaptic vesicles – within terminal buttons, neurotransmitters are stored in these small sacs

Postsynaptic potential – a voltage change at a receptor site on a postsynaptic cell membrane. Does not apply to the all-or-none law and can vary in size.

Neurogenesis - the formation of new neurons

Split brain surgery – the bundle of fibres that connects the cerebral hemispheres is cut to reduce the severity of epileptic seizures.

Perceptual asymmetries – left/right imbalances between the cerebral hemispheres in the speed of visual or auditory processing.

Two types of messages can be sent from cell to cell (Excitatory PSP & Inhibitory PSP)

Excitatory PSP – is a positive voltage shift that increases the likelihood that the postsynaptic neuron will fire action potentials.

Inhibitory PSP – is a negative voltage shift that decreases the likelihood that the postsynaptic neuron will fire action potentials.

Cerebrospinal fluid CSF - nourishes the brain and provides a protective cushion for it. It can be found in ventricles

Reuptake – a process in which neurotransmitters are sponged up from the synaptic cleft by the presynaptic membrane.

The Neural impulse =

Resting potential - neuron's stable, negative charge when inactive (tiny battery)

Action potential – a brief shift in a neurons electrical charge that travels along the axon

Absolute refractory period – the minimum length of time after an action potential before another action potential can begin (unless stimulation is elevated)

All-or-none law - a neuron fires or doesn't fire

Neurotransmitters and behaviour =

Acetylcholine – enables muscle action, learning and memory. released by neurons that control skeletal muscles. Only transmitter between motor neurons and voluntary muscles

Agonist – is a chemical that mimics the action of a neurotransmitter

Antagonist – is a chemical that opposes the action of neurotransmitters

The Monoamines (3):

Serotonin – affects mood, hunger, involved in the regulation of sleep; abnormal levels linked to depression and obsessive compulsive disorder

Dopamine – influences movement, learning attention and emotion. Abnormal levels linked to schizophrenia; dopamine circuits activated by cocaine and amphetamines.

Norepinephrine – helps control alertness and arousal. Abnormal levels linked to depression; contributes to modulation of food and arousal

GABA – major inhibitory transmitter that contributes to regulation of anxiety.

Endorphins – internally produced chemicals that resemble opiates in structure and in effects.

Glutamate – major excitatory transmitter linked to memory process of long-term potentiation

Synaptic transmission =

Synthesis and storage of neurotransmitters in synaptic vesicles ✅ Release of neurotransmitters into synaptic cleft ✅ Binding of neurotransmitters at receptor sites leads to excitatory and inhibitory PSP's ✅ Inactivation or removal (drifting away) of neurotransmitters ✅ Re-uptake of neurotransmitters by presynaptic neuron

Synaptic pruning – is the process of eliminating old/inactive synapses if no longer needed, which therefore helps shape and mold some of the neural networks which are crucial for cell communication.

<u>Organization of the nervous system</u>

Central nervous system = Brain & Spinal Cord (extension of the brain, connects brain to rest of the body through peripheral nervous system.

Peripheral System = made up all those nerves that lie outside the brain and spinal cord. Nerves are bunches of neuron fibres (axons) that are routed together in the peripheral nervous system. This system can be subdivided into the somatic and autonomic nervous systems

Somatic nervous system: made up of nerves that connect to voluntary muscles, and sensory receptors. "Cables" that Carry info from receptors in the skin, muscles, and joints to the nervous system. Let's you feel the world and move around it.

Afferent – (incoming) nerves

Efferent – (outgoing) nerves

Automatic nervous system: nerves to heart, blood vessels, smooth muscles, glands. Also mediates psychological arousal that occurs when people are experiencing emotions.

Sympathetic division – mobilizes bodily resources for emergency

Parasympathetic – conserves bodily resources

Methods for study of brain:

Electroencephalograph (EEGs) - monitor the electrical activity of the brain over time by means of attaching electrodes to the surface of the scalp yielding line tracings called brain waves. Different patterns represent different states of consciousness

Lesioning – involves destroying a piece of the brain

Electrical stimulation of the brain (ESB) - involves sending a weak current into a brain structure to activate it.

Transcranial magnetic stimulation – is new technique that permits scientists to temporarily enhance or depress activity in a specific area of the brain

CT scans and MRI scans (structure) - can provide precise images of the brain structure

PET scans and fMRI scans (function) – can map actual activity of the brain over time. fMRI monitors oxygen consumption and blood flow to map activity.

Brain and Behaviour (brain = Hindbrain, Midbrain, Forebrain)

Midbrain - the segment of the brainstem that lies between the hindbrain and forebrain. Involved in locating things in space; dopamine synthesis

Plasticity of the brain – the anatomical structure and functional organization of the brain is somewhat malleable

Hindbrain -

Cerebellum **-** coordinates fine muscles movement, balance

Medulla – regulates unconscious functions such as breathing and circulation

Pons – a bridge of fibers connects brain stem with cerebellum, involved in sleep and arousal

Forebrain = largest and most complex region of the brain.

Thalamus - relay centre for cortex; distributes all incoming sensory signals, except smell

Cerebrum – Handles complex mental activities, sensing, learning, thinking, planning and motor skills. Most complex part.

Corpus callosum – the structure that connects the two cerebral hemispheres (right/left halves)

Frontal lobes: primary motor complex (Prefrontal cortex – relational reasoning, working memory)

Parietal lobes – primary somatosensory cortex (sense of touch)

Temporal lobes – Primary auditory cortex

Occipital lobes – primary visual cortex

Limbic System - loosely connected network that contributes to emotion, memory, motivation (aggression/sex drives)

Hippocampus – contributes to memory

Amygdala – involved learning of fear responses

Hypothalamus – regulates basic biological needs, such as hunger, thirst, sex

Endocrine system – consists of glands that secretes hormones in the bloodstream, governed by the hypothalamus and regulates response to stress, hunger, sexual development. Pituitary gland is the "master gland" and releases a variety of of hormones to the body.

Ascending reticular activating system (ARAS) - regulation of balance between arousal and calming by allowing information into the brain through the brain stem which projects diffusely into many areas of the brain. Under-active when in a coma (constant sleep).

Right/Left Brain

Left hemisphere – usually handles verbal processing, including language, speech, reading, writing

Right hemisphere – usually handles nonverbal processing, including spatial, musical, and visual recognition tasks

Corpus collosum – is the structure that connects the two cerebral hemispheres.

Methods for study of lateralization =

Split brain surgery – bundle of fibres that connects two hemispheres is severed

Perceptual asymmetries – Left/Right imbalances in speed of processing are studied in normal subjects

Brain imaging – fMRI scans can identify specific neural circuits in the left or right hemisphere that appear to handle various cognitive tasks

Endocrine system =

Endocrine system – consists of glands that release hormones into the bloodstream; hormones help control bodily functions

Pituitary gland – releases a great variety of hormones that fan out around the body, stimulating actions in the other endocrine glands

Oxytocin – a hormone released by the pituitary gland which regulates reproductive behaviour

Heredity and Behaviour

Concepts =

Behavioural genetics – an interdisciplinary field that studies the influence of genetic factors on behavioural traits

Chromosomes – are threadlike strands of DNA that carry genetic information

Genes – are DNA segments that are the key functional units in hereditary transmission. Two genes in a specific pair may be *homozygous* (the same) or *heterozygous* (different). When paired genes are different, one may dominant (expressed) and the other recessive (masked)

Genotype – refers to a person's genetic makeup, whereas phenotype refers to a person's observable characteristics. Most behavioural traits appear to involve polygenic inheritance

Chromosome – strands of DNA carrying genetic info

Zygote – single cell formed by the union of a sperm and an egg

Homozygous – the two genes in a specific pair are the same. In the heterozygous condition, the two genes in a specific pair are different.

Dominant gene - is one that is expressed when paired genes are different and a recessive gene is one that is masked when paired genes are different.

Polygenic traits – or characteristics that are influenced by more than one pair of genes.

Research methods =

Family studies – assess hereditary influence by examining blood relatives to see how much they resemble one another on a specific trait.

Twin studies – assess hereditary influence by comparing the resemblance of identical and fraternal twins with respect to a trait.

Adoption studies – compare adopted children to their adoptive parents and to their biological parents

Genetic mapping – determines the location and chemical sequence of specific genes, which can help to pinpoint links between particular genes and behavioural traits

Epigenetics – is the study of heritable changes in gene expression, not involving DNA sequence modifications.

Evolutionary bases of behaviour

Darwins insights =

1. Organisms vary in endless ways
2. Some traits are heritable
3. Variations in hereditary traits might affect organisms survival and reproductive success
4. Heritable traits that provide survival or reproductive advantage will become more prevalent over generations (natural selection can change a gene pool)

Concepts =

Fitness – refers to the reproductive success of an organism relative to the population

Inclusive fitness is the sum of an individual's own reproductive success of related others.

Adaptations – are inherited characteristics sculpted through natural selection because they helped solve a problem of survival or reproduction when they emerged.

Behaviours as adaptive traits =

- Species typical patterns of behaviour often reflect evolutionary solutions to adaptive problems. Behavioural strategies that help organisms avoid predators have obvious adaptive value.

Psych ch 4

Sensation - involves the stimulation of sensory organs
Perception - involves the processing and interpretation of sensory input.
Transduction - the sensory material or info is transformed into a form that the brain can utilize. Sensory info gets transferred into neural
Threshold - a dividing point between energy levels that do and do not have a detectable effect.
Absolute threshold – minimum amount of stimulation that an organism can detect. The stimulus intensity which is detected 50% of the time.
Signal detection theory - the detection of stimuli involves decision processes as well as sensory processes, which are both influenced by a variety of factors besides stimulus intensity.
Subliminal perception - stimuli presented below the absolute threshold. Things we see that we are not conscious of. Not very effective.
Just noticeable difference - the smallest difference you can detect.

- Weber's law: the size of the JND is proportional to size of initial stimulus (a constant) (candle vs LED light)
- Fechners law: the magnitude of a sensory experience is proportional to the number of JNDs that the stimulus causing the experience is above the threshold. Increased exposure = decreased magnitude of stimulus intensity.

Sensory adaptation – gradual decline in sensitivity due to prolonged stimulation
Sensory deprivation – the absence of normal levels of sensory stimulation. Varied responses somewhat dependant on expectations & interpretations (eg hallucinations)

THE VISUAL SYSTEM

Light waves vary in:
Amplitude - brightness
Wavelength - colour (hue)
Purity - saturation (how varied the mix is)

Key eye struct ures:

Lens - focuses the light rays falling on the retina
Pupil - regulates the amount of light passing to the rear of the eye
Retina - is the neural tissue lining the inside back surface of the eye
Optic disk - is a hole in the retina where the optic nerve fibers exit the eye.
Fovea - is a tiny spot in the centre of the retina that contains only cones and visual acuity is greatest
Nearsightedness – close objects are seen clearly but distant objects appear blurry
Farsightedness – distant objects are seen clearly but close objects appear blurry
Saccades – eye movements that are happening constantly, analyzing our environment and stimuli

*in the retina visual receptors consist of rods and cones where are organized into receptive fields

Visual Receptors

Rods - play a key role in night and peripheral vision and greatly out-number cones
Cones - play a key role in day and colour vision and provide greater acuity than rods
Receptive fields - are collections of rods (night) and cones (day) that funnel signals to specific visual cells in the retina or the brain.
Dark adaptation – the process in which the eyes become more sensitive to light in low illumination
Light adaptation – the process in which the eyes become less sensitive to light in high illumination
Lateral antagonism – occurs when neural activity in a cell opposes activity in surrounding cells

*visual signals are sent onward to the brain through **visual pathways and processing**"

Visual pathways and processing

The main visual highway - can be subdivided into the "parvocellular channel" (colour) and "magnocellular channel" (brightness) which engage in parallel processing of stimulus input. Projects into thalamus after axons carry information to the optic chiasm.
The second visual highway - handles coordination of visual input with sensory input
The primary visual cortex - in the occipital lobe handles the initial cortical processing of visual input

Feature detectors - are neurons in the visual cortex that respond selectively to specific features of complex stimuli
Optic chiasm – the point at which the optic nerves from the inside half of each eye cross over and then project to the opposite side of the brain
Parallel processing - involves simultaneously extracting different kinds of information from the same input
Visual agnosia – inability to recognize objects
Prosopagnosia – inability to recognize familiar faces

after processing in the primary visual cortex, visual input is routed to other cortical areas along the "where pathway" (dorsal stream) and the "what pathway" (ventral stream)

Optical illusion - is a discrepancy between the appearance of a visual stimuli and its physical reality. Optical illusions show that perceptual hypothesis can be wrong and that perception is not a simple reflection of objective reality

<u>Colour perception</u>
Subtractive colour mixing - works by removing some wavelengths of light, leaving less light
Additive colour mixing - works by putting more light in the mixture than any one light
Trichromatic theory - holds that the eye has three types of receptors with differing sensitivities to different wave lengths. There are 3 channels for colour vision (red green blue).
Opponent process theory - holds that receptors make antagonistic responses to three pairs of colours
Conclusion - the evidence suggests that both theories are necessary to explain colour perception
colour blindness - involves a variety of deficiencies in the ability to distinguish among colours
Complementary colours - pairs of colours that produce grey tones when mixed together.
Afterimage – a visual image that persists after a stimulus is removed

<u>Form perception</u>
Reversible figure - a drawing that is compatible with two interpretations that can shift back and fourth
Perceptual set - a readiness to perceive a stimulus in a particular way.
Feature analysis - the process of detecting specific elements in visual input and assembling them into a more complex form (lines – squares & triangles)
Bottom-up processing – a progression from individual elements to the whole
Top-down processing – a progression from whole to its elements
Subjective contours – the perception of contours where none actually exist
The Phi phenomenon - the illusion of movement created by presenting visual stimuli in rapid succession
Distal stimuli – stimuli that lie in the distance (the world outside the body)
Proximal stimuli – stimulus energies that impinge directly on sensory receptors
Perceptual hypothesis – is an inference about which distal stimuli could be responsible for the proximal stimuli sensed. The same visual input can result in very different perceptions. Form perception is selective, as the phenomenon of "inattentional blindness" demonstrates

"**Gestalt principles**" help explain how scenes are organized into discrete forms such as;
Figure and ground (distinction between object and background,
Proximity (elements close to one another are usually grouped together)
Closure (viewers tend to supply missing elements to close or complete a familiar figure)
Similarity (elements that are similar tend to be grouped together)
Simplicity (viewers tend to organize elements in the simplest way possible)

Continuity (viewers tend to see elements in ways that produce smooth continuation)

Depth perception
Depth perception – involves interpretation of visual cues that indicate how near or far an object is
Binocular cues - are clues about distance based on the differing views of the two eyes (convergence – when the eyes move closer together to focus on closer objects)
Retinal disparity - the right and left eyes see slightly different views of objects
Monocular cues - are clues about distance based on the image in either eye alone
Pictorial cues - are about distance that can be given in a flat picture (texture, convergence of lines in distance)
Perceptual constancy - a tendency to experience a stable perception in the face of continually changing sensory input.
Impossible figures – are objects that can be represented in 2D pictures but cannot exist in 3D space.

THE AUDITORY SYSTEM

Sound Waves vary in:
Amplitude - loudness
Wavelength - pitch
Purity - timbre
sound is registered by receptors in the ear then transferred to the brain

3 main parts of the ear
external ear – depends on vibrations of air molecules
Middle ear – depends on vibration of movable bones
Inner ear – depends on waves in a fluid.

Key ear structures
Pinna – the external ear's sound-collecting cone
Eardrum – is a taut membrane at the end of the auditory canal that vibrates in response to sound waves
Ossicles – are three tiny bones in the middle ear that convert the eardrums vibrations into smaller motions
Cochlea – the fluid filled, coiled tunnel, that house the inner ear's neural tissue
Basilar Membrane – holds the hair cells that serve as auditory receptors along the spiraled cochlea

Pitch Perception:
Place theory – holds that perception of pitch depends on the portion and the place of the basilar membrane vibrations
Frequency theory – holds that perception of pitch depends on the basilar membrane's rate of vibration
Conclusion – the evidence suggests that both theories are needed to explain pitch perception

Auditory Localization:
- Involves locating the source of sounds in space
- Critical cues include the loudness and the timing of sounds arriving at each ear.

The Sense of touch
- Sensory receptors in the skin respond to pressure, temperature and pain

- Pain signals travel along a “fast pathway” that registers localized pain and a “slow pathway” that carries less localized pain sensations
- Cultural variations in the experience of pain show the subjective nature of pain perception
- Gate-control theory holds that incoming pain signals can be blocked in the spinal cord
- Endorphins and a descending neural pathway appear responsible for this suppression of pain

The Chemical Senses

Taste (gustatory system)

- Taste cells absorb chemicals in saliva and trigger neural impulses routed through the thalamus
- Traditional views hold that our taste buds are sensitive to four basic tastes: sweet, sour, bitter, and salty
- Recently it has been suggested that there is a fifth basic taste sense: **Umami.** This is a Japanese word for the savory taste of glutamate
- Sensitivity to these tastes is distributed somewhat unevenly across the tongue but the variations are small
- Taste preferences are largely learned and heavily shaped by social proceses.
- Supertasters have more taste buds and are more sensitive than others to certain sweet and bitter substances

Smell (Olfactory system)

- Olfactory Cilia absorb chemicals in the nose and trigger neural impulses
- Smell is the only sensory system that is not routed through the thalamus
- Most Olfactory receptors respond to more than one odor
- People tend to have a hard time attaching names to odors
- **Pheromones** – are chemical messages, typically imperceptible, that can be sent by one organism and received by another member of the same object

Other senses

The Kinesthetic system – receptors in the kinesthetic system monitor the positions of the various parts of the body

The Vestibular system – receptors in the vestibular system provide information about the body’s location (gravity)

Psych ch 5

The nature of consciousness

- Consciousness involves varied levels of awareness (controlled/automatic processes)
- Mental process continue during sleep, as some stimuli can penetrate awareness
- Research suggests that decisions made when people do not have the chance to make conscious deliberations may sometimes be more accurate
- The evolutionary significance of consciousness is a matter of debate

- Changes in consciousness are correlated with changes in brain activity as measured by EGGs, EMGs (electromyography) and EOGs (electrooculograph)

<u>Sleep</u>

The architecture of sleep * REM = rapid eye movement

- Non-REM sleep consists of stages 1-4, which are marked by an absence of rapid eye movements, relatively little dreaming, and varied EEG activity.
- REM sleep is a deep stage of sleep marked by rapid eye movements, high frequency/ low amplitude brain waves, almost near muscle paralysation and dreaming.
- During the course of sleep, REM periods gradually get longer and non-REM periods get shorter and shallower.
- The architecture of sleep varies somewhat from one person to the next
- Slow-wave sleep (SWS): consists of sleep stages 3-4, during which high amplitude, low frequency delta waves become prominent in EEG recordings. Gradually brain waves become higher in amplitude and lower in frequency when in a deep sleep.

Stages of sleep

1. Brief transitional stage of light sleep (lasts 1-7min, breathing/heart rate slow, hypnic jerks)
2. Typically lasts 10-25min with brief bursts of higher frequency brain waves (speed spindles)

3,4. Muscle tension, respiration rate, body temperature continues to decline (lasts 30min and then the cycle reverses and the sleep begins to move back up through the lighter stages.

Sleep Deprivation/restriction

- Partial sleep deprivation is common and can impair alertness; it appears to contribute to many accidents
- Selective deprivation of REM and slow-wave sleep leads to increased attempts to shift into these stages of sleep and increase time spent in these stages after sleep deprivation ends.
- Recent studies suggest that REM and slow-wave sleep help firm up learning that takes place during the day, a process called “memory consolidation”.
- Short sleep deprivation is associated with a variety of health problems, but both short and long sleepers exhibit elevated morality.

Insomnia

- **Insomnia occurs in three patterns:** difficulty falling asleep, difficulty remaining asleep, persistent early morning awakenings
- Insomnia is a fairly common sleep disorder and it has many diverse causes including the possibility that insomniacs have a high arousal level
- Sedative drugs are a poor long term solution to insomnia because the risk of overdose, escalating dependency and carryover drowsiness

Sleep problems

Narcolepsy – is marked by sudden and irresistible onsets of sleep during normal waking periods.
Sleep apnea – involves frequent, reflexive gasping for air that disrupts sleep
Nightmares – are anxiety –arousing dreams that lead to awakening, usually from REM sleep.
Night Terrors – are abrupt awakenings from non-REM sleep accompanied by intense arousal and panic
Somnambulism – (sleep walking)
REM sleep behaviour disorder: characterized by potentially disruptive dream enactments during REM periods.

Factors influencing sleep

- The REM portion of sleep declines from 50% in first year among newborns to about 20% among adults
- The time spent in slow-wave sleep declines during adulthood
- Culture does not appear to have much effect on the architecture of sleep.
- Culture does influence napping practises and co-sleeping, which are normative in many societies
- Many brain structures and neurotransmitters contribute to the regulation of sleep/ circadian rhythm

Biological rhythms: relations to sleep

- **biological rhythms**: periodic fluctuations in psychological functioning
- **Circadian rhythms:** are 24hr biological cycles influential in the regulation of sleep (urine)
- Internal biological clocks are reset by exposure to light, which stimulates the SCN, which signals the pineal gland to secrete melatonin
- The poor sleep associated with jet lag and rotating shift work is due to being out of sync with circadian rhythms
- Administration of melatonin, and exposure to bright light appear to have some value in efforts in realign circadian rhythms that are out of sync
- Ignoring your circadian rhythm can lead to heart disease, irritability, extreme fatigue, decline of metabolism

The world of dreams

The nature of dreams

- The concept of what constitutes a dream is being re-evaluated by scientists
- Dreams are less exotic than widely assumed
- Dreams may be affected by events in one's life and external stimuli
- Cultural variations are seen in dream recall, dream content, dream interpretation, and the importance attributed to dreams

Theories of dreaming

- Sigmund Freud asserted that the chief purpose of dreams is wish fulfillment
- Other theorists argue that dreams provide an opportunity to think creatively about personal problems
- The activation-synthesis model proposes that dreams are side effects of the neural activation that produces walking-like brain waves during REM.

Hypnosis

Hypnotic induction and phenomena

- Hypnosis is a procedure that produces a heightened state of suggestibility
- People vary in their susceptibility to hypnosis
- Hypnotic susceptibility is a stable trait made up of three components: absorption, dissociation, and posthypnotic amnesia

Theories of hypnosis

- According to Theodore Barber, hypnosis, produces a normal state of consciousness in which people act out the role of hypnotized subject
- The role-playing view Is supported by evidence that hypnotic feats can be duplicated by non-hypnotized subjects and that hypnotic subjects are often acting out a role
- According to Ernest Hilgard, hypnosis produces an altered state of awareness characterized by dissociation (a splitting of mental processes into two separate, simultaneous streams of awareness
- The altered state view is supported by evidence that divided consciousness is a common state that has continuity with everyday experience.

Meditation: psychological correlates and long-term benefits

- Meditation refers to a family of practises that train attention to heighten awareness and bring mental processes under greater voluntary control.
- Two types of meditation are focused attention and open monitoring
- Studies suggest that effective meditation leads to beneficial physiological state that may be accompanied by changes in brain activity
- Evidence suggests that meditation may reduce stress hormones, enhance self-esteem and well-being, and reduce vulnerability to a variety of diseases. Recent work highlights the efficiency of cognitive-behavioural therapy rooted in mindfulness meditation. Some critics suggest that these benefits may not be unique to meditation and are a product of relaxation.

Altering consciousness with drugs

Principal abused drugs

Narcotics – drugs derived from opium (heroin)
Sedatives – sleep inducing drugs (barbiturates)
Stimulants – drugs that increase CNS activation (cocaine)
Hallucinogens – LSD produce sensory distortions and diverse mental and emotional effects
Cannabis – WEED! BEST SHIT EVER! THC DERIVED!
Alcohol – contains ethyl alcohol
MDMA – compound drug related to hallucinogens/amphetamines

Factors influencing drug effects

- drug effects depend on users' age, mood, personality , weight, expectation, and previous experience with drugs
- drug effects also depend on the potency of the drug, the method of administration, and the user's tolerance

Mechanisms of drug action

- Psychoactive drugs exert their effects by selectively altering neurotransmitter activity.
- Increased activation in the mesolimbic dopamine pathway may be responsible for the reinforcing effects of many drugs

Risks associated with drug abuse

- Physical dependence exists when drug use must be continued to satisfy craving for the drug
- Psychological dependence exists when drug use must be continued to avoid withdrawal illness
- Many drugs, especially, CNS depressants, can produce a lethal overdose
- Many drugs cause deleterious health effects by producing direct tissue damage
- The negative effects of drugs on physical health are often due to indirect behavioural effects

Ch 12

The nature of personality

- A personality trait is a durable disposition to behave in particular way across a variety of situations
- According to the five-factor model, most aspects of personality are derived from five crucial traits: neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness
- The Big Five are predictive of behaviour such as honesty, job performance, and alcohol use, as well as of important life outcome such as grades, occupational attainment, divorce health and morality.

Psychodynamic Perspectives

Freud's theory

- Sigmund Freud's **psychoanalytic theory** grew out of his therapeutic work with clients and emphasised the importance of the unconscious.
- Frued divided personality structure into three components: the id, ego, and superego
- The id is the instinctive component that follows the pleasure principal, ego is the decision-making component that follows the reality principal, and the superego is the moral component.
- Frued described three levels of awareness: the conscious (current awareness), the preconscious, and the unconscious.
- Frued theorized that conflicts centering on sex and aggression are especially likely to lead to significant anxiety.
- According to frued, anxiety and other unpleasant emotions are warded off with defense mechanisms, which work through self-deception
- Frued proposed that children evolve through five stages psychosexual development: the oral, anal, phallic, latency, and genital stages.

- Certain experiences during these stages, such as handling of the **oedipal complex**, can shape subsequent adult personality.

Carol Jung

- Carl jung's **analytical psychology** emphasized unconscious determinants of personality, but he divided the unconscious into the personal and collective unconscious
- The **collective unconscious** is a storehouse of latent memory traces inherited from people's ancestral past
- These memories consist of **archetypes** which are emotionally charged thought forms that universal meaning.
- Jung was the first to describe the introverted (inner-directed) and extraverted (outer-directed)

Alfred Adler

- Alfred alder' **individual psychology** emphasized how social forces shape personality development
- Alder argued that **striving for superiority** is the foremost motivational force in people's lives.
- Alder attributed personality disturbances to excessive inferiority feelings that can prevent the normal process of striving for superiority and can result in overcompensation
- Alder stressed the social context of personality development and did pioneering work on the effects of birth order

Behavioural perspectives

Skinners theory

- BF skinner work on **operant conditioning** was not meant to be a theory of personality, but it has been applied to personality
- Skinners followers view personality as a collection of response tendencies that are tied to specific situations
- Skinnerians view personality development as a lifelong process In which response tendencies are shaped by reinforcements

Bandura's Theory

- Albert banduras **social learning theory** emphasizes how cognitive factors shape personality
- According to bandura, people's response tendencies are largely acquired by **observation learning**
- Bandura stressed the role of **Self-efficacy** one's belief about ones ability to perform behaviours that should lead to expected outcomes

- Greater self-efficacy is associated with greater success in variety of athletic, academic, health pursuits

Mischel's theory

- Walter Mischel's brand of social learning theory emphasizes how people behave differently in different situations
- His theory has sparked debate about the relative importance of the person versus the situation behaviour

Humanistic perspective

Roger's theory

- Carl Rogers **Person-centered theory** focuses on the **self-concept** (a collection of subjective beliefs about one's nature)
- **Incongruence** is the degree of disparity between one's self-concept and one's actual experiences
- According to rogers, unconditional love during childhood fosters congruence while conditional love fosters incongruence

Maslow's theory

- Abraham Maslow proposed that human motives are organized into a **hierarchy of needs,** in which basic needs must be met before less basic needs are aroused.

- At the top of Maslow's hierarchy of needs is the need of **self-actualization (**the need to fufill ones potential.
- Recently, theorists have proposed a major revision of Maslow's pyramid of needs in which the higher, growth needs are replaced by motives related to reproductive fitness
- According to Maslow, **self-actualizing persons** are people with very healthy personalities, marked by continued personal growth

Biological perspectives

Eyesnick's theory

- Hans Eysnick views personality structure as a hierarchy of traits are derived from a handful of fundamental traits
- According to Eysnick, personality is largely determined by genetic inheritance

- Eyesnick theorizes that introversion and extraversion are shaped ny inherited differences in arousability and ease of conditioning.

The evolutionary approach

- According to Buss, the ability to recognize and judge others status on the Big Five traits may have contributed to reproductive fitness.
- Nettle Argues that the Big Fives traits themselves (rather than the ability to recognize them) are products of evolution that were adaptive in ancestral times.

Behavioural genetics research

- Identical twins reared apart tend to be more similar in personality that fraternal twins reared together, which suggests that genetics shape personality
- **Heritability estimates** for personality tend to hover around 40-50%
- Behavioural genetics research has revealed that differences among families have surprisingly little impact on personality.

The Neuroscience of personality

- Neuroscientists have begun to examine relations between personality and brain structure and function
- Most current work focuses on the Big Five

Terror Management theory

- Cultural worldviews and self-esteem buffer people from the anxiety associated with their awareness of their mortality
- Increasing mortality salience leads people to work harder at defending their cultural worldview and their self-esteem
- The need to defend one's cultural worldview can fuel prejudice and can explain many aspects of behaviour, ranging from conspicuous consumption to political preferences.

Culture and personality

- The basic trait structure of personality may be much the same across culture as the Big Five usually emerge in cross-cultural studies
- However, some culture variability has been seen when researchers compare average trait scores for various cultural groups
- Markus and Kitayama assert that American culture fosters and independent view of the self, whereas Asian cultures foster an interdependent view of the self.

Narcissism

- Narcissism is a trait marked by inflated self-importance, need for attention and tendency to exploit others.
- There is evidence to suggest that narcissism has been increasing in recent generations.

Chapter 14
Mental disorders

- Not a public health issue
- Mortality rate: a disease that ends in death
- Psychiatric illnesses
- Global burden of disease (mental disorders should be treated as seriously as any other disorder)
- Mental disorders have never been on the list of the top ten things we should be concerned about
    - But many people suffer from these things
- Mortality over morbidity (illness)
    - Let us look at the DALY (disability adjusted life year)
    - One DALY is one lost year of normal life
- Suffering
- Depressing disorders are the most important when it comes to suffering ages 15-24 years of age
    - 1 out of 4 saw help for their struggles
- 6-7% anywhere in the world people are depressed (mostly women)
- predicting 10-15% increase by the year 2020
- early diagnostic is key!!
- 1/3rd of us in the world have psychiatric problems
- stigma
- Phillips: rejection of a person followed a kind of hierarchy of treatment
    - no rejection if they don't look for help
    - little rejection from Religious figures
    - very little rejection from your MD (family doctor)
    - some rejection begins when you admit to others that you are seeing a therapist/psychiatrist
    - most rejection comes when you admit to being hospitalized for your condition
- abnormal behaviors is always cut from "normal cloth"
    - not always hard to imagine what people are suffering because we have usually experienced something similar
- school refusal-
    - quality of the family that is the problem (parents will miss the child so much)
    - the child starts to wonder if the parents will be okay
- Hypomania

    - Manic-depressive disorder became a mood disorder
- Disturbed behavior are distortions, exaggerations and impoverishments (the individual is breaking some important social taboos) of normal behavior
    - Impoverishment (doing something in public that we might normally do in private)
- Diagnosis (one of the big problems facing us)
    - Example of two different views diagnosing the same patient:
    - Americans rational
    - British emotional
- Etiology (the causes for these behaviors)
- Prognosis (are they going to get better?)
- Treatment
- Medicalization of Deviance
    - Unnecessary medical use on people that don't need medicine
    - They can work through it on their own

Chapter 14-Psychiatric Disorders

Stats

- 2.7M people in Canada are in care for psychiatric problems
- If mortality is a factor in the health issue then globally we will be more concerned
- Canada has the 3rd highest suicide rate is between ages 15-24 years old
- About 7% of people in care are chronically depressed
- ¼ disturbed teens sought help
    - The problem is stigma

DALY (disability adjusted life year)

- How many days lost when people have mental illnesses due to premature death, suffering etc.
- Mental disorders are ranked almost as high as cardiac. It surpassed cancer
- 1 DALY is 1 lost year of healthy life

- Suffering caused by schizophrenia is estimated to be equal to a quadriplegic
- Suffering caused by depression is estimated to be equal to a paraplegic
- Mental health is supposed to increase by 15-20% by 2020

Phillips

- As you get closer to getting mental health the odds of getting rejected increases
- Process of rejection:
    - No help, clergy, M.D., psychiatry, hospitalized (at this point rejection is clear)

- Abnormal behaviour is always cut from normal cloth
- We are all part of a continuum of which we shift along. Meaning we are all the same- those who are clinically depressed are not “aliens”
- E.g. Timothy is a nice, shy little boy. He refuses to go to school ⚿ crystalized form of psychopathology. Parents must consider how they have contributed to Timothy’s school refusal
- Disorders to not make us different than what we used to be

Abnormal behaviour

These are normal behaviours

- Distortions
- Exaggerations
- Impoverishments e.g. things we would rarely do in public but do in private

Hypomanic

- Very popular, fun loving people
- Lead to diagnosed mania. Protect himself from own impulses by hospitalization

Understanding Mental Disorders

1. Diagnosis
    a. e.g. prescriptions for Ritalin in US vs. UK are 100% greater. This does not mean US people are worse off but that perception affects our judgment
    b. Biopsychosocial, body, mind, environment
2. Causes aka etiology
3. Prognosis: will a person get better or not?
4. Treatment

Schizophrenia

5 types. These disorders are very different from each other yet grouped under the same name

We have **medicalized deviance** e.g. lady who road a horse down the road naked claiming she was Lady Gadiva, was admitted and was diagnosed with a mental disorder

e.g. is alcoholism a mental disorder?

e.g. Man gets bypass performed for his obesity

Medical Deviance

Thomas Stotts

Social non-conformity

Medical Model

Assumptions

1. Dualism
   - Mind-body dualism. We separate the individual from the illness
2. Reductionism
   - Reduces complex disorders into fundamental substrata i.e. chemistry, physics, neurology
   - E.g. you cannot look at a cardiovascular problem as a whole but must break it down into components
3. Single Factor Approach
   - Some define schizophrenia as high levels of dopamine. Depression is defined as low levels of serotonin
   - Some physicians have this view however not many use this
4. Illness vs. Health

How do we define abnormality?

Approaches:

1. Statiscial: those with middle scores are normal; those with extreme scores are abnormal
   Issues:
   - Inequality of extremes
   - Studying one factor vs. many
   - Dichotomous approach: sane and insane people meaning we can identify the sane and insane
2. Subjective discomfort
   Issues:
   - Person's reaction to the illness
   - Ignores social consequences of behaviour
   - E.g. saying "I don't feel well"
   - How accurate can someone assess their own mood?
3. Social Nonconformity
   - If you do not conform with main aspects of society you are mentally ill
   - Conformant neurotic
   - Someone who conforms to everything (are they mentally ill?)
   - E.g. all prisoners who are non-conformant are mentally ill
   Issues:
   - Cultural relativity
4. Legal Criteria
   - Legal incompetency
   - Legal commitment: if you are destructive to yourself you will be committed to a psychiatric wing
   - Criminal responsibility
5. Professional definition
   - Exposure to treatment for mental illness
   - In terms of stigma, this is the only information they would need to know to stigmatize a population

1. Intelligibility
   - Ability to understand your behaviour
2. Consistency
   - Judging by what you know of yourself can you predict your behaviour (in a general way)
3. Control
   - When you need to control thoughts, behaviour can you?

Thomas Stotts

- Psychiatrist

Tissues

1. Hypoglycemia
   - Low levels of blood sugar provide evidence of aggressive behaviour
2. Vitamin B-Complex Deficiency
   - Dietary changes can affect personality
   - E.g. group of women went on a strict diet of vitamin B¥ these women became aggressive
3. Calcium
4. Anoxia
   - Oxygen deficiency
5. Brain Damage
   1. Diffused: typically deteriorates in a general way (e.g. aging, poisoning, intoxication, alcohol, syphilis)
   2. Specific: certain part
   - Infection in the brain, tumors, trauma
6. Neurotransmitter Problems
   - Too much or too little (dopamine- schizo, serotonin- depression)

Social Contest

- Social class dictates diagnosis and treatment you get regardless of symptoms
- E.g. Titanic ¥ poor died, rich survived (social-economic class determines)
- Upper class- anxiety neurotic- the talk cure
- Lower class- psychotic ¥ antipsychotic medicine or custodial care
- E.g. Pierre Jenné

- Age is not a physiological problem
- Female is a social construct (over diagnosis of female disorders) ¥ men are not necessarily stronger than women. Men are weak in bed
-
  1. Poverty [financial]: can destroy the integrity of person's mind. Can either
     - Evoke mental illness
     - Cause mental illness
  2. Drift hypothesis
     - Ferris and Dunn did a study: found that some schizo patients who lived in good quality homes drifted to cold, dank homes

3. Diathesis Stress Hypothesis
   - Might be genetically exposed to become disturbed
   - Manifest when combined with stress
4. Prenatal Care
   - If you grow up with good prenatal care you will be better off than those without

Psychological Issues

Anxiety

- there is a normal anxiety to an extent; can't avoid it, we stress about being separate human beings, worry about our meaning in life

Three things we do to avoid anxiety

1. Absolute fear of death and physical harm
2. Alliances- security of our relationships, we are not convinced by these, can we trust our alliances?
3. Cosmic triviologies- complexity of our theologies,

Symptoms

1. Intense negative emotions
2. Uncontrollable feelings
3. Self-focus – very intense

Drapetomania
Psychopathological condition of slaves in the deep south during cival war
Desperate need for freedom

Panic Attacks
Comes unexpectedly, suddenly, unbearable people think they are going to die
Panic attack disorder: 4 panic attacks in 4 weeks according to DSM
Attacks can last for minutes or hours
Big question: are the attacks cued or spontaneous?
Sympathetic system turns on, symptoms become exaggerated and people feel they are going to die
Need a feeling of safety (someone to talk to) to calm a person down
Cognitive therapy is effective in calming down a person
Only 9% of panic attacks happen at home
People low on self-efficacy can be more prone to attacks oversensitive

Aspects
Depersonalization person is completely altered
Derealization individual and world looks altered

General Anxiety Disorder
Anxiety is generalized, very difficult to deal with
Chronic worriers, low level of anxiety
DSM definition: unrealistic or excessive worry of 2 or more of life circumstances (i.e. money, health, work, family)
Convinced something dreadful is going to happen to themselves or people they care about
This disorder can lead to secondary disorder: anxiety about anxiety will my anxiety affect my job?
About 6% of Canadians suffer, often undiagnosed
Resting phase of panic attacks
Highly sensitive to threats, especially if it has some personal relevance

Post Traumatic Stress Disorder (PTSD)
About 8% for females, 5% for males have this
Women are often predisposed to develop this disorder because they have encountered domestic abuse or have been abused as a child
“This is a response to an event that is outside the range of human experience and distressing to anyone”
Psychic numbing: dissociative disorder
Human actions are much more traumatic than natural disasters
Soldiers often experience this- they find it hard to talk about how many people they have killed

Stages
Shock
Suggestive
Recovery- can last decades. Some argue reliving it perpetuates trauma, some say suppressing it means it will always be there

Phobias
“phobos”=dread
Simple phobias – e.g. phobia of spiders

Social phobias – fear they may commit a faux paw. As anxiety increases the likelihood of the phobic to mess up creates a cycle
Biggest fear is disapproval of others
92% claim their social phobia interferes with their career
Claustrophobia- very common, closed places
Acrophobia- morbid fear of high places
Zoophobia- insects
Phobias are nonrandom
Preparedness: we have come to the world predisposed to condition quickly to these kinds of situations (our phobias).

Diagnosis
Irrational – makes no sense but can't help thinking about it, disproportionate
Escape – want to avoid your phobia which makes it difficult to treat
Excessive –
Phobic functions normally and well in all other aspects of their lives

Obsessive Compulsive Disorder (OCD)
You can be obsessed and not compulsive but not vice versa
Checking and cleansing rituals are most common
E.g. check if the door is locked, stove is off
Cleansing: house is never clean
Means to ends: want to reduce anxiety by performing these rituals they are rewarding
Affects men and women equally
Could follow trauma
Age of onset is about 23 years old
1896 Freud discovered a case of a little 11-year-old boy with OCD. He needed to tell his mother everything that happened during his day, his room had to be extremely clean, 3 chairs lined up on the wall
Hockey players have rituals – superstitious

Somatoform Disorders
Body dismorphic disorder- unhappy with an imagined or real defect of their bodies
So stressed that these people can no longer function normally (some people become house bound, cannot work, drop out of school)
Some resort to plastic surgery or suicide
Comorbidity- anxious and depressed simultaneously
On avg about 19yrs for onset
E.g. a woman who is stressed about her "thunder thighs"

Munchausen syndrome
Fake symptoms and subject themselves to painful medical procedures
Why?
These people have been rewarded for playing the sick role- we are taken care of when we are sick, absolved of responsibility
Munchausen biproxy- inflict on others painful routines. Father squeezes his 6 month old daughter so hard that she couldn't breath, then he heroically resuscitates her

Conversion Disorders
Anxiety is converted into dramatic physical symptom
E.g. conversion blindness (cannot see a particular colour)
Conversion paralysis: most dramatic

Labelle indifference – paralyzed from the waist down. Fundamentally know at some level their symptoms are not organic
How can it happen? Problem lies in the processing part of cerebral processing- it is blocked

Dissociative Disorders in Anxiety

- Gets so deep it fractures the personality
- Schizophrenia literally means a split personality
- A dissociation or the splitting of a stream of consciousness
    - The drive is at a much deeper level
- Amnesia: lost any idea of who the individual is
    - Who they are, what their name is…etc
    - Commit a kind of homicide
- Fugue: someone who completely forgets who they are (amnesic) and then travels far distances and becomes someone completely different (in music means flight)
    - Anxiety became so great they refused to acknowledge one identity or the other
    - Psychic numbing is a dissociative state
- Dissociative states have been used by many artists
- Dissociative identity disorder = multiple personality disorder
    - Capable of great good and great evil as well
    - Conflicting selves become stabilized
    - Generally these people have has great sexual or physical abuse
    - They repress their experiences
    - The multiple personalities do not know each other but some can be conscious of each of them
    - There are dominate personalities but there is more than one and they are usually polar opposites
    - Ex: Eve White vs. Eve Black
    - A North American thing , highly controversial topic
- If the majority has dealt with physical or sexual abuse why aren't there more people with split personalities?
- The Ohio state rapist Billy Mylligin
    - He was tried and convicted and sent to jail
    - Discovered he needed psychiatric help and found 10 different personalities
        - One was an escape artist
    - Was eventually found not guilty because of reason of insanity because of an extreme anxiety disorder
    - Iatrogenic: relating to illness caused by medical examination or treatment.

Mood Disorders

- Disturbance of mood
- Affective disorders
- Common cold of psychiatry (the most frequent complaint) depression
- Hypocrites called it melancholia of depression
- Plato: the illness itself should be our focus
- Disease is the pathological state
- Illness is the persons response to the disease (what should world psychology students) what the illness means to the individual
- Stress:
    - Going up

    - Going down
    - Mood disorders are episodic
    - People tend to fluctuate
- Many argue ours is an age of depression
    - Age of onset is falling quickly
    - Environmental factor
- The me generation: put ourselves first and estrange ourselves from other people; end up alone
    - We need a social network
    - When resources are limited we become depressed
- Family
    - Blame society that does not support the family
    - Becomes diminished in its importance
    - Unrealistic expectations of spouses
- Increased urbanization
    - Will be destructive of communities
- Religion
    - People don't depend on the Church
    - Under constant attack
    - Go to church for the social rather than the expression of faith
- Government
    - Lost faith in them to solve our social problems
- Choices
    - Create depression
    - No fixed future
    - We have decisions and preferences and over whelming choices
    - Paralysis of so many choices
- Over express ourselves and intern people diagnosis the individual as depressed
- Broad circulating neurotoxin
    - Live around many toxic chemicals in the air and water
    - Could be responsible for increased depression
- Major Depression
    - Any given month 1.6% for males 3% for women for depression
    - Depression-normalicy-mania; need to intervene during an episode of normalcy
- Childhood depression does exist
    - Walk into traffic, hit their heads on concrete and is seen as a tragic accident but often times be dur to depression
    - Failure to eat is a sign of child depression
- Not age related symptoms
    - Depressed mood
    - Poor concentration
    - Insomnia
    - Suicidal ideation
        - Ideas of self destruction
- Females are more commonly depressed
    - Are there ways of looking at a women's life to understand why she might be depressed?
    - Women tend to seek help earlier
    - Use health care facilities greater than males
    - Males seek help later

    - Women are more willing to say they need help and get it
- Alcoholism occurs more often in males
    - Women get help where as males turn to self-medication of alcohol
    - Women are more often found more in health institutes
    - Males are found more often in the penal system
- Many people argue it may be x-linked
    - Is the glandular system involved? more complicated in women
    - Menstrual cycle?
    - Contraceptive drug?
    - Are any of these the cause of female depression??
    - Not understood very well
- Social status theory
    - Argues women may find their general situation depression because of their many discriminations they are facing
    - Inequality for women
    - Suffer extreme dependence
    - Low self-esteem
    - Matrilineal societies have higher depression of men
- Marriage therapeutic for women?
    - Single men and women, depression rates are comparable
    - When depression rates are elevated you can usually account for that elevation for the inclusion of married women
    - Intimacy
        - Psychological intimacy in spousal relationships
        - Three things used to study women in marriage:
            - Two or three youngsters under 5
            - Doesn't work outside the home
            - Lacked intimacy in relationships (preferably with the husband)

Bipolar Mood Disorder

- Different from chronic depression
- Has periods of normalcy in-between
- Bipolar is much less common
- Affect 0.4-0.8% in a society
- Very different demographic areas
- Equal between men and women
- More prominent in more upper jobs
- People who are married with an intimate relationship have no advantage of resisting bipolar
- Primordial personality is better than bipolar
    - More normal and better functioning
- Bipolar episodes are briefer and more fewer than with major depression
- Strong genetic component
    - Environment not important

Bipolar

- Cyclothymia
    - Not a disorder; very average mood swings; something we live with, but it can crystallize into a bipolar disorder
- Dysthymia
    - A more moderate form of depression
    - introverted, incapable of fun, but the symptoms are not as sever as depression
- When treating depression:
    - Serotonin helps with depression levels
    - Internal, Global and Permanent instead of External, Specific and Temporary
        - Negative attitude towards self, world and future
- Depression genetic? The earlier the onset of the disorder the more likely that relatives suffer or will suffer from this disorder

Suicide

- Rational suicide
    - Use pros and cons about your life to determine whether or not it's worth it to keep living
    - Society makes it easy to give examples to do an easy suicide (sending you instructions)
- Living can be a supreme act of courage
- Hemlock society (the right to die)
- Highest number of suicides occur in the spring
- Young men's suicide rate goes up steadily every year
- 4 times as many females attempt suicide than males but females use less lethal methods (shot gun vs. overdose)
- Freud argues that a person who commits suicide has:
    - A wish to kill
    - A wish to be killed
    - A wish to die (Thenatos)
- 1/5th leave notes
- 8/10 have given definite warnings but we were unable to decode them before it was too late
- when homicide rates go up, suicide rates go down
- hostility increases suicide rates decrease
- cause of death is difficult (NASH- NATURAL, ACCIDENT, SUICIDE AND HOMICIDE) are suicides accidents or are accidents suicide
    - do a psychological autopsy (interview friends and family to try and figure out the mind set of that person to figure out if it is accident or suicide)
    - reconstruct events prior to the fatal event
- When suicides occur:
    - peacetime
    - aged + illness + living alone
    - Caucasian puts you at a greater risk for attempting suicide
    - Protestant a greater risk than Catholic
    - People living in urban centers have a higher rate than people living in city centers
    - Professionals have a higher rate than the working class people

    - Dentist suicide rates are going down because they don't use mercury in the work place anymore
    - Officers greater than enlisted men
    - Separated, divorce and widowed higher suicide rate
- Student suicide 3 contributing factors
    - Concern over academic success
    - Unusual complaints (ex: eye site, stomach problems)
    - Difficulties in interpersonal relationships
        - Troubled by broken romantic relationships
        - Remains isolated and alone

Psychopaths

- Charming and highly verbal
- Unsocial or a social; socialized completely
- Little conscious of super ego
- 3-4% of men would meet the criteria for psychopaths
- 1% of women would meet the criteria for psychopaths
- bright and charming but also sly and manipulative
- violent
    - feels no remorse
- some types
    - aggressive predator psychopath
    - passive parasitic psychopath (quiet, and not aggressive)
- psychopath is not psychotic; there is no anxiety, it is not a mental disorder, these people show no recognition defect
- dangerously disruptive
- the world gets in the way of his doing
- description
    - Asocial (unsocial)
    - Unconscious desires and not aware of his impulses (doesn't understand himself)
    - Impulsivity (have not learned to control their impulses; life is created of unrelated acts)
    - Aggressive
    - Guiltlessness (used to be a guilt society but now we are a shame society)
    - Warped capacity for love (they can come and accept love but they definitely have a cold act towards people and treats people like objects)
- Charm = image
- 40-50% would be the criteria of psychopathy
- the psychopath can not experience the emotion of interpersonal behavior
    - they cannot empathies
    - he mimics the human personality but is unable to deeply feel what its like to be emotionally human
    - semantic dementia (psychopaths suffer from this- behaviors seem normal but have no emotional meaning)
- Genetic
    - Genetic component in psychopathy?
    - Can't be simply nature or genetics on their own
    - Diathesis stress
    - Adverse family condition plus the diathesis stress together could help contribute
    - Nerotransmitters (lower serotonin levels in more violent people)
    - Stereotypes: Sexual psychopaths might suffer from higher testosterone levels
- Neurological approach
    - Lobotomies change people into feeling psychopathic
        - Turn out to care much less about their affect on others
    - Slow wave activity in the temporal lobes
- Perhaps there is a defect in arousal (cortical immaturity); possibly a sensation seeker

    - Limbic system of the brain (where we learn to control impulses) psychopaths show a sense of fearlessness (they can't learn that once they respond and are punished for their response they will continue with the same response and keep getting punished)
- Psychopaths have a low threshold for anxiety
- Why psychopaths?
    - Parental loss early in life
    - Emotional deprivation
    - Parental rejection
    - Inconsistent discipline
- Criminal responsibility
    - Knows the difference between right and wrong but can't internalize it (can we appreciate the wrongfulness of the act?)
- Normal people's conscious includes:
    - Resistance to temptation
    - Guilt
- Psychopathy
    - Point A: high temptation, no guilt
    - Point B: low resistance and low guilt

Schizophrenia

- A split in the dissociative functions of the mind
- A very debilitating problem
- Typically when you meet someone you create a harmony where the actions and emotions and thoughts have a dynamic harmony, but with schizo the thoughts are disorderly and full of dylusional thinking.
- Schizo's make up words and it becomes gibberish to other people
- Emotions are also very inappropriate; they laugh at inappropriate times
- Formal thought disorder; thoughts are disorderly
- The harmony is absent and it is disturbing for others
- Loses the dynamic harmony that is "normal"
- The hallucinations (hearing voices in your head in the absent of others) and delusions (fixed thoughts about the world)
    - Persegatory hallucinations
- Dopamine hypothesis will help type 1 schizophrenia but not type 2
- Catatonic vs. paranoia
- Schizophrenia is argued to be genetic, viral or the label
- 25-44 the most likely time to be diagnosed with schizophrenia
    - appears more frequently in women
- Types of Schizo
    - disorganized schizophrenia 5% of the total population of schizophrenic people
    - catatonic schizophrenia assume postures for long periods of time 10% of the total population of schizophrenic people
    - paranoid schizophrenia 40%
    - residual type schizophrenia 5% (in remission)
    - undifferentiated schizophrenia 40% (the patient doesn't fit any of the other categories
- symptoms
    - positive (something is there but not there for normal individuals; hallucinations and illusions) active and present when they should not be (type 1 schizophrenia- high level of dopamine help with these problems)
    - negative (something that is not there that should be there) show little variety in emotion (type 2 schizophrenia- multiple approaches in treating the patient)
- disorders of thought:
    - thought [illegible] delusions
    - perception [illegible] hallucinations
    - emotions [illegible] apathy
    - behavior [illegible] regressive
- 1% might face developing schizophrenia
    - 1 parent with schizo it jumps to 17%
    - identical twins it jumps to 48%
    - children with two schizo parents is 46%
- Spectrum concept- means if you or parents have a family relative with schizo other family members might start acting strange but they don't necessarily have schizo
    - Many of these disorders are genetically similar; there's a disorder that falls along a spectrum
- Schizophrenia have the inability to focus, can't pay attention
- Diathesis (genetic component) stress hypothesis (vulnerability hypothesis)

    - Environmental and genetic components that contribute to the schizophrenia
    - Birth problems: under weight, disorders at birth that could attack the central nervous system
    - Poor bonding with the birth parents: lack of close relationship with parents in the first 3 years
    - Poor motor coordination
    - Intellectual deficits: don't do well on standardized IQ tests, poor verbal ability
    - Cognitive effects: attention deficits, distractions
    - Social deficits: rather abrasive and aggressive, there social skills are not well developed
    - Communication problems: between parent and child (saying they love you but then act in a different way child becomes confused)
- Schizo patients have larger cerebral ventricles
    - The ventricular differences between normal people and schizo people are that its larger
    - 1/3 of schizo people don't have enlarged ventricles
    - cause and effect
    - differences in temporal lobes?
    - Differences in where our thinking is
    - Not positive on the above facts…
- Biochemical approach
    - Protein abnormalities
    - Schizophrenic serum
    - Naturally occurring hallucinogenic compounds
    - Dopamine hypothesis (high levels of dopamine)
    - Reoccurring endorphins
    - All hypothesis
- Attention defect
    - Cannot focus
    - They are over-inclusion: they can't focus
    - Suffer from irrelevant stimuli
- Socio-cultural variables
    - Every culture has some kind of malady that looks like schizophrenia (the similarities are quite remarkable) every society has something like schizophrenia
    - Culture or society can evoke pathology, suppress pathology and can be caused by pathology
    - The environmental part of schizo can be evoked, suppressed or caused
- Behaviorist approach to schizo
    - Those attention needs are not being rewarded otherwise they are just being punished
    - Some symptoms are being learned and reinforced with a reward
    - Many schizos know what they are doing
    - Impression management
    - Can unlearn some of their maladaptive behavior
    - Even some of the most disturbed can understand their pathological schedule
- Humanistic approach
    - 2 central arguments

        - madness is a perspective
        - a strategy that a person invents to live in an unlivable set of situations
- once you are labeled disturbed, you seem to have all of the symptoms
- Double bind- you can't win in a double bind, I tell you that I love you but I act in another way that shows I don't love you
    - Over involvement (ex. Mom) over interested in the child's life
- Multi-modal therapy: multiple treatments for the individual and for the family; variety of approaches and schizos can indeed recover