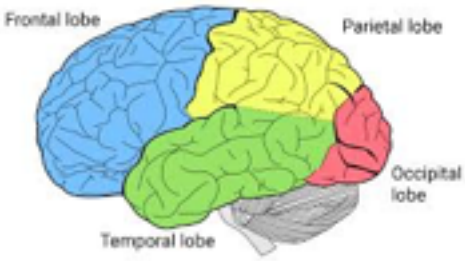


Biological influences

Roles of the four lobes of the cerebral cortex

Three Regions of the brain

- Hindbrain: Base of the brain near the back of the skull
- Brainstem: which controls vital activities of which we have no conscious control (heart rate, breathing)
- Cerebellum: Coordinating voluntary movement

- Midbrain: top of the brainstem under the cerebral hemispheres, receives messages from senses except smell and sends them to higher brain regions and receives replies that directs to places such as the cerebellum

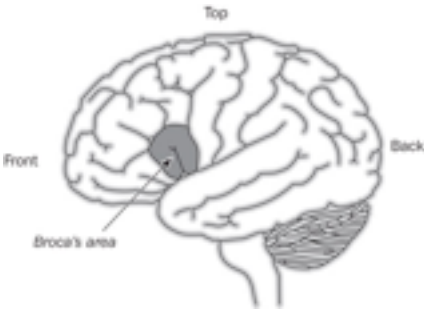
- Forebrain: largest part of the brain, major role in how we think, feel and behave,
- consists of limbic system, thalamus and hypothalamus and outer layer is the cortex (2 hemispheres joined together by a thick band of fibres called the corpus callosum which lets messages be sent from one hemisphere to the other)
- Thalamus: sensory relay station, controls autonomic functions
- Hypothalamus: regulates autonomic functions via hormones, include eating, sleeping, sexual activity

Hemispheres

- Left hemisphere: gets sensory information from the right side, controls movement on the right side of the body (verbal functions,speaking, reading, writing, maths)
- Right hemisphere: receives sensory information from the left side of the body and controls the left side of the body (non verbal functions, puzzles, maps, creativity, spatial tasks)
- Cerebral cortex: the wrinkling of the cortex rather than size defines humans and determines intelligence

Four Lobes

- hemispheres of the cortex can be further divided into lobes, which are defined by cracks (or fissures) in the cortex and has different functions
- Frontal lobe
- Parietal lobe
- Occipital lobe
- Temporal lobe



Frontal Lobe

- Characterised by the primary motor cortex and Broca's area
- It is the largest lobe behind your forehead
- Associated with thinking, decision making, feeling, higher mental ability, attention, personality, the control of emotions, expression of emotional behaviour and the control of movement
- Performs a coordinating role as it is the final place for a lot of sensory information that is received and processed elsewhere in the brain

- Primary motor cortex (rear of each frontal lobe) controls voluntary bodily movements through skeletal muscles attached directly to the bones e.g hand, arm, leg back and facial muscle (left controls right and right controls left)

- Broca's area: left frontal lobe has a crucial role in the production of speech, coordinating muscles required for speech and supply this to the motor cortex areas, involved with the meaning of words and structure of sentences, parts of speech such as adjectives and conjunctions and grammatical structure of a sentence (a person with damage to Broca's area has difficulty producing speech but they can understand language)
- Case study: Phineas Gage, damage to Frontal lobes: personality may change and capacity for reasoning and problem solving is reduced

- Paul Broca described two patients who had lost their speech and whose brains he examined after their deaths, he found both patients has a common area of damage to the third frontal convolution of the left hemisphere, he concluded that this brain controlled speech
- The deficit in language production is known as Broca's aphasia, the reasons for the language loss are not completely clear and may be different in different patients

Parietal Lobe
- Sits behind frontal lobe on top of cortex
- Is responsible for bodily sensations mainly touch and other skin sensations such as temperature and pain
- Is involved in spatial awareness and some aspects of speech

- The "parietal association cortex"
- enables individuals to read, write and solve mathematical problems
- The association areas: all the areas of the cerebral cortex that do not have a specialised sensory or motor function, they integrate information received from difference brain areas and structures to enable complex behaviours
- Damage to the parietal lobe in the right hemisphere is loss of imagery and visualisation of spatial relationships and the neglect of left-side space and left side of body
- Damage to this lobe in the left hemisphere results in problems in maths, reading and writing (association cortex)
- The sensory inputs from the right side of the body go to the left side of the brain and vice versa as with other neural and sensory systems

- The "primary somatosensory cortex"
- Parallel to the primary motor cortex separated by a fissure
- It receives and processes sensory information from the skin and body
- It allows us to perceive bodily sensations, touch, pressure, temperature, muscle movement

Occipital Lobe
- Sits directly behind and below the parietal lobe and is primarily responsible for vital functions of the eyes
- It has to provide very quick responses to the visual environment

- The "primary visual cortex" is located in the occipital lobe and this region of the brain receives visual input from the retina, here visual signals are interpreted in the occipital lobe, involved in both visual perception and colour recognition y
- Damage to this lobe can lead to different types of visual problems, for example full or partial blindness, or words blindness (experienced in conditions known as alexia and agraphia)
- Because of its location, this lobe is not prone to accidental damage

Temporal Lobe
- Located at the base of the cortex and is important in auditory perception such as hearing, as well as language and speech production and memory
- It receives information from the ears and interprets different sounds the ears hear

- "Primary auditory cortex" deals with the first step in hearing when sounds first reach the brain
- Structures like the limbic system, the amygdala and the hippocampus are located inside the temporal lobes
- The limbic system: emotions, long term memory and sense of smell
- The amygdala: process emotions
- The hippocampus: memory and spatial navigation

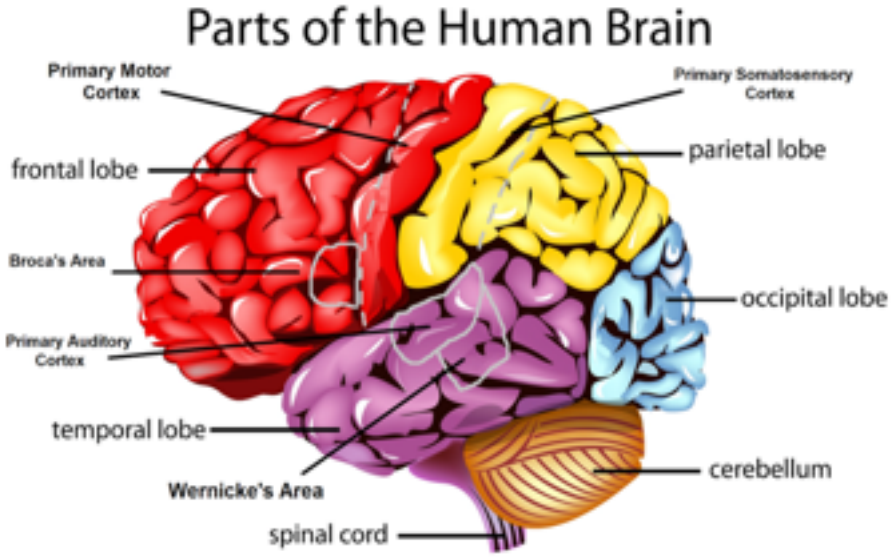
Wernicke's Area

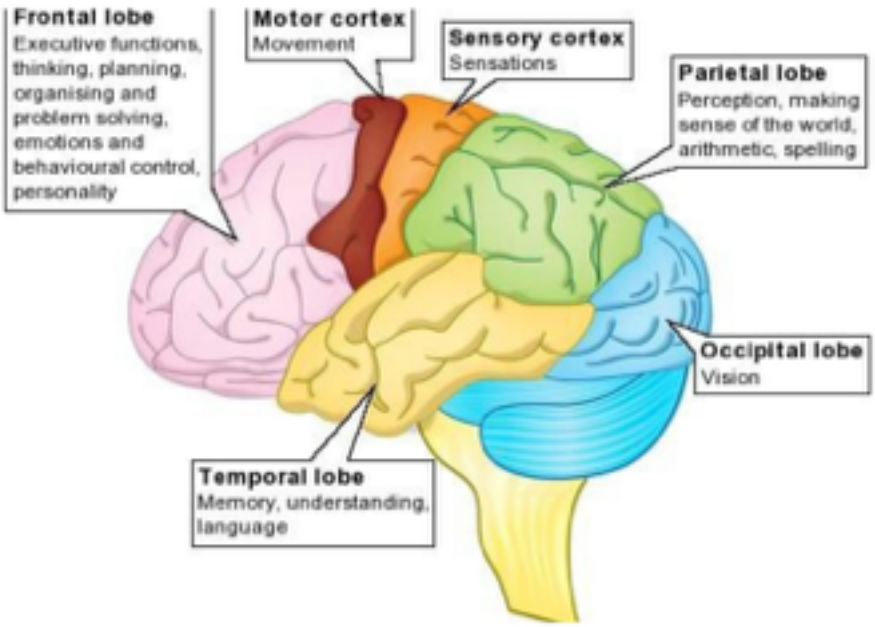
- This area is inside the temporal lobe and is linked to the Broca's area as both are involved in speech production, it is named after Carl Wernicke, who proposed a link between he left upper temporal lobe and mimicking of words and syllables associated with the images of spoken words

• Wernicke's aphasia: Describes a condition in which language comprehension is impaired while speech production remains relatively normal, in other words, receptive language is impaired

- The Wernicke's area: is involved in speech production, but comprehends speech, interpreting sounds of human speech, understands words and locates appropriate words from memory to express intended meanings when we speak or write

• damage to Wernicke's area can produce sounds/ phrases/ word sentences (but without meaning but has difficulty in understanding language (semantic processing/ language recognition/ language interpretation)





Structure and function of the nervous system

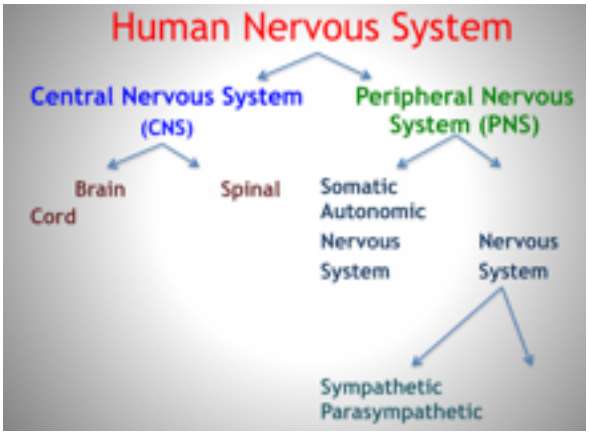
- Much work of Psychologists who are interested in the functions of the brain is conducted on animals rather then humans (Ethics)
- Monkeys, cats, rats and mice are common experimental animals
- Knowledge about our visual system, sensory receptors, sleep, attention, temperature regulation, reproductive behaviour, avoidance behaviour and stress comes from animals

- Human brain has advanced corticalisation (Enlargement of the cerebral cortex) compared to animals
- Humans have cortical localisation which means there are specific behavioural functions that are located in specific areas of the human brain
- Researchers use various scanning techniques to gain an understanding of how the brain works
- Researchers have also studied people who have sustained damage to their brain either by accident or disease

- Neuropsychological tests study complex cognitive functioning to see what behaviours have been affected (i.e stoke) also brain activity while people are engaged in normal living activities such as read, speaking, eating etc
- Scans that show brain damage can lead to hypotheses about behavioural effects

- Case studies are used to study brain function but can not be generalised to others
- The brain is plastic and sometimes a nearby brain area can take over the functions of a damaged area and may have the effect of masking the behavioural consequences of an injury

- Cognitive neuroscience uses behavioural, psychophysical, electrophysiological and brain imaging techniques to investigate the links between the brain, cognition and behaviour



Central nervous system

<u>Central nervous system- brain</u>

- The nervous system is divided into 2 parts: CNS and the PNS
- CNS is the brain and spinal column and the PNS is everything else
- The brain is divided into the forebrain, cerebellum and the brainstem
- Forebrain is the uppermost part of the brain and consists of the cerebrum and limbic system, thalamus and hypothalamus

- In general the outer brain areas are involved in perception, learning motor and conceptual activities, areas near the centre of the brain are involved internal and automatic bodily functions such as body temperature, reproductive functions, eating, sleeping and emotions
- Cerebrum is associated mainly with the cerebral cortex which controls motor and mental activity

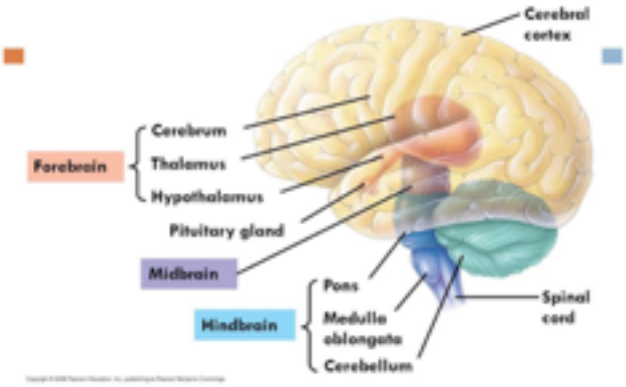
- Cerebrum is divided into right and left hemispheres which control different processes

• Right hemisphere: Visual imagery, emotions
• Left hemisphere: language processes

- Each hemisphere controls movements on the opposite side of the body e.g damage to the left brain may lead to difficulties with movement in the right arm and leg

- These effects on the opposite side of the body are termed "contralateral" which is contrasted to ipsilateral referring to being situated in or affecting the same side of the body
- Cerebellum: is responsible for motor control and body balance therefore damage to this can result to ataxia, which is unsteady walking and shaking

- Brainstem: the lowest part of the brain and connects the brain with he spinal chord, has 4 parts (midbrain, the pons, reticular system and medulla oblongata)
- Midbrain: top of brainstem and relays messages via the thalamus to the rest of the forebrain, important in vision, hearing, muscular movement (parkinson's disease part of the midbrain has degenerated resulting in tremors)
- Pons: at the front of brainstem and is responsible for eye movements, chewing and facial expressions
- Reticular system: neurons that extend from the top to the bottom of the brainstem and lead into the thalamus important in sleep and arousal (epilepsy may involve an abnormality of the reticular system)
- Medulla oblongata: Is the lower half of the brainstem continuous with spinal cord, links with the pons and deals with heart rate, breathing and blood pressure
- Brainstem includes: breathing, sleeping patterns, hunger and thirst, blood pressure, heart rhythms and body temp, helps regulate the CNS



Central nervous system- Spinal cord

- Spinal cord runs down from the brainstem and is a thoroughfare for messages between the brain and the rest of the body
- There are both neurons that transmit information via impulses away from the brain (efferent or motor neurons) and those that transmit towards the brain (afferent of sensory neurons)

- The spinal cord is organised into 31 segments, with sensory nerves leading in that the dorsal (back) side of each segment and motor nerves exciting from the ventral (abdominal) sides
- Between the 2 sides is grey matter and surrounding this matter are the neural pathways that characterise humans

- The PNS originates in the 31 pairs of spinal nerves and the 12 pairs of cranial nerves that leave the brainstem at the top of the spinal chord
- Most of these nerves combine both sensory and motor functions, leading both to and from the brain, although there are functional differences in spinal nerves when they meet the cord, at this point they split into a dorsal root that has sensory functions and a ventral root that has only motor functions. The discovery of this split, nearly 200 years ago, prompted much work into spinal reflexes

- Cranial nerves carry sensory input from the skin or motor output to the muscles of the head and face. They also carry sensory information for vision, hearing, smell and balance
- The effect of injury to the spinal cord depends on where the damage is done
• In paraplegia, the lower part of the cord is damage resulting in the lower parts of the body being paralysed
• In quadriplegia, the upper part of the spinal cord is damaged, resulting in the arms and legs being paralysed

Peripheral nervous system
- PNS is further subdivided into the somatic and autonomic parts
• somatic: Nervous system is the system of nerves communicating information from the sense organs to the CNS and motor messages from the CNS to the muscles
• Autonomic: refers to the nerves connected to the heart, glands and smooth muscles such as the digestive system and reproductive organs and tells the brain what is going on in these largely involuntary systems

<u>PNS- Somatic Nervous system</u>
- Somatic nervous system is important for monitoring bodily functions
- It receives sensory information from organs such as skin, ears and eyes and communicates information via the sensory nerves to the CNS
- It also carries messages from the CNS along nerves to enable the muscles to move voluntarily

- Different sensations that you experience involuntarily such as birds singing, light going on etc are communicated by your somatic nervous system through your spinal cord to your brain
- Typing, sending a text message, taking a selfie e.g perforating a task involuntarily, are sent from your brain down your spinal cord to you muscles that performs these tasks such as muscles in your arms, fingers and face

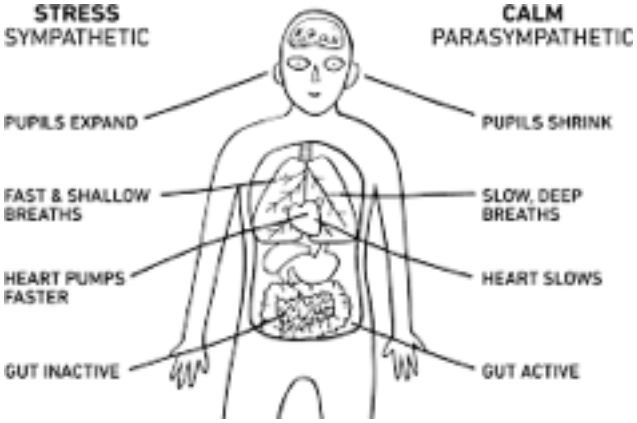
<u>PNS- Autonomic nervous system</u>
- Refers to neurons that transmit messages between the brain, via the spinal cord, and he smooth muscles found in the heart, lungs, blood vessels and glands
- It regulates involuntary body organs
- Autonomic nervous system is further subdivided into the sympathetic an parasympathetic systems
• Sympathetic: manages the body in times of stress (fight-flight response)
• Parasympathetic: Takes over for the normal day to day living and maintains normal bodily functions

- These two systems sometimes seems to work in opposite directions in relation to the same body organs
• Sympathetic: arouses the body to perform, act and react while the parasympathetic system works to maintain and conserve energy

- Sympathetic:
• In an emergency the sympathetic nervous system activates bodily systems to react to a threat, crisis or disaster e.g rapid heart beats, faster breathing, expanded lung capacity which allows you to increase the oxygen to the brain and muscles, your mouth will go dry and pupils dilate to increase field vision
• They are your flight-fight responses
• Anxiety for doing a class presentation is a type of arousal that involves the sympathetic nervous system
• Extreme heightened arousal can lead to impaired performance
• Long-term arousal can lead to mental problems and exhaustion

- Parasympathetic:
• Parasympathetic calms the body down to maintain and conserve energy, it slowly returns your body to normal functioning, heart rate goes down, breath normally and start to salivate again
• It also assists when eating such as salivation and stomach contractions

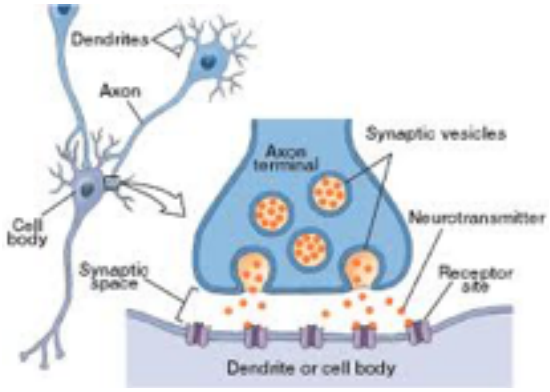
- These 2 systems work together to make sure that the automatic and voluntary behaviours are carried out

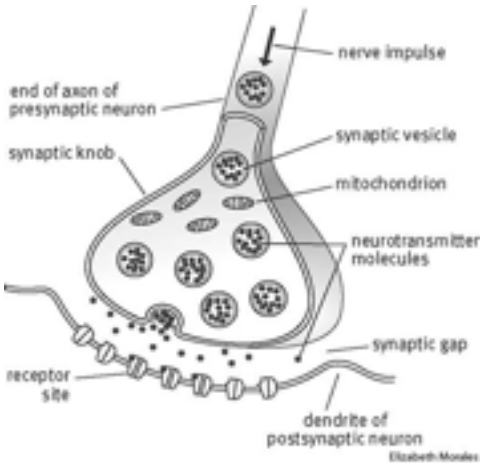


- The nervous system compromises of neurons which are the building blocks of physiological psychology which tries to explain how neurons working with one another bring about behaviour in humans (and animals)

Neural Transmission

- Neurons: Nerve cells of the brain transmit information to each other
- Models of synaptic transmission rely on chemical balances in the cell and electrical transmission of impulses through the neuron





Structure of the Neuron

- Cell body (soma): Determines if neuron will be activated and will transmit messages to other neurons, contains nucleus, has extensions (2 types are dendrites and axons)
- Dendrites: Detects and receives neural information
- Axons: transmits messages from the soma to other neurons or to cells in the body including muscles, organs and glands
- Myelin Sheath: Is a fatty covering that helps to insulate the axon form other axons or neurons, assists with speedy transmission of nerve impulses

Role of the synapses

- Cell body- protrudes dendrites and an axon
- Are tiny (measured in microns) 1/1000 mm up to several millimetres
- Cell bodies and dendrites are similar as they are both covered in synaptic knobs that receive information as electrical impulses
- Axons work to conduct impulses away from the dendrites and towards the synaptic knobs that form the next junction in the neural circuit

- Neurons are filled with a fluid known as cytoplasm in which are suspended the nucleus and different basic cell structures composed of folded membranes full of ribonucleic acid (RNA)

- RNA regulates the synthesis of proteins and other substances that maintain cell and transmit substances that are released to other cells to excite of inhibit them
- Cells work by firing under chemical and electrical triggers (spontaneous action is possible)

- Neurons will fire repeatedly if input is maintained
- Synapses: excited by activity can also be inhibited through activity that decreases cells firing- if not we would be in constant state of neural activity
- Electrically charged molecules, ions, are found in and around nerve cells
- Some have positive charge and some have a negative
- The resting potential of a nerve cell is its electrical change when doing nothing

- Impulses from other neurons alter the resting potential and if the message is strong then the cell will trigger or fire
- Humans- trigger point is 50 millivolts (millivolt is about one thousandth of a volt) this is where a nerve impulse or action potential moves down the axon and sodium ions enable the channels of the axon membrane to open- this happens all the way down the axon
- Action potential is an all-or-nothing event impulse happens completely or not)
- So while the nerve impulse is mainly electrical it requires chemical activity to transmit to other neurons

- Synaptic gap: each neuron is separated from the next neuron by a tiny gap
- Synapse: the point of communication between the neurons, includes the synaptic gap and a small area of the membrane of each of the connecting neurons
- Synaptic transmission: relies on chemical balances in the cell and electrical transmission of impulses through the neuron
- Motor neurons: control muscle contraction, have a cell body on one long end, long axon in the middle and dendrites on the other end
- Sensory neurons: have dendrites on both ends and are connected by a long axon with a cell body in the middle
- Synapse: the point of communication between neurons

Summary
- Electrical impulse: Electrical impulses within a neuron are called an Action Potential. When there is a resting potential of -70mv and action potential can be transmitted. When a stimulus reaches the threshold potential the impulse will travel (all or nothing response)
- Chemical impulse: Whereas the chemical impulse is when an action potential reaches the axon terminal, the transmitters in vesicles will fuse to the synaptic knob and be released into the synapse. The neurotransmitters will then be taken into receiving dendrite by receptors. Any left over neurotransmitters will be broken down by enzymes or taken back into the axon terminal (re-uptake)

<u>Role of Neurotransmitters</u>
- Neurotransmitter: are those chemicals that enable activity to travel across the synaptic gap between neurons
- Dopamine: a common neurotransmitter is involved in learning, attention and pleasurable sensations, the degeneration of the neurons that produce dopamine in one area of the brain causes Parkinson's disease- tremors, rigid movements and poor balance
- Serotonin: a common neurotransmitter involved in sleep an mood, a deficit of serotonin has been linked to depression, drugs like Prozac increase the availability of serotonin in some brain regions
- Noradrenalin: Helps the body deal with danger or threat as well as being important in memory retrieval, dysfunction is associated with mental disorders, especially depression
- Endorphins: Regulate our feelings and perceptions of pain, are out body's natural pain killing drugs and are manufactured and released when stressed, they are also released when a person is in a positive mood

• The runners 'high' associated with running by athletes is caused by a rush of endorphins

Factors that affect behaviour, emotion and thought

The role of genetics- heredity

- genetics influence a person before they are both
- e.g intelligence, physical growth, timing of development
- Genes may have an effect on how we think, behave and act

Genetics

- Heredity factors influence us from conception
- At conception a zygote is formed as a result of the sperm penetrating the lining of the ovum (egg). When sperm finally penetrates the wall of the egg, chemical changes occur in the wall immediately blocking other sperm. The genetic material is released and becomes the new cell called the zygote.
- The zygote contains the 'recipe' that directs the development of the cell into a human

• Male: XY
• Female: XX

Chromosomes

- The development of the cell into human is determined by the chromosome
- There are 46 thread-like chromosomes which consist of thousands of genes (23 pairs)
- Chromosomes occur in matched pairs with one exception
- The exception is 23rd pair which are the sex chromosomes- determine whether the zygote will be male or female

Mitosis

- The zygote develops from a single cell to a person through the process of mitosis
- In this process, the zygote divides into 2 cells, each of which also split and so on until billions of cells are formed.

• Just before each division, the cell duplicates each set of chromosomes, which move in opposite directions within the cell. As each new cell gets half the chromosomes.

Meiosis

- Meiosis: the process where a cell divides, producing sperm or ova that each contain half the parent cell's original number of chromosomes. (Chromosome pairs cross and break, exchanging genetic material)
- This means that each chromosome is combined in different ways to the original one. When the cell splits, only one of the pair goes to each new cell, resulting in a sperm or egg that only has 23 chromosomes. When a sperm and egg unite, the resulting zygote has the full set of 46 chromosomes

What do genes do?

- The genes we have inherited guide how we develop physically
- Genes determine:

• physical appearance such as eye colour, skin colour
• Development such as when teeth first appear, growth spurts, puberty and menopause

Genes

- Our genes provides the receipt for our development but our environment affects the outcome
- e.g a child who inherits genes or being tall may not turn out to be tall if he or she has inadequate nutrition for a prolonged period in early life
- Heredity sets limits but environment determines how things turn out within those limits
- Epigenetics: the study of the transmission of information from one generation to the next through genetic inheritance that affects the traits of the offspring without alteration of the DNA or alteration that occurs from environmental factors

- Experience like child neglect or drug use are examined to see if they or other stressors can create epigenetic changes to the brain's neurons without altering the DNA

- Recent studies into cognitive epidemiology, a related field of inquiry that looks at the heritability of intelligence, have shown that semen and intelligence are related (Arden et al, 2009) and that genetics can influence children's drawing, which in turn is related to intelligence 10 years later (Arden et al, 2014)

Heredity and the Environment
- Our environment influences our development
- Heredity sets the limits but our environment determines how things will turn out within those limits

Environmental influences on behaviour and development
- What can impact development?
• Inadequate nutrition
• lack of education, no opportunity for education
• Drug and or alcohol consumption by mother during pregnancy
• Trauma
• Natural disasters

Nature VS Nurture
- The nature nurture controversy is the extent to which out development is influenced by genetic information (nature) from our parents and how much is the result of environmental influences both physical and social in our world (nurture)
• e.g early enrichment= higher brain mass and better learners

Hormones
- Our genetics play a role in regulating the production of hormones
• e.g thyroid problems can be genetic, 'in the family'
- Hormones: chemical messengers produced by the endocrine glands (endocrine system is the hormone system in the body)
- Hormones travel through the bloodstream and affect other parts of the body, such as the brain
- When they act on our brain, they influence our interest in food and sex, influence our moods and affect our growth
- Hormone messages are slow

Adrenal Glands
- Adrenal glands: The hormones prepare us to deal with emergency situations and trigger the 'fight or flight response'

- Adrenaline: Hormone produced by the adrenal glands during high stress or exciting situations called "fight or flight" responses, it increases the heart rate, increases blood pressure and breathing and prepares the muscles for exertion (e.g car accident, a fight, public speaking)
• Adrenaline rush: can give you strength in your body (some have lifted cars off bodies of children), heightened senses (from your vision to your touch) or a sudden boost of energy

- Noradrenaline: serves a vigilance function keeping us alert, hormones act as a neurotransmitter in our nervous system, it increases blood pressure and heart rate, it helps to regulate the stress response, it is responsible for controlling attention and responsiveness in the brain
• low levels- difficult staying awake and concentrating and paying attention to tasks
• high levels- can mirror symptoms of overdose: nervousness, cold hands and feet, high blood pressure, racing thoughts
• Dysfunction of noradrenaline is associated with mental disorders especially depression

Thyroid Glands
- thyroid glands: produce the hormone thyroxin which is necessary for the brain and nervous system to develop properly
- If babies are born with thyroxin deficiency that is not noticed and quickly treated, they will become intellectually deficient

- Those who develop thyroxin deficiency after the brain has developed do not suffer in the same way but they grow more slowly

Pituitary glands
- pituitary glands: our most important gland, because it triggers the release of hormones from all other glands, produces the growth hormone that stimulates body growth and development of body's cells
- Children lacking this hormone will grow and are usually properly proportioned but by adulthood they reach only about 130cm in height (Tanner, 1990)
- The pituitary gland also plays a role in the changes that occur at puberty, time of sexual maturation
- The pituitary gland stimulates a girl's ovaries to produce oestrogen and a boy's testes to produce more testosterone
- This change in the body's chemistry is a factor in explaining the 'teenage' behaviour such as moodiness, emotional etc
- Hormones are a chemical which affects how we think, feel and act

Psychoactive drugs
- Drugs are chemicals and similarly to hormones, drugs affect the chemistry of the body and changes behaviour
- Drugs can influence how people behave think and feel

Types of Drugs
Depressants
- Depressant: these are 'downers; that calms the activity of the nervous system nd slows bodily functions
- e.g alcohol, heroin is a narcotic/opiate, morphine is opiate
- Effects of alcohol:
• Lowers inhibitions
• reduces feelings of self consciousness
• promotes relaxation
• disinhibition: normally placid people becoming aggressive
• Affects motor control
• slows body's response

- Effects of heroin:
• opiates mimic endorphins, the body's painkillers altering reactions to pain by reducing the brain's perception of pain
• Heroin creates a feeling of euphoria followed by feelings of calmness and peacefulness
• Withdrawal unpleasant side effects such as fevers, cramps and gastro-intestinal problems

- Physiological effect of depressants
• Reduced activity in the CNS
• decreased heart rate
• slower breathing
• reduced coordination

- Psychological effect of depressants:
• Feel less stressed/ calmer
• Relieves anxiety

Stimulants
- Stimulant: these are 'uppers' that excites the nervous system and arouses body functions
- e.g nicotine, caffeine, amphetamines (speed), cocaine, ecstasy, ice (meth)

- Effects of stimulants:
• Increased heart and breathing rates

- appetite decreases as blood sugar rises
- energy increases
- stay awake
- body speeds up- hence the name 'speed'

- Effects of cocaine:
- elevate mood and produce a sense of euphoria
- larger and larger doses are required to maintain their effects
- increased mental alertness and self-confidence
- prolonged use of cocaine can result in a form of psychosis with auditory hallucinations and strange paranoid ideas

- Effects of Ecstasy:
- Heightened emotions and a feeling of connectedness with those around them
- Dehydration, and if this occurs when a person is dancing for long periods of time it can lead to overheating, increase in blood pressure and death

- Long term effects of ecstasy due to effect on brain serotonin:
- Deflated mood
- memory loss
- damage to immune system
- Kyle McCardle and Co, 2004- higher depression and difficulty in storing information in long term memory, easily distracted and less efficient at focusing attention on complex tasks
- Dafters, 2006: Difficulty in switching between tasks

- Effects of Ice or meth
- very intense high
- experience a feeling of exhilaration and increased arousal and activity levels
- More awake
- suppresses appetite
- receptors in brain are flooded with monoamines which are forms of a neurotransmitter, as more is taken these receptors can be destroyed and prolonged ice use can lead to a point when the user no longer feels pleasure without ice
- Prolonged use is associated with brain and mental health conditions, such as memory loss, depression and psychosis
- Affect social and family relations and lead to financial problems

- Physiological effects of Stimulants:
- speed up activity in the CNS
- increase heart rate
- rapid breathing

- Psychological effects of stimulants:
- increased feelings of excitement
- higher energy level
- increased confidence

<u>Hallucinogens</u>
- Hallucinogens: A mind altering drug that changes perceptions and gives sensory images without input from the senses
- e.g marijuana, LSD, Magic mushrooms, ecstasy (both hallucinogen and stimulant)

- Effects of hallucinogens
- Reduce inhibitions
- increased sensitivity to colours, tastes and smells
- heightened emotions

- dehydration
- overheating
- blood pressure increase
- death
- euphoria with intense, pleasant images to one of absolute terror and panic
- The drug user's mood and expectations can affect the nature of the trip

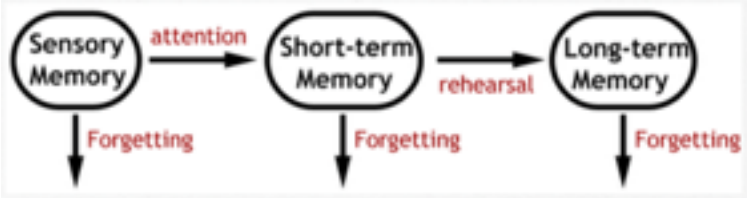
- Physiological effects:
- Increased heart rate
- increased blood pressure
- increased body temperature
- blurred vision
- dilated pupils
- convulsions/seizures

- Psychological effects:
- disrupted cognition
- altered perceptions
- distorted sense of time
- hallucinations
- mood swings
- dissociation
- depersonalisation

Cognition

Memory
- Definition: Can be defined as the internal record of some previous event or experience
- Memory is also called representation, which refers to the fact that memory is a psychological version of the original sound, thought, object or concept

Multi-store model of memory
Atkinson and Shiffrin (1968)
- developed a model of memory, known as the stage model, which has three separate stages: sensory memory, short term memory and long-term memory
- Each memory stage is characterised by 3 different types:
• Capacity: how much information can be stored?
• Duration: how long can the information be stored
• Function: What is done with the stored information



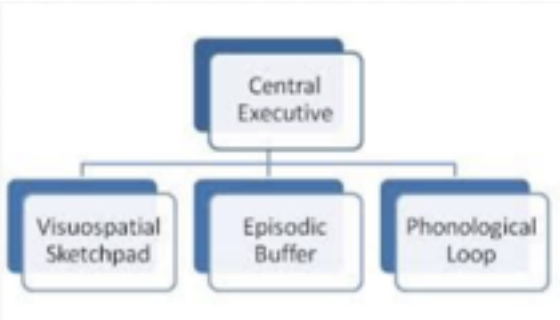
Sensory Memory
- Sensory memory refers to memory retained for a very brief period of time usually 5 seconds
- information is encoded rapidly
- registers the different senses
- iconic memory is visual and echoic is auditory

- Most information is lost quickly but information considered important is attended to and passed into short-term memory
- Encoding: refers to the conversion of sensory info into a form that can be processed by the brain
- Storage: refers to the retention of information
- Human information storage is via a network of neurons, information must be stored in a form that is accessible later, humans form associations between neural networks to aid retrieval later, retrieval is the recovery of information stored in the brain (process)

Short-term memory
- Short term memory: a place where currently used information is stored for about 20-30 seconds
- It is also called the "working memory" as it is a system for decision-making, problem solving and the direction of flow of information

STM- Capacity
- Limited capacity
- Miller (1956) proposed the amount of unrelated material that could be stored in the working memory was between 5-9 items, the capacity of working memory appears greatest for digits and lower for letters and words, the longer the words the shorter the working memory span

Baddeley and Hitch (1974)
- Two slave systems: for short-term maintenance of info and one central executive responsible for organising information and coordinating the slave systems
- Slave systems are the articulatory or phonological loop (rehearses silently) and visuospatial sketchpad (visual images-mental maps)
- The executive- directs attention to relevant information and suppresses irrelevant information
- Baddeley (2000) added 4th component= episodic buffer which links across the domains to form integrated units such as a memory of a story or movie, it links long term memory



How to improve Short-term memory

1) Effects of Rehearsal
- rehearsal is the process that enables information to be held in STM for a longer period and transfer material into long term memory
- Two types: maintenance rehearsal and elaborative rehearsal
- maintenance rehearsal: out loud or in your head rehearsal such as repeating a telephone number
- Elaborative rehearsal: relating meaning to remember

2) Chunking
- Chunking: process of recoding single items by grouping them on the basis of similarity or combining into a pattern
- Can increase the capacity of short term memory
- e.g mobile number we chunk them into 3 groups to remember them

Long-term memory
- Long-term memory: A relatively permanent store of information with an unlimited capacity
- Long term memory refers to storage of greater then 30 seconds to forever

- Information is transferred from short term memory to long term emory
- There are a number of types of long term memories distinguished according to the types of memory they hold

Types of Long term memory
- Procedural memory:
- LTM which stores information on how tasks are performed; the knowing 'how' of memory
- e.g riding a bike, brushing teeth
- Implicit memory because it is not a conscious memory process

- Declarative memory:
- LTM that stores information; knowing 'what'
- It is the explicit memory as it requires conscious effort for retrieval

1. Semantic
- Encyclopaedia, facts and information

2. Episodic
- Autobiography, events in your life

Recall, recognition and relearning
- Research has shown that the amount of information that we can retrieve from our memories depends on the sort of questions we ask
- The three ways: recall, recognise and relearn
- Recall: retrieve information from memory without prompts or cues
- Recognition: identify information from alternatives (people find this easier)
- Relearning: this method involves a person relearning information he or she has previously learned- if the information is learned more quickly the second time around it is assumed that some information must be retained

Forgetting and Remembering
- Forgetting: inability to use information that has been previously stored

<u>Theories of forgetting</u>
- Retrieval failure:
- Inappropriate cues used when locating previously stored information
- Cues= internal, external, general, specific, dependent on context or physiological cues

- Interference:
- Interference: competition for recall with other similar information
- Retroactive interference: new information interferes with old
- Proactive interference: information previously learned interferes with new learning

- Motivated forgetting:
- Some advantage to not remembering it, such as material that is painful, embarrassing, threatening, or unpleasant is blocked from consciousness (repression) it is not deliberate
- Term came from work of Sigmund Freud

- Decay:
- Decay: Memory traces fade overtime as a result of disuse
- 'If you don't use it, you lose it'

<u>Organic cause of forgetting</u>
- Anterograde Amnesia:
- the disruption of memory from experiences after the onset of amnesia
- causes: disease, accidents, brain surgery, drug use
- e.g sometimes experienced following consumption of very large amount of alcohol- alcoholic blackout

- Retrograde Amnesia (retro= before)
- A disruption of memory of experiences occurring before amnesic event
- causes: brain injury such as collision or blow to the head

Enhancing memory

- Context cues
- State cues
- Mnemonics

- The use of improved organisation of memory
- paying closer attention to the material remembered
- having experience with the information to be remembered
- using the information to be remembered rehearsing the material to be remembered as it is transferred from STM to LTM

Context cues

- Context cues: additional information about the circumstances around an individual that is encoded when other (effortful) encoding takes place
- context cue would be noticed if a person visited the classroom where they spent grade six

State cues

- state cues: information about the physiological or emotional state of a person that is encoded when other encoding takes place
- e.g if an adolescent is really angry and frustrated with her parents, her emotional and psychological state is likely to trigger recall of other times when she was angry and frustrated with them

Mnemonics

- Mnemonics: A collective name for methods or tricks that help people remember information
- Roy G Biv

Learning

- Learning is defined as a relatively permanent change, often behaviour that occurs as a result of experience
- How does learning occur?

- There are many different theories one is known as the stimulus-response approach (we learn by responding to the environmental stimuli
- Example of these theories are: classical conditioning and operant conditioning

- More recent theories describe learning as humans making sense of the world and problem solving: this has shifted to cognitive processes rather than changes in observation behaviours as a result of environmental stimuli e.g observational learning

Classical Conditioning

- Initially shown in animals
- It is learning caused by pairing, or association of two stimuli or the learning of 'conditional' behaviour
- An association forms between two stimuli, one of which is not normally associated with the desired response, such that the appearance of that stimulus alone results in the desired response of behaviour
- Stimulus: Event which may trigger a response
- It is the pairing and consequent association of stimuli that is essential for learning to occur

Pavlov

- Ivan Pavlov (1849-1936) studied the digestive systems of dogs, he noted that salivation, usually considered a reflex action, could occur before food was given to them
- He wanted to know what triggered the anticipatory salivation that occurred to many stimuli associated with food such as the sight of the bowl, he has a way of measuring this
- Pavlov set out to test the association between stimuli and response systematically

Pavlovs process:

- Selected stimulus not associated with food or salivation (bell)
- The bell was a neutral stimulus (NS) as it has no relevant response
- The bell was rung, closely followed by food. The food was considered and unconditioned stimulus (UCS) as it will lead to a reflexive response
- Unconditioned response (UCR) was salivation at the presentation of food
- After several pairings, the presentation of the bell alone produced the response of salivation, this is when conditioning has occurred
- Now the neutral stimulus (NS) produces a conditioned response (CR) to the conditioned stimulus (CS)
- The salivation at the sound of the bell was thus considered to be conditional response on its pairing with the conditioned stimulus (the bell)
- This experiment, modifying a reflex behaviour, showed how learning can take place

Before conditioning	During conditioning	After conditioning
NS (bell) = no response UCS (food) = salivation (reflex)	NS + UCS = unconditioned response UCR	CS (bell) -> CR -> CR salivate at the sound of bell

Classical conditioning in the real world

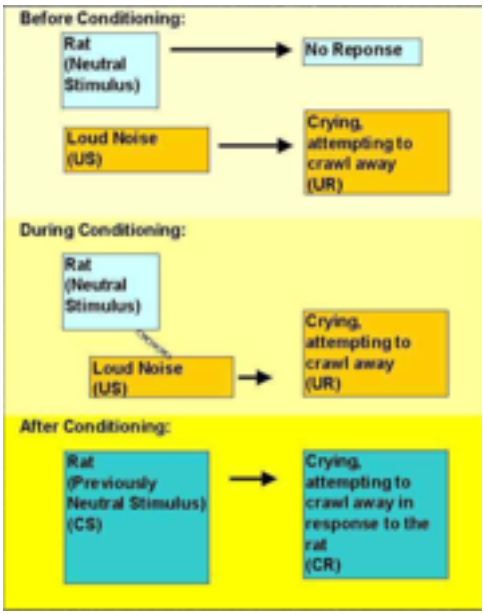
- Advertises often use classical conditioning in an attempt to lead consumers to associate a product or service with a particular object or event
- e.g soft drink advertisements which show young, attractive people having fun use a neutral object (soft drink) and try to create positive associations with it. The intention is that consumers will learn to associate the product with good times and consequently buy the product
- e.g CS being used by advertisers to influence out attitudes to products is the use of well-known sporting identities to endorse products by wearing brand-name logos on their sport gear (intention is that the manufacturers want consumers to learn to associate their product with the skills and success of the athlete enduring the product)

Classical conditioning and attitude formation

- Attitudes are formed, we are not born with them
- Attitudes are formed over a long period of time through the process of learning
- Apply the theory of classical conditional to ageism, sexism and racism
- Acquisition: is the process of pairing the neutral stimulus with the unconditioned stimulus to eventually produce the conditioned response
- Extinction: Is the process where the conditioned stimulus is repeatedly presented without the unconditioned stimulus then the conditioned response is weakened until it does not occur at all

Little Albert

- John Watson (1878-1958)
- Experiment to show how emotions are learned
- Watson used classical conditioning to induce a fear response in infant Albert
- Albert- 11 month old baby
- Said to be placid child who rarely cried



- Placed on a rug with white rat (NS), showed no fear of rat
- Later trials, Watson made a loud sound behind Alberts back (UCS)
- Loud noise made Albert cry, feared the loud noise (UCR)
- After several pairings, Albert became distressed when presented with rat- crying (CR), turning away
- Albert associated the rat with a loud noise (Rat became conditioned stimulus)
- Later Albert generalised the fear of the stimuli that were similar to the conditional stimulus (e.g a beard or fur coat)

Operant conditioning

- Operant conditioning: is a form of learning which has its origins in classical conditioning and American animal psychology
- E.L Thorndike (1874-1949) proposed that animals learn responses through experiencing consequences of which are rewarding and drop other responses that are punishing: Law of effect
- Classical conditioning focuses on changing voluntary behaviours through their antecedents (stimulus), operant conditioning is learning which is explained through consequences

- Reinforcement and punishment are associated with operant conditioning
- J.B Watson (1878-1958) and B.F Skinner are called behaviourists their work has applications today
- Skinner conducted the Skinner box (conditioning chamber) experiment in 1930's
- Skinner (1904-1990) was able to shape the rat's behaviour so that the rat would produce a response that would gain a satisfactory outcome
- Developed the notion of 'operant conditioning': The process to increase the likelihood of a behaviour that has a desirable consequence, and decrease the likelihood of producing a behaviour that has undesirable consequences

Skinner Box

- Hungry rat was placed in the conditioning chamber
- At first, no food pellets released (in order to establish a baseline record or control)
- The rat randomly touched various parts of the walls and floor until eventually pressing the lever by accident. After the food dispenser was connected, this action caused the pellet of food to drop into the dish below the lever
- In each successive trial, the rat discontinued most of the random behaviours, and the rate of lever pressing increases
- Eventually the rat was pressing the lever as quickly as it could finish eating each food pellet
- Even after the food dispenser was disconnected, the lever pressing would continue for some time
- The lever pressing would continue indefinitely if occasionally pellets were delivered (Partially reinforced)

How operant conditioning occurs

- Skinner believed an operant (response) could be strengthened if its consequences proved beneficial or rewarding, such as receiving food for pressing lever

Comparing operant and classical conditioning

Classical Conditioning	Operant Conditioning
Pavlov	Skinner
Observable stimulus leads to response	No observable stimulus to lead to response (non-reflex response)
Reinforcement comes before the response in early trials pairing UCS and NS	Reinforcement comes after response, as reward

Observational Learning

- Observational learning: Occurs when the learner learns a new behaviour or modifies an existing one as a result of watching another person and copying that person's actions

• Can also occur when observing the consequences faced by that person

- Observation learning: sometimes called modelling or imitation and this theory was developed by Albert Bandura (1925)
- Reciprocal determinism is that not only does environment cause behaviour and learning but behaviour can change the environment
- Learning occurs when we observe and imitate the behaviour of others

Bandura's Theory

- Bandura considered that children watch other people and copy their behaviour, in this way children can learn complex social behaviours
- Bandura found that children who watched a film of an adult hitting the Bobo doll changed their behaviour when left alone with it, imitating many of the behaviours of the adult

Observational learning in the real world

- Applications of observational learning are found in research on children's aggressive behaviour in playgrounds and the effects of television viewing on children's behaviour

- Observational learning is effective when trying to learn a skill such as how to throw a javelin or drive a car- which is difficult to learn through theory
- It can teach us what not to do- how to avoid potential dangerous situations
- Explanation for aggression in children

Application of social learning theory and Observational learning
- Lisa Simpson is said to have been responsible for large numbers of girls taking up saxophone lessons

Behaviour Modification
- Behaviour modification: the systematic and deliberate use of reinforcement and punishment in an attempt to modify unwanted behaviours
- Behaviour modification is the application of classical and operant conditioning techniques to human behaviour and learning

- Behaviour modification is also called behaviour therapy because it is used to treat psychological problems, such as fears or phobias
- Useful in the treatment of maladaptive habits like overheating, antisocial behaviour, smoking and excessive drinking

A typical modification program
- Based on answers to the following questions:
• What behaviours are desired or undesired?
• Are these behaviours observable and measurable? (the answer must be yes)
• What reinforces these behaviours?
• When are the reinforcements applied?
• What are the consequences of these reinforcements?
• How can the reinforcement pattern be improved?

Types of behaviour modification
- Token economies
- Systematic desensitisation
- CBT
- Positive and negative reinforcement including rewards and punishment

Token economies
- Token economies: When a desired response is reinforced with symbolic reinforcers which can later be exchanged for a variety of tangible reinforcers
- More effective than simple reinforcement schemes because in reinforcement, the person can get full i.e a chocolate square is full whereas an accumulation of counters etc leads to a secondary reinforcer such as a DVD so you can never get full

Token economies in the real world
- Classrooms (stickers)
- prisons
- psychiatric institutions (get reward for taking medicine etc)
- fly buys
- frequent flyer points
- casino tokens (poker chips) (accumulate them and then trade in for money)

Criticism of token economies
- If used in places like hospitals and prisons it is difficult to maintain improvement of behaviour once left the institution
- Tokens need to be reinforced with social reinforcer and is often not successful
- Alcoholics anonymous does work where a behavioural contract is agreed upon standard of behaviour
- Similar schemes are also seen in frequent flyer loyalty programs, casino chips and fly buys where they can be used later/ exchanged for gifts etc

Systematic desensitisation
- Systematic desensitisation: A classic conditioning procedure used to replace the fear response with an incompatible relaxation response to a frightening object or situation

- Uses classical conditioning techniques to replace fear response with a relaxation response
- Exposed to least scary aspect of their feared event e.g photo of spider, practise relaxing until comfortable to proceed
- Presented with next level e.g dead spider in a jar until they tolerate appearance of spider (graded exposure)
- Be in presence of spider

Contribution to society
- It can help with fears, phobias etc

Cognitive behaviour therapy (CBT)
- CBT is a technique used by psychologists based on cognitions (thoughts) influence feelings and behaviours and that subsequent behaviours and emotions influence thoughts
- CBT- the therapist helps identify unhelpful thoughts, feelings and emotions
- Has both a cognitive component and a behavioural component
- Behaviour therapy: therapist helps to change behaviour modification, relaxation and other behavioural change techniques
- Cognitive therapy: based on the theory that distressing emotions and behaviours are the result of maladaptive thinking, it replaces dysfunctional thoughts with ones that can be managed which is an important component of CBT

- CBT: treat depressive disorders, anxiety disorders (highly recommended and successful), PTSD which uses trauma-focused CBT, obsessive compulsive disorder (highly successful), adjustment disorder, substance use disorders, childhood behavioural disorders and childhood anxiety disorders
- Also treat shyness, smoking cessation, obesity and all manner of activities where changing a person's thinking can lead to changes in behaviour

- CBT: cost effective as the benefits outweigh the costs relative to other treatments
- Used by many psychologists, psychiatrists and counsellors
- Used with limited success in treating schizophrenia which is a mental illness characterised by distorted thinking and emotions by reducing some symptoms and it can assist family members to avoid the patient relapsing and having another episode- it helps in conjunction with medication

CBT and depression
- Depression: in situations that could end positively or negatively, people are more likely to think a situation will end negatively
- CBT: will help replace negative thoughts with positive ones and reinforce positive actions

• Successful in reducing relapse after the treatment for depression and anxiety

Treating depression with CBT
1) helps identify and change negative thinking associated with depressed feelings
2) helps to focus on the positive things
3) helps to manage your problems
- CBT: regular appointments with psychologist, weekly then less frequent, maybe start off with 8 weeks and review the progress, usually 1 hour appointment and might give patient some homework

<u>Positive and Negative reinforcement</u>
- Reinforcement: the process of making a behaviour more likely to be repeated in the future because it is followed by a pleasant consequence for the learner
- Reinforcer: the stimulus that strengthens a response (i.e a pleasant consequence often referred to as reward)

<u>Positive and negative reinforcement and punishment</u>
- Reinforcement: is a consequence that causes a behaviour to occur more frequently
- Positive reinforcement: When a behaviour is followed by a pleasant reward
- Negative reinforcement: When a behaviour is followed by the removal of a unpleasant outcomes such as a cessation of a loud noise

Postive reinforcement
- When you receive a good grade on a test after several hours of studying, making it more likely you will invest a similar amount of time in preparation for the next test
- In the workplace, employees are offered a bonus for meeting productivity targets

Negative reinforcement
- Your parents may nag at you to clean your room or make your bed, and when you complete the chore the nagging stops
- When you take a panadol to relieve a headache, because taking the tablet removes the aversive headache stimulus and increases the likelihood that you will take the panadol next time you experience one

<u>Positive and negative reinforcement and punishment</u>
- Punishment: is a consequence that causes a behaviour to occur less frequently
- Positive punishment: is the addition of an aversive consequence (loud noise)
- Negative punishment: Is the removal of a pleasant stimulus- take a toy away

<u>Factors affecting the effectiveness of reinforcement and punishment</u>
- There are several factors that need to be considered when delivering punishment or reinforcement in order to maximise its effectiveness
• Order of presentation: important for consequence to follow behaviour
• Timing: Consequence to be presented immediately after the behaviour is demonstrated
• Appropriateness of the punisher: A reinforce must be considered desirable and pleasant by the learner, and a punisher must be considered undesirable and unpleasant

Four principles of operant conditioning
1) Immediacy: If the reinforcer is given immediately it has the maximum effectiveness
2) Principle of deprivation (nothing)/satiation (having too much): Desirability that the consequence (reward) diminishes overtime because the person has the lesser desire for the reward

3) Contingency: Reinforcement should occur consistently after the response, a future event that is possible but cannot be predicted with certainty
4) Principle of Size: If the size, or amount of the consequence is large enough to be worth the effort, then the consequence will be more effective upon the behaviour

Behaviour in the real world

- Police initiative is to lower the rate of drivers speeding
- So those who speed are punished with monetary fines
- Those who do not speed are 'rewarded' by not receiving a fine
- It is hoped with a combination of reinforcement and punishment, drivers will adjust their habits and obey speed limits

Communication

Communication styles

- Communication involves the transmission of a message from one person to another
- It depends on content and how content is conveyed
  - E.g media- visual, spoken or written can affect the way our messages are conceived
- Different communication styles can also have an impact on how effective we are at getting our message across

- Communication style: Examines the cultural and social aspects of language
- How we learn to speak depends on culture, socioeconomic background and gender
- Style involves accents, our vocabulary, grammar and how we express
- Our identity is how we speak, our self image, people make judgments about

Social background and style

- Basil and Bernstein (1971) had an interest in the relationship between language style and social class
  - Bernstein claimed that people from working and middle classes used different kinds of language codes
  - Working class relied on traditional roles and ways of interacting and used a restricted code (see p 212 table 15.1)
  - Middle class wanted to developed ideas in relation too their personal experiences so used both traditional and elaborated code in their interactions
  - Bernstein considered that children in working-class families had a language deficit because they could only use the inferior restricted code, this limited their ability to benefit from education
  - His theory had a major influence on education programs for young children in the USA in 1960's and 1970's with various projects to help poor children overcome their educational disadvantage

- Bernstein's language deficit position was opposed by William Labov (1970)
  - Labov's work was based on black children from NY who spoke Black English Vernacular (BEV)
  - Labov considered that BEV was just as complex and rule-governed as standard english and should be considered different not deficient
  - Labov said that there was nothing inherently more complex e.g "He doesn't know anything BEV- "He don't know nothing"
  - Labov pointed out that several languages used double negatives in the same way as BEV
  - He was concerned that teachers were being told not to accept BEV as it was useless for learning. 'They are being taught to hear every natural utterance of the child as evidence of his mental inferiority. As linguists, we are unanimous in condemning this view as bad observation, bad theory and bad practice" (Labov, 1970, p240)
  - There are still prejudices against particular styles in most communities

- Ian Malcolm and his colleagues (2003) consider that Aboriginal Children are still expected to submit to an education that only recognises standard English in which teachers have little appreciation of differences in speaking and learning styles
  - In aboriginal communities a person who has been asked a question has the right not to reply, in the classroom, the Aboriginal child may take this option, to the irritation of the teacher
  - Malcolm and his colleagues points out the important of understanding and respecting differences in communication styles for effective interactions

Gender differences- Tannen

- Deborah Tannen (1990) described styles that she considered to be typical of men and women
- Men tend to "report talk"
  - Type used in public speaking, when telling jokes, stories, imparting information etc
  - Men are comfortable holding centre stage, they talk as a way of gaining and holding the attention of their audience and to negotiate and maintain status

- Women tend to "rapport talk"
- Based on establishing relationships, understanding and negotiating differences, enjoy private conversation more than men which means sharing experiences
- Friction between men and women can occur due to a lack of understanding the differences in communication
- Women coming to couple counselling complain that their partners do not listen to them or want to talk
- Tannen considers that if men and women simply understand the differences in each other's reasons for talking, a lot of anguish can be avoided

- Other researchers have attempted to look at the differences in forms of expression used by men and women to link them to power differences between the sexes
- Women have been shown to use more confirmatory noises e.g "mmm" and "yeah" to indicate they are listening, they use more indirect requests then men e.g a man might say "shut the door" a women would say "would you mind shutting the door?"
- Another grammatical form that is considered common in women's speech is a "hedge" which is used to soften a request or statement e.g "Please shut the door, if you don't mind"- if you don't mind is the hedge

- Rudi Dallos (1996) noted that hedges are used by both men and women and are more thought of as strategic devices rather than powerless, they are also used to achieve an end

Persuasive Communication

- Persuasive communication is a form of communication used everyday and involves changing beliefs, feelings and behaviour of another, we need to know what affect the listener's reactions if we want to be successful
- Petty and Cacioppo (1986) state that there are two routes to persuasion:
- Central: The central route to persuasion consists of thoughtful consideration of the content of the message by the receiver as an active participation in the process of persuasion, listener must have the motivation and ability to think about the message
- Peripheral: The peripheral routes to persuasion occurs when the listener decides whether to agree with the message based on cues other than the content of the message e.g may agree with the message because the source appears to be an expert or attractive, more passive than central processing
- Petty and Cacioppo explain that "Attitude changes that result mostly from processing issue-relevent arguments (central route) will show greater temporal persistence, greater predication of behaviour and greater resistance to counter persuasion than attitude changes that result from mostly peripheral cues" (Petty and Cacioppo, 1986, p21)

<u>Source of the message</u>

- Important to get the attention of the listener
- Research suggests that we are likely to accept the word of people with expertise in an area even without assessing the validity of their claim (Smith and Mackie 2000). Advertisers count on this.
- Listeners also assume that a fast speaker is more intelligent and knowledgable
- Smith and Shaffer (1995) fast presentation makes it difficult for listeners to evaluate content properly
- Trustworthiness is another characteristic that persuades us, politicians are aware of this and in an election campaign will often try to convince us that their opponents are untrustworthy, by referring to broken political promises etc

<u>Nature of the communication</u>

- When people understand a message and respond favourably to it they are likely to be persuaded
- Research indicates that much persuasive information is misunderstood, although comprehension of printed advertisements and information is higher then for information presented on television (Smith and Mackie 2000) For this reason those using the media for persuasion need to remember to 'keep it simple'.

- Messages often aim to provoke emotional responses if they don't we are unlikely to be persuaded
- Research linking good mood to ability to be persuaded is quite mixed, this is due to the fact that when in a good mood, people are less likely to process information carefully and so will not be swayed by a rational argument but they are more likely to be convinced by a supposed expert
- Some attempts at persuasion rely on inducing fear rather than a positive mood e.g political campaigns, parents warning, health campaigns
- Research shows us that this type of appeal to be successful must arouse sufficient anxiety to convince us to attend to the message but not too much emotion
- High levels of fear can lead to avoidance of the message, and stop us from being able to process the content of the message properly

<u>Characteristics of the audience</u>
- The content or presentation style of our message will change depending on a range of characteristics of the audience: their age, relationship to us, personality, level of education, culture, etc
- Research has shown that some people enjoy examining the issues, checking for inconsistencies, or weighing up the 'pros and cons' in a debate, such people are said to have a high 'need for cognition' (Cacioppo and Petty 1982) they are persuaded by strong arguments and unmoved by weak ones
- People who are low in their need for cognition are less likely to take the strength of an argument into account and to be swayed by such factors as the expertise or trustworthiness of the person presenting the message

- Min-Sun Kim and colleagues (1998) examined cultural differences in the way attempts at persuasion are evaluated, used students from mainland USA, Korea and Hawaii
- They hypothesised that participants who valued interdependence (collectivist culture) would likely use hint strategies and consider them to be an effective means of persuasion, and people who valued independence (individualist cultures) would consider direct statements as the best way of making requests
- Their hypothesis were supposed for "first attempt" requests but if confronted with non-compliance all participants reported that they would likely resort to more direct requests for the second attempts.

Features and Limitations of Theories of Language Development
- Researchers of language consider that there are 3 main types of knowledge that children acquire
- Knowledge about what to say (content)
- Knowledge about how to say it (form)
- Knowledge about the use of language (use)
- All language have these components, even a deaf person)
- A child learning a spoken language must learn to discriminate and produce the sound of their language
- All the components change as the child develops
- If a child did not know how to use language that takes into account the person they are speaking with, then their intended message does not get across effectively
- Politeness is expected in most cultures, especially if the speaker is asking for something
- The value of politeness is soon learned

<u>Innate and Learned Behaviours- Chomsky</u>
- 1970s-1980s research examined how children develop or acquire language
- Chomsky (1968) proposed a language device (LAD) a mysterious 'black box' that was hard-wired for language
- LAD worked by receiving as input the native language around the child and generated sentences in that same language as output
- Chomsky's theory of language assumed that there were universal rules that could distinguish grammatical from ungrammatical sentences
- One set of rules was developed to cover the grammatical, or deep, structure of language

- These are universal rules, applicable to all languages
- Surface structure rules described the grammatical structure of spoken language (ability to understand)
- Deep structure rules enabled the production of grammatical sentences (ability to produce)
- It was claimed that people are genetically predisposed to learn this universal grammar, so children learned language naturally
- LAD could deal with surface structure language received (sometimes ungrammatical, erroneous or irregular) and make sure children's output increasingly approximated the language of native speakers
- This theory paid little attention to the social environment in which the child was developing, except that the primary linguistic input came in the form of language being used in the family and in the community
- Children were innately predisposed to learn how to talk ad how to understand the language around them
- This led to other researchers to propose a role for the social environment in the language development of children, recognising that communication is a fundamental function of language

<u>Innate and Learned Behaviours- Bruner</u>

- Children's language development takes place through parents talking to their children, it involves participation in shared activities where words and meanings develop in routines and activities regularly undertaken such as shopping, washing dishes and tending the garden
- Jerome Bruner (1983) described the processes through which language was learned
- Bruner (1983) proposed a language acquisition support system (LASS) which described how parents (mothers) guided their children's language through interaction based on a longitudinal study of 2 boys from 3 months age until they were about 24 months
- Not only did the children learn to talk but they learned the language of the social, historical and cultural group in which they were growing up
- Bruner thought that LASS required LAD and vice versa- Language could only develop through the interaction with others, the child contained the innate part to learn language and adult provides the social framework to encourage talk
- Scaffolding: The mother provides suitable framework for language e.g familiar games such as 'peek-a-boo', joint book reading and activities such as bath times and meal times (These routines are called 'formats)

- Reference: Is how people manage and direct each other's attention by linguist means and is how language development is supported through mother-child interactions e.g pointing, turning you heard to look at someone
- A example of growth of reference is: Joint attention is the eye contact between an infant and mother, once established the mother will show objects to the infant
- Another example of growth of reference is: book reading. Bruner (1981), Garton and Pratt (1998, 2004) by the time book reading appears as a format, children are able to know man of the conventions of conversations
- Book reading supports the attempts to use language

Culture & Values

Sense of Community (McMillan and Chavis)

- 1975, Gusfield (in McMillan and Chavis, 1986) noted two major uses of the term (community)

1) First is a geographical notion such as neighbourhood or town
2) Second is concerned with the quality of relationships without any reference to location

- When McMillan and Chavis (1986) developed their theory of community, they thought it applied to both notions
- McMillan and Chavis (1986) "Sense of Community" is a feeling that members have a belonging, a feeling that members matter to one another and to the group, and a shared faith that members' needs will be met through their commitment to be together
- Four criteria:

• Membership
• Influence
• Fulfilment of needs
• Shared emotion connection

Membership

- Provides a feeling of belonging
- Establishes boundaries
- Groups often use dress, rituals and language to indicate a member
- The pranks or worse, performed on new students used to be common in private schools and military establishes were designed for initiation into a group membership

• Boundaries can be important for neighbourhood communities, sometimes obvious or more subtle- as gangs put graffiti on walls to mark their territory
• Boundaries provide a sense of safety separating 'us' from 'them' indicating who can be trusted

- McMillan and Chavis identified 5 Attributes

A) Boundaries: e.g language, dress and ritual, indicating who belongs and who does not, the difference between in-group and out-group
B) Emotional Safety: Willingness to reveal how one really feels, protection of group intimacy, part of the broader motion of security
C) A Sense of Belonging and Identification: Expectation that "I" belong and acceptance by the community, feeling that one belongs in the community and is wiling to make sacrifices for that community. Role of identification- It is my group
D) Personal Investment: Personal time and effort, working for the community leads to feelings that they have earned membership which is valuable and meaningful
E) A common symbol system: Means of identifying who belongs to a community (e.g name, flat, rituals, ceremonies, dress)

Influence

- Based on research on group cohesiveness, McMillan and Chavis proposed that while people are more attracted to a community in which they have influence, community cohesiveness requires members to be prepared to conform
- Research found that people who acknowledge other's opinions and needs are often more influential than those who try to dominate others and ignore their wishes

Integration and fulfilment of needs

- For any group to stay together, membership of the groups must be rewarding
- One rewarding aspect of many groups is status and that group success brings members closer together- needs to be organised
- Members need to know each other's strengths and weaknesses therefore roles must be assigned
- Must make sure they are not competing for resources or status

- 1978, Aronson and colleagues showed that students in cooperative classrooms who work together to achieve group goals and receive their marks on the basis of the class product, actually learn better then students in competitive or individualistic classrooms
- Employers have adopted this type of approach to improve group productivity, they have provided bonuses to employees when group production targets are met

- When McMillan revised his and Chavis' theory in 1996, he proposed that another way in which individuals can have their needs met, is by being members of a group of people with shared values, who think and feel similarly to themselves and with whom they can safely be themselves

Shared Emotional Connection
- Shared emotional connection refers to the feeling that we might have been connected to another person through a common emotional response to a shared activity or event- to a shared history
- This history is not from just being together over a period of time but also by the quality and importance of the integration
• E.g when you have a group of war veterans talk- you are aware that shared experiences in difficult and dangerous times have provided a real sense of community

- 7 important features:
1) Contact hypothesis: greater personal interaction- people become close
2) Quality of interaction: There needs to be positive interaction between members
3) Closure to events: Unresolved tasks inhibit group cohesiveness
4) Shared valent event hypothesis: Increased importance of a shared event (e.g crisis facilitates a group bond)
5) Investment: Community becomes more important to someone who has given more time and energy to it (the more one invests)
6) Effect of honour and humiliation on community members: Someone who has been rewarded in front of a community feels more attracted to that community and if humiliated, feels less attraction
7) Spiritual bond: It is present to some degree in all communities

Impact of Significant events on individuals and communities
- World events are large-scale events that affect more than an individual- however they are often sources of stress for individuals
- Whether the event is negative such as a hurricane, war or stock-market crash or whether the event is positive such as in the Olympic games or a new treatment of malaria

Stress is the determinant of health
- Stress is a singular nonspecific bodily reaction to real or imagined threats/events/change
- It starts off as an alarm reaction, a triggering of the fight/flight response
- Then if prolonged the body starts trying to adapt/resist the ongoing alarm reaction = stress
- Finally the body gives up and exhaustion sets in, no longer stressed, you are burnt /worn out

Trauma
- Defining Trauma: A traumatic event, either witnessed or experienced, representing a fundamental threat to one's physical integrity or survival
• Responses involved intense fear, helplessness or horror
• The meaning of the event may be as important as the actual physical act/experience
- It is the 'individual's subjective experience' that determines whether an event is or is not traumatic
- Key components:
• Is the experience of loss
• Loss of boundaries, safety, trust, power and control, innocence, protection, attachment, possessions, consistency/predictability, sense of self/body image
• Can result in a number of outcomes:
1) Post Traumatic Growth (PTG)
2) Post Traumatic Stress Disorder (PTSD)

Event characteristics contributing to stress

- Predictability of the event: (Katz and Wykes, 1985, in Atkinson et al, 1996) if an event is unpredictable it is more likely to cause more stress on the community than an event that has been predicted such as an eruption of a volcano
- Controllability: Stress is increased when a community or individual has no control over the situation (terrorist attack)
- Experience threat or loss: Whether we experience threat or loss also impacts whether we find an event stressful or not, many people find even when a positive event such as the Olympic Games to be stressful as it involves many changes and unknowns that can be perceived as threatening.

• Will it disrupt public transport or cause traffic problems in our city?
• Will it increase the risk of a terrorist attack?

Positive responses

Resilience

- Kobasa (1979) thought that personality differences could account for the different responses to stress
- She carried out a study in which 600 executives and managers were asked to compete two questionnaires

• One was a personality questionnaire the other measured the stressful events and illnesses that respondent had experienced over the previous three years
• She divided the respondents into two groups: one that had scored above the average for illnesses and the other that scored blow the average
• The number of stressful events experienced by both groups was high- however when she compared the high stress/ high illness group with the high stress/low illness group she found that the latter group saw change as a challenge, felt more in control of their lives and had a sense of direction in both their work and personal lives
• She described this group (high stress/low illness) as having a hardy personality
• She carried out a longitudinal study (Kobasa et al, 1982) in which she followed a group of executives over 2 years as having a hardy personality were less likely to become ill

- Those qualities that Kobasa saw in her 'hardy' types are some characteristics that have in more recent years been identified with the concept of resilience- other qualities seen in a resilient person are:

• The capacity for making the most of small windows of opportunity
• Having a deep-rooted faith in a system of meaning
• Having a healthy social support network
• Having a wide comfort zone

- Challenge-based personal development programs such as Outward Bound are based on the premise that personal growth and resilience can be taught by combining challenges with support
- Recent years the mining boom in Australia, psychologists have been studying reactions to the lifestyle of the FIFO worker to determine what factors in the individual, the family and wider community are implicated in the responses of individuals and their families to the stressors the lifestyle imposes

- Taylor and Simmonds (2009) suggest that families who showed healthy flexibility (neither rigid more chaotic), healthy cohesion (neither emotionally engaged nor enmeshed) and in which communication was good, were most satisfied with how their family was functioning
- Stress levels could be reduced through provision of information during the recruitment process so workers and families have a better understanding of the challenges they will be facing (Meredith et al, 2014)
- Researchers have found that the sense of community is important to the psychological wellbeing of people of all ages within a community , and effect how well they 'bounce back' after an emergency as well as their participation in positive activities

Post Traumatic growth

- Post Traumatic Growth (PTG) is a positive psychological change experienced as a result of adversity and other challenges in order to rise to a higher level of functioning
- The term was described by Tedeschi and Calhoun (1995) where the focus was on the idea of growth as a potential consequence of grappling with trauma
- Typically 30-70% of survivors say that they experience positive changes of one form or another
- Initially 3 domains of PTG:

1) Changes in perception of self
2) Changes in experience of relationships with others
3) Changes in one's philosophy of life

- Later developed into a five-factor approach to PTG

1) Personal Strength – "I lived through that, I can face anything.
2) New possibilities – opening up possibilities that were not present before
3) Relating to others – increase sense of connection
4) Appreciation of life- in general
5) Spiritual Change

- A simple view of PTG is that a decrease in distress and an increase in psychological well-being
- The reality is that PTG may not necessarily be 'good', the presence of PTG may not result in greater wellbeing or less distress.
- "The presence of PTG is an indication that the people who experience it are living life in ways that, at least from their point of view, are fuller, richer and perhaps more meaningful. But that richer life may come at the price of the discomfort that tragedy and loss almost always produce." (Calhoun and Tedeschi, p7)

<u>Negative responses</u>

Post Traumatic Stress Disorder

- Common reactions following trauma:

• Physical symptoms: disturbed sleep, nightmares, exhaustion, restlessness, headaches
• Cognitive symptoms: Poor concentration, disturbances to attention and memory, flashbacks, intrusive thoughts, disorientation
• Emotional symptoms: Fear, avoidance, anxiety and panic, depression, guilt, withdrawal and fearfulness

- Young children may also regress in their behaviour:

• Wetting bed, thumb-sucking and being scared of the dark, they may lose trust in adults who have not been able to protect them from the traumatic event

- For some people the event can be so distressing that the symptoms continue and post-traumatic stress disorder (PTSD) may be diagnosed
- An official diagnosis of PTSD as stated in the Diagnostic and Statistical manual, 5th edition (APA, 2013) requires that people meet the criteria that includes past experience of actual or perceived threats to life violence or serious injury:

• Presence of distressing symptoms such as recurring memories, dreams or flashbacks, persistent avoidance of any stimuli perceived to be associated with the original traumatic event, negative changes in thoughts and mood associated with the traumatic event, and changes in these reactions such as angry outbursts, problems with concentration and sleep disturbance
• PTSD can have a delayed onset years after the event

- There are different neurological explantations as to why some people suffer from PTSD and others don't:

• The availability of social support may contribute to different outcomes
• Others suggest that it could be pre-trauma factors may make some more susceptible than others
• Relief workers from organisations such as the Red Cross have learned the critical incident stress management and provide counselling as part of their attempt to reduce the numbers of PTSD sufferers

• Those who do suffer PTSD are usually treated by a combination of psychotherapy and drug therapy

Impact of negative events on community wellbeing

Vulnerable groups

(Both Positive & Negative)

- Much research on community responses to major events has focused on determining what sections of communities are particularly vulnerable at times of disasters such as cyclones etc
- Hurricane Katrina: the poor, black and elderly were the most vulnerable (Elliot and Pais, 2006)
- Buckle (2001-2002) found that in the 1998 gas explosion at Esso natural gas plant at Longford that the elderly coped better (cold showers and chilly nights) than the younger people- past life experiences with reduced expectations of external help lead them to deal with the crisis more easily

Community Resilience

(Positive)

- WA researchers Julie Ann Pooley (2006) and her colleagues- the concept of "community competence" is used to explain resilience in a community

• Competent communities are ones that are able to identify needs and issues and work to carry out plans and achieve goals

- Have a sense of community- sense of belonging and attachment to the community then it is considered to be resilient
- Effects of community resilience on outcomes following a disaster are not direct- studying the impact of cyclones on communities in the NW of Australia, Pooley found that the competence of the community and individual's feelings of attachment to their community led them to having an increased sense of self-efficacy and social networks

• This lead to reduced stress and increased growth

(Negative)

- To understand the long-term influence of such events on the lives of individuals and communities we need well-designed longitudinal research
- In 1974 Glen Elder reported on a study of just this type which looked at children of the great Depression
- Summary of his findings:

1) For the group that suffered deprivation- life achievement was dependent on effort and accomplishments outside the education system then those from non-deprived families
2) Adult health was negatively related to economic hardship but only from working class homes
3) Values among the offspring of deprived families were conservative - the importance of children in marriage, family and job security

Developmental Psychology

Developmental theories

Many psychologists have proposed stage theories - they consider the development processes in discrete, qualitatively distinct steps or stages that are reached in a set order.

Piaget's theory of cognitive development

- Jean Piaget: A Swiss biologist and psychologist 1896-1980 became interested in how children think after administering intelligence tests to children and being intrigued by reasoning that led children to give wrong answers
- We build an understanding of our world and develop our thinking through active interaction with our environment which leads us to build concepts or schemas about the world

• Schema: An idea about what something is and how to deal with it (e.g we have schemas ranging from those for chairs/tables to concepts of love and democracy)

- Piaget thought there were two processes which we gain and change our schemas which are:

• Assimilation: We interpret new experiences and information in terms of our current understanding (schemas) (e.g 3 year old have a simple schema for a ball- roughly round and therefore will call a grape or olive a ball because that is his schema 'ball'. His response from his parents would tell him that he needs adjusting)
• Accomodation: Piaget called this his adjustment to fit the particulars of new information

- Piaget's studies also led him to believe that children's thinking changed with age; children progressed gradually through a fixed sequence of four developmental stages that have different characteristics

Stages

- Sensory-motor stage (birth to 2 years)

• Understanding of the world is developed through sensory and motor interactions with it by mouthing, touching, looking and listening
• The child lives in the present and has little understanding that things continue to exist if they are not within sight
• Piaget tested this idea by presenting infants of different ages with an interesting toy then covering it up to see if they would look for it
• Piaget thought that infants had no idea of "object permanence" until approximately 8 months because before this age they did not look for the toy once it has been covered up

- Pre-operational stage (2-7 years)

• Still not able to carry out the mental operations that would allow them to think logically
• e.g 4 year old Susie complained that she did not have enough lemonade- her mother poured her drink from the short wide tumbler that it was in, into a tall thin glass, Susie was now satisfied that she has enough lemonade. She was unable to understand that the quantity of drink had not changed, only its appearance)
• Egocentric: Children can only perceive the world from their own viewpoint (e.g when playing hide and seek they will think that you cannot see them if they cannot see you)
• Piaget used the 3 mountains task to demonstrate egocentrism, the child has to sit on one side of the model and determine what the person sitting on the other side can see
• Until about 6 years, children cannot understand that another person can hold different visual perspective from their own
• egocentrism explains some irritating behaviour, e.g if a child stands between you and the TV they are unaware that you cannot see the TV because they can

- Concrete-operational stage (7-11 years)

• Able to think logically and carry out mental operations with concrete objects, can conserve, can classify

- Conservation: the understanding that an object does not changes its weight, mass, volume or area simply because it changes shape (e.g plasticine exercise)
- Ability to classify: to groups, objects or events by features that they have in common
- Ability to seriate: the ability to order objects with respect to common properties, children start to be able to use mental pictures of objects and events other than having to use concrete materials to help them solve problems

- Formal-operational stage (11 years and above)
- Capable of abstract thinking: thinking that does not rely on being able to see or handle concrete materials in order to reason with them, talk about concepts such as honesty and morality and can discuss possible outcomes of actions without having experienced them
- Logical thinking: individuals develop strategies to work through problems systematically, developing hypothesis and testing them until a solution is found- one test for logical thinking was Piaget's pendulum problem (p.g 226)
- This involved pendulums hanging from string of different lengths and weights. These could be dropped from different heights and pushed with different amounts of force. Children had to work out what factors or combination of factors affected the rate at which the pendulum swung
- A child who has reached the Formal Operational stage would respond to this test by systematically testing the factors to enable them to conclude that it was the length of the string that determined how quickly the pendulum swung
- Piaget thought that social, emotional and moral development all depended on the level of cognitive development that a child had reached
- Critics suggested that Piaget underestimated children's understanding of the world

<u>Piagetian tasks on Indigenous Australians</u>
- Seagrim and Lendon (1980) reported findings of the Hermannsburg project, which compared the cognitive performance of children from Aranda and Loritja people, reared in isolated Lutheran Mission Station in Central Australia with other Aboringal children reared elsewhere and in different circumstances
- Intellectual performance was based on Piagetian tasks and included tests of conservation, classification and of seriation
- Was longitudinal in nature and was conduced between 1965-1978 as well as cross-sectional comparative element to the research, some children were retested over a number of years

- Seagrim concluded that Australian Aboriginal children were as capable as white children in the different types of thinking at similar ages with similar educational experiences
- This was only the case if children had been immersed in the white culture
- Nowadays cross-cultural research in the Piagetian tradition has ceased due to the recognition that formal schooling plays a role in the development of the types of thinking shaped by Piagetian cognitive tasks
- Researchers who have criticised Piaget suggested he:

1) Underestimated young minds
2) failed to distinguish between competence and performance
3) Gave insufficient attention to social influence on performance

<u>Subsequent Research based on Piaget (Donaldson and Siegal)</u>
- Studies that have modified Piaget's tasks so that they involve materials and situations that are common to young children indicate that the children in Piaget's studies may have failed tasks because of the lack of familiarity with the situation rather than because they lacked the cognitive skill required

- Donaldson:
- Martin Hughes (Donaldson 1978) found that children aged between 3.5 and 5 years could take another person's perspective and no longer appeared egocentric when asked to carry out tasks involving hiding a boy doll "so that the police can't see him" (p.g 227)

- Even when Hughes produced a second policeman, making the task more complex, 90% of children could correctly hide the boy from both policeman
- Donaldson argued that young children pass the policeman task and fail the 3 mountain task of Piaget because they are familiar with hiding and so the policeman task makes sense to them
- The 3 mountain task used by Piaget is more abstract and makes little real-world sense to young children
- Another aspect of Piaget's tasks that has been critically examined is the language used

- Michael Siegal (1991)
- Michael Siegal argues that younger children's apparent inability to conserve can be explained by adults breaking the conversational rules that children hold
- Siegal thinks that problems arise when experimenters ask questions where the answer is obvious or repeat questions when an answer has already been given- children are likely to please the examiner so they change their responses (e.g study of the conservation of mass)
- A child may be given 2 balls of play dough and asked if they contain the same amount of dough, one ball is then rolled into a sausage and the child is again asked whether they contain the same amount of dough
- Siegal considers that children are likely to change their answers even if they think the balls still contain the same amount of play dough simply to please the examiner
- Studies have changed the way in which questions are asked, which provided support for Siegal's claim
- Related to this is the question whether Piaget was actually testing children's competence- Piaget assumed that if a child failed a particular cognitive task that she/he lacked the competence
- Educators have been long aware that there are many factors other than competence that can affect whether a person successfully performs a task- Many reasons (e.g to please the examiner, capable of doing the reasoning of the task but unable to explain it) as many of Piaget's tasks rely on verbal responses to questions- lack of skill in verbal expression may mask competence in reasoning

- Piaget placed too little emphasis on how children minds develop through their interaction with others- especially with more competent peers and adults
- Contrast to Lev Vygotsky: Whos central theme was that cognitive growth developed from children's interactions and occurs in a sociocultural context
- Some psychologists considered that Piaget underplayed the role of social and cultural influences
- While research has indicated that Piaget may have been wrong on the ages at which milestones were reached, he was correct in their sequence
- Piaget's emphasis on children as active beings who construct understanding through their interactions with the world has transformed education- his theory still provides a platform for research

Kohlberg's theory of moral development

- Lawrence Kohlberg (1927-1987): There is a universal sequence to the development of morality and the stages begin early in childhood (Kohlberg, 1981)
- He found 6 stages of moral development based on children's responses to various moral dilemmas
- These dilemmas focus on the value of human life and property, the meaning of social rules and laws, value of honesty and importance of upholding contractual agreements with others

<u>6 Stages of moral development</u>

Pre-Conventional

Stage 1-Moral focus: Punishment and obedience, Egocentric

- Content/characteristics: doesn't recognise different points of view, confuses perspective of authority of one's own
- Characteristic of children under the age of 7 since they cannot take the perspective of another person

Stage 2- Moral focus: Individual, instrumental and concrete
- Content/Characteristics: aware of different interests and that these may conflict, instrumental exchange of services, goodwill and fairness
- Judgments appear around age of 7 when exchanges become more common place

Conventional
Stage 3- Moral focus: Mutual interpersonal expectations, conformity and relationships
- Content/characteristics: Following rules, living up to expectations of others, and maintaining trust, gratitude, respect and loyalty

Stage 4- Moral focus: social system and maintenance of one's conscience
- Content/characteristics: Doing ones duty, take the view of the system, obey laws and uphold the social order

Post-Conventional
Stage 5- Moral focus: Rights and social contract
- Content/characteristics: asserting and integrating basic rights, values and legal contracts, laws and social contracts

Stage 6- Moral Focus: Universal ethical principles and moral point of view
- Content/ characteristics: Commitment to the universal principles of justice, respect for others

- During adolescence Stages 5 and 6 are reached which reflects principled reasoning and the young person demonstrates an awareness of values and rights of both the self and of others

• p230 for example of a moral dilemma

Stage	Moral focus	Content/characteristics
PRECONVENTIONAL		
Stage 1	Punishment and obedience Egocentric	Does not recognise different points of view Confuses perspective of authority with one's own
Stage 2	Individual, instrumental and concrete	Aware of different interests and that these may conflict Instrumental exchange of services, goodwill and fairness
CONVENTIONAL		
Stage 3	Mutual interpersonal expectations, conformity and relationships	Following rules, living up to the expectations of others, and maintaining trust, gratitude, respect and loyalty
Stage 4	Social system and maintenance of one's conscience	Doing one's duty, taking the view of the system, obeying laws and upholding the social order
POSTCONVENTIONAL		
Stage 5	Rights and social contract	Asserting and integrating basic rights, values and legal contracts Laws as social contracts
Stage 6	Universal ethical principles and moral point of view	Commitment to the universal principles of justice Respect for others

- Moral dilemma: A woman was near death from cancer. A drug was found that might save her but costs $4000. Sick woman husband went to everyone to borrow money, but could only gather $2000. Should Heinz break into the laboratory to steal the drug for his wife? why or why not?

• Stage 1: He should not steal the medicine, because he will go to prison
• Stage 2: He should steal the medicine, because he will be much happier if he saves his wife, even if he goes to prison

- Stage 3: He should steal the medicine, because his wife expects it
- Stage 4: He should not steal the medicine, because the law prohibits stealing
- Stage 5: 1) He should steal the medicine because everyone has the right to live, regardless of the law. 2) He should not steal the medicine, because the doctor has the right to fair compensation
- Stage 6: 1) He should steal the medicine, because saving a human life is more fundamental than the property rights of another person. 2) He should not steal the medicine, because that violates the rule of honesty and respect

<u>Moving on from Kohlberg</u>

- If Kohlberg's stages are true sequence then we should find a strong positive correlation between age and level of moral reasoning
- Many countries from around the world have found a strong positive correlation between the age and level of moral reasoning (Shaffer 1999)
- But these studies could not show that the sequence is invariant (never changing)- We need longitudinal design and follow the same people across time
- Ann Colby and her colleagues (Colby et al, 1983) followed Kohlberg's original participants for 20 years and found the stages did occur in the order that Kohlberg proposed (p.g 231)
- Richard Shweder considered that Kohlberg's research methods led him to 'impose stage classifications upon informants from other cultures that both distort the meaning of what they have to say and fail to take account of implicit structures in their view of their own social order' (Durkin, 1995) p.g 231

- Kohlberg's theory is culture biased: Shweder argues that Kohlberg's coding system does not allow him to take into account the reasoning of a man with a sophisticated understanding of his own culture (Shweder 1991)
- Kohlberg's theory has also been seen as gender-biased: (Gilligan 1982), Early research suggested that women reached Kohlberg's stage 3 where man stage 4

- Carol Gilligan (1982)
- This was due to the different socialisation of girls and boys resulting in different values
- Gilligan argued that males are socialised to be independent and achievement-orientated they see moral dilemmas as a conflict of interest between individuals which rules and laws are designed to resolve- adopt a morality of justice (stage 4)
- In contrast girls are socially responsible and nurturing- adopt morality of care (stage 3)
- Gilligan argued that female's moral reasoning is not inferior but different
- Gilligan examined the moral reasoning of a group of 29 American women, she presented them with a real-life moral dilemma: whether of not to continue a pregnancy, she posed a genuine conflict between personal choice and traditional female values of self-sacrifice and care for others
- From her interviews Gilligan identified 3 levels of reasoning:

1) Level 1: Self interest: Women justified response solely in terms of their own needs and wishes
2) Level 2: Self-sacrifice: Women argued in terms of the rights of others, referring to the wishes of the partner or the rights of the unborn child
3) Level 3: Care as a universal obligation: Women tried to reach a balance between care for other and personal well-being. One woman whom Gilligan classed at this level argued that the decision has got to be, first of all, something that the woman can live with… or at least try to live with, and must be based on where she is at and other significant people in her life are at (Gilligan, 1982, p.g 96)

- Reviews of many studies indicate most studies using Kohlber's techniques do not show sex differences and where they do, they are not always in favour of males (Durkin, 1995)
- Gilligan has been criticised for basing her own theory on a small number of interviews and only women, but her research has encouraged later researchers to examine morality in both men and women in terms of justice and care

Erikson's stage theory of identity

- Sense of identity: Establishing the distinct nature of the self
- Erik Erikson (1902-1994) described the development of identity of childhood and across the lifespan
- Series of continual challenges have to be met by the individual to move successfully to the next phase
- Major question "Who am I?"
- Identity formation starts at infancy through to old age

- The stages are based on Erikson's clinical observations of the patients he was treating
- Unsuccessful resolution can lead to people being 'stuck' at a particular stage then not developing normally
- Abnormal personality development could be traced to failure to resolve a particular identity crisis at an earlier stage of development
- One of the few theories to adopt a true lifespan perspective and link development in infancy

<u>Stage 1: Infancy</u>

- Ages 0-1
- Crisis: Trust vs Mistrust
- Description/ Outcome of crisis: Infants are dependent on others for food, warmth and love and must trust others to provide these, if needs are consistently met then they are able to develop secure attachment to their primary caregiver and learn to trust others, if fail to bond then mistrust of the world around them.

<u>Stage 2: Toddler</u>

- Ages 1-3
- Crisis: Autonomy vs shame and doubt
- Description/ Outcome of crisis: Toddlers learn to walk, talk, feed and use the toilets and become less dependent on others, success leads to self-control and confidence and mistakes are fixed or corrected, overprotection by or disapproval from parents can lead to shame and doubt on the ability to be independent

<u>Stage 3: Early Childhood</u>

- Ages 3-6
- Crisis: Initiative vs guilt
- Description/ Outcome of crisis: Child's social and motor skills become highly developed and dilemma is to balance the wish to achieve more and take more responsibility while accepting parental control and discipline without the guilt

<u>Stage 4: Middle Childhood</u>

- Ages 6-12
- Crisis: Industry vs inferiority
- Description/Outcome of crisis: Industry is competence achieved at school, relationships with friends and peers increase, children who are awarded for their industry and achieve success at school will develop through competence, while a failure to achieve competence may lead to a feeling of inferiority

<u>Stage 5: Adolescence</u>

- Ages 12-18
- Crisis: Identity vs role confusion
- Description/Outcome of crisis: To answer the question of "Who am I?" successfully, must integrate all resolutions to the earlier crises and achieve sense of identity incorporating all elements of self, this is major as failure to achieve this can lead to role confusion, indecision and avoidance of commitment

Stage 6: Early Adulthood
- Ages 18-40
- Crisis: Intimacy vs isolation
- Description/ Outcome of crisis: If intimacy is not achieved with another person then a failure to develop sense of identity can mean that an adult is incapable of forming an intimate relationship and sinks into isolation

Stage 7: Middle adulthood
- Ages 40-65
- Crises: Generativity vs stagnation
- Description/ Outcome of crisis: In middle adulthood, the main focus is on work and maintenance of family relationships, success in both these areas leads to a sense of accomplishment and leaving a legacy for the future, failure can lead to self-centredness and stagnation

Stage 8: Late adulthood
- Ages: 65-death
- Crisis: Integrity vs despair
- Description/ Outcome of crisis: time to reflect on one's contribution and to view it as positive and satisfactory or unsatisfactory, if life is fulfilled then death is viewed as integrity if not death will be despaired or even feared

Stage	Crisis	Description and outcome of crisis
1 Infancy, ages 0–1	Trust versus mistrust	Infants are dependent on others for food, warmth and love, and must trust others to provide these. If the infants' needs are met consistently and responsively, then infants will develop a secure attachment to their parent or caregiver and learn to trust others. A failure to bond with a caregiver can lead to mistrust of the world around them.
2 Toddler, ages 1–3	Autonomy versus shame and doubt	Toddlers learn to walk, to talk, to feed themselves and to use toilets, so become autonomous and less dependent on others. Success at becoming independent leads to self-confidence and self-control and mistakes are easily fixed or corrected. Overprotection by or disapproval from parents can lead to shame and doubt on the toddler's ability to be independent.
3 Early childhood, ages 3–6	Initiative versus guilt	Children's social and motor skills become highly developed during early childhood, and the dilemma for these children is to balance the wish to achieve more and take more responsibility while accepting parental control and discipline without guilt.
4 Middle childhood, ages 6–12	Industry versus inferiority	Industry can be regarded as competence and this is achieved through learning at school. Meanwhile, relationships with friends and peers increase. Children who are rewarded for their industry and achieve success at school will develop a sense of competence and mastery, while a failure to achieve competence may lead to a feeling of inferiority.
5 Adolescence, ages 12–18	Identity versus role confusion	To answer the question of 'Who am I?' successfully, an adolescent must integrate all the resolutions to the earlier crises and achieve a sense of identity incorporating all the elements of self. This is *the* major crisis to be resolved for successful transition to adulthood. Failure to resolve the identity conflict can result in role confusion, indecision and avoidance of commitment.
6 Early adulthood, ages 18–40	Intimacy versus isolation	During early adulthood, the achievement of intimacy with another person is important. A failure to develop a sense of identity can mean that a young adult is incapable of forming an intimate relationship and thus sinks into isolation.
7 Middle adulthood, ages 40–65	Generativity versus stagnation	In middle adulthood, the main focus is on work and the maintenance of family relationships. Success in both these areas leads to a sense of accomplishment and leaving a legacy for the future. Failure to resolve this crisis can lead to self-centredness and stagnation.
8 Late adulthood, ages 65 to death	Integrity versus despair	Towards the end of one's life, there is time to reflect on one's contribution and to view it as positive and satisfactory or as disappointing and unsatisfactory. If life is regarded as fulfilled, an older person can view death with a sense of integrity; if not, death will be despaired and even feared.

Bandura's social learning theory (the role of observational learning and modelling)
- Albert Bandura (1925) Is an american Psychologist, his theory of how children develop is more restricted in its scope then Piaget's, his interest is in how people learn social behaviour
- Strongly emphasised observational learning (modelling or imitation), children watch other people and copy their behaviour
- Children can learn complex social behaviours ranging from aggression and altruism to sex roles

- In the original version of his theory he proposed that children took in information from watching others and simply copied it, his conclusions based on a Bobo doll
- The doll was repeatedly knocked over by a female student, she bashed it, shouted aggressive words and was taped and shown to groups of young children
- The children were later allowed to play with the doll and the children behaved in exactly the same way as the female student, the children demonstrated their behaviour without reinforcement or punishment

- Bandura conducted many variations of this experiment and each time the children imitated the behaviour of the female student

• This challenged behaviourist theory
• Bandura called this observational learning and the subsequent theory, the "Social learning theory"

- Applications of social learning theory and observational learning are found in research on children's aggressive behaviour in playgrounds and in research on the side effects of television viewing on children's behaviour
- In later versions of his theory, Bandura (1986) acknowledged that learners play an active role in the modelling process, choosing which models they attend to and whether the behaviour is consistent with their beliefs and values and produces wanted outcomes
- Bandura (1977) believes that humans are active information processors and think about the relationship between their behaviour and its consequences. Observational learning could not occur unless cognitive processes were at work. These mental factors mediate (e.g intervene) in the learning process to determine whether a new response is acquired
- Therefore, individuals do not automatically observe the behaviour of a model and imitate it. There is some thought prior to imitation and this consideration is called 'mediational processes'.

• This occurs between observing the behaviour (stimulus) and imitating it or not (response)

<u>Four meditational processes (Bandura)</u>

1) Attention

- The extent to which we are exposed/notice the behaviour
- For a behaviour to be imitated it has to grab our attention
- We observe many behaviours on a daily basis and many of these are not noteworthy
- Attention is therefore extremely important in whether a behaviour has an influence in others imitating it

2) Retention

- How well the behaviour is remembered
- The behaviour may be noticed, but is not always remembered which obviously prevent imitation
- It is important therefore that a memory of the behaviour is formed to be performed later by the observer
- Much of social learning is not immediate so this process is especially vital in those cases. Even if the behaviour is reproduced shortly after seeing it, there needs to be a memory to refer to.

3) Reproduction

- This is the ability to perform the behaviour that the model has just demonstrated
- We see much behaviour on a daily basis that we would like to be able to imitate but that is not always possible
- We are limited by our physical ability and for that reason, even if we wish to reproduce the behaviour, we cannot
- This influences our decision whether to try and imitate it or not.

4) Motivation

- The will to perform the behaviour
- The rewards and punishment that follow a behaviour will be considered by the observer
- If the perceived rewards outweighs the perceived costs (if there are any) then the behaviour will more likely be imitated by the observer

- If the vicarious reinforcement is not seen to be important enough to the observer then they will not imitate the behaviour

Research designs in developmental psychology

- Most common research design in developmental psychology is cross-sectional design and longitudinal design

The cross-sectional design

- Study people who differ in age at the same point in time
- Ethical dilemmas were presented to children of different ages and asked how person should behave and why, then children reasoning was rated according to Kohlberg's criteria for the different stages, researchers were able to show that older children are more likely to reason at a higher level
- This design can tell us age differences but can't tell us that there are developmental differences- we don't know if children in the youngest group will reason like the children in the oldest age group when they are at that age
- In cross sectional research, participants at each age level are different people, the come from different cohorts
- Cohort: Is defined as a group of people of the same age who have experienced the same cultural conditions and environmental events
- Cross-sectional is used because it is quick and easy- especially if no reason to expect cohort differences

Longitudinal research designs

- Study the same group of people at different points in time
- In developmental research often over a period of years
- Since individuals are followed across time there is no need to be concerned about possible cohort effects
- Limitations: Expensive, participants might move, unable to be traced, may die, practice effect (carry out the same task several times may improve results)
- Cross generational problem- children might have different experiences at each point in their life span than children in earlier or later generations (e.g different leisure activities compared to your grandparents)

Longitudinal-sequential design

- Features both the cross-sectional and longitudinal in attempt to overcome the limitations of each
- Groups of particular patients are followed over time as in a longitudinal study, but at each measurement point, a new group is added that is the same age as the first group at the first measurement point

Personality

Overview
- Definition: Personality is the characteristic way of thinking feeling and acting that makes the person an individual
- Makes people who they are

- Personality is more than temperament
• Temperament: Physical and heredity parts of personality such as sensitivity, emotion and irritability
- Problems in later life can be traced to difficult temperament in infancy and how this influences behaviour through childhood

Trait theories
- Personality traits describe the stable forms of behaviour in any and every situation
- They can be used to predict the future
- It has moved beyond the early type approaches (Sheldon in the 1940's)
- It now categorises people using more than one dimension and therefore can better capture a person's individuality

- Trait theories largely differ from each other on the number of dimensions that are considered to be important
- Eysenck (1991-1997) (chapter 7) considered that there were 3 main dimensions of personality (extraversion, neuroticism and psychoticism)
• Extraversion: active and outgoing; Introversion: passive and calm
• Neuroticism: Emotional instability, restless and anxious; Emotional stability: calmness and relaxed manner
• Psychoticism: Recklessness or disregard for common sense

- Costa and McCrae (1999)
• 5 main dimensions: extraversion, neuroticism, opens to experience, agreeableness and conscientiousness (known as the "Big Five")

- Michael Ashtion and Lee Kibeom (2007)
• Added 6th factor (honest-humility)

- Each of these theories describe the possible combinations of characteristics and how they predict behaviour

The Big Five Factors in personality- Trait theory

1) Openness to experience:
- Down to earth; Imaginative
- Uncreative; Creative
- Conventional; Orignial
- Unadventurous; Daring

2) Conscientiousness
- Negligent; Conscientious
- Lazy; Hardworking
- Disorganised; Well organised
- Late; Puntual

3) Extraversion
- Loner; Joiner
- Quiet; talkative
- Passive; Active
- Reserved; Affectionate

4) Agreeableness
- Suspicious; Trusting
- Critical; Lenient
- Ruthless; Soft-hearted
- Irritable; Good-natured

5) Neuroticism (emotional instability)
- Calm; Anxious
- Secure; Insecure
- Unemotional; Emotional
- Vulnerable; Hardy

Consistency and continuity of traits
- A claim of all trait theories is that personality traits are stable and enduring characteristics
- There is considerable research evidence to indicate that once adulthood is reached, personality is largely stable - But what age does personality stabilise?

Hell Pullman and Colleagues (2006)
- Helle Pullman and her colleagues (2006) conducted longitudinal research over a two-year period with Estonian adolescents from 12-18 to look at several aspects of personality stability:

1) Rank order stability: Does a person who scores high or low on a particular trait compared with his or her peers remain high or low relative to peers, even if the whole group changes?
2) Mean-level consistency: Are there any changes in mean scores on each of the traits for each age group?
3) Individual continuity: Do the personality traits of individual participants remain stable over time

- Using the NEO Five-factorial Inventory, a measure of the Big Five personality factors, Pullman and her colleagues found the 'mean levels of personality traits were similar to adults from the same population'
- They found 'modest change in the mean-level' of the trait scores on three of the five dimensions and no change on the other two:

• Level of openness increased and levels of agreeableness and conscientiousness decreased between the ages of 12-18

- 'Mean- level stability' can occur because most of the groups remain stable, approx 80% in each age group reported their personality traits in a consistent manner over the two years of the study, this indicates that adolescents are similar to young adults in the stability of their personality traits at an individual level

- By the age of 16 adolescents in their sample had reached the rank-order stability typical of young adults, e.g if a person started high on extraversion relative to the group, he or she usually stayed high.
- Does the fact that we report our personality in consistent ways mean that we express our personality consistently across all situations?, e.g If we report a high on conscientiousness and agreeableness then does that mean that we will behave in a cheerful and helpful way regardless of the company we are in?

• Research indicates that this may not be the case!

Walter Mischel (1984)
- Found that conscientiousness in college students could only be predicted with a moderate degree of success. Students who were conscientious on one occasion (e.g being in class on time) were not always the same on another occasion such as handing assignments on time
- Mischel found that scores on personality tests only mildly predicted behaviour, it is unfair to expect personality traits to predict behaviour on every occasion as other factors come into play

- When behaviour is averaged over several occasions it is likely that the person who scores a high on conscientiousness will act in a more conscientious way than one who scores low.

Costa and McCrae Contributions and Limitations

- Contributions:

• Provides useful descriptions of personality and its structure
• Provided foundation for development of valid/reliable personality assessment devices (personality tests)
• Devices can be used in vocation selection
• Diagnostic testing for personality disorders

- Limitations:

• Leads to acceptance of oversimplified classifications and descriptions of people (labelling people)
• Classification method does not account for individual differences
• Underestimates the ways in which specific situations and socio-cultural factors influence personality and human behaviour

Humanistic theories of personality

- Humanistic theories arose in the 1960's in the United States, the centre of the theory is the belief that "people are born good and that they try to reach their potential throughout their lives"
- Personality results from people striving to achieve their potential

Maslow (1908-1970)

• We must first have our most basic needs for food, water and shelter met before we will try to meet our higher needs
• Once lower level needs are met we try to satisfy increasingly high level needs
• At the top of this hierarchy is the needs for self-actualisation which is the need to live up our highest unique potential
• His theory stated people who have achieved self-actualisation shared the same characteristics of being open and self aware, secure in who they are, able to enjoy deep relationships and tackle problems without worrying about others' opinions.

- According to Maslow, our basic physiological needs must be met before we can move up the hierarchy to meet the need for personal safety. If we achieve a sense of security we are then motivated to love and be loved. When our need for love and belongingness is met, esteem becomes important, that is the needs to respect yourself

Maslow & Self-Actualisation

- Self-actualisation: The process of fulfilling our potential
- Studied healthy, creative people

• Abe Lincoln, Tom Jefferson and Eleanor Roosevelt

- Self-aware and self-accepting
- Open and spontaneous
- Loving and caring
- Problem-centred not self-centred

Maslow's hierarchy of needs

- People are held back from achieving self actualisation if they are dominated by their lower needs and are therefore unable to move up the hierarchy
- Self actualist: Realising one's potential
- Esteem: Self esteem, approval from others
- Love needs: Acceptance, friendship
- Safety/security: Feeling safe, out of danger
- Physiological: Food, water, shelter

Carl Rogers (1902-1987)

- Shared much of Maslow's thinking; He believed that people are born good and with potential for enormous growth like the seed of a big tree (Rogers, 1961)
- Important people in our lives help us grow by providing genuineness, acceptance and empathy, which are like sun, water and nutrients for a tree- necessary conditions for growth
- A person who is genuine is honest and open with us and does not put on a front

- An accepting person is prepared to take us as we are, with all our shortcomings, we do not have to change or improve to be valued or accepted (Rogers called this type of acceptance "unconditional positive regard")
- A person who shows us empathy, the 3rd condition for growth, is when they try to see the world from our perspective and understand how we feel
- Rogers considered that we needed to experience these conditions from significant people in our lives in order to feel free to make changes we want to make in ourselves- to grow and to self-actualise

- Central to Roger's theory was the concept of self or personal identity
- A well adjusted personality= A good match between our ideal self (the person we want to be), our self-image (the person we think we are) and our true self (the person we really are). (e.g we value kindness and think of ourselves as a kind person, we need to act with kindness and compassion)
- The greater the gap between our ideal self, self-image and behaviour, the more likely we feel anxious and stressed

• Scott and O'Hara (1993) supported this belief- they found that students whose ideal and self-image were discrepant were anxious and depressed compared with students whose ideal and self-images were a better (closer) match

<u>Self- Report: Q-sort</u>

- Humanistic theories use a self-report called Q-sort stack of cards on which are printed statement such as: I try hard to please others, If i put my mind to it I can do anything, Success is important to me etc
- Rogers used these cards to see if there was a match between ideal self and self-image

• Self image: He would ask clients to arrange statements from those most like you to those least like you
• Ideal Self: Arrange cards from what you would like to be like, to what you would least like to be like

- Rogers considered that a well-adjusted personality would arrange the cards in similar orders
- Q-sort provides insight into a person's insight but has limitations:

• It depends on the sorter of the cards being prepared to be honest and open and to share what he or she really believes with the psychologist

- Contributions:

• Big impact in areas ranging from counselling through to education and child rearing

- Criticisms:

• Vagueness of some of the concepts (e.g self-actualisation, some suggest that Maslow's description of the characteristics he found in his heroes are simply a list of values, e.g someone who admired Winston Churchill might consider that single-mindedness and motivation to achieve were characteristics of the self-actualised person)
• The humanistic approach is too optimistic and faults to take into account human capacity for evil (Rogers replied to this criticism by saying that he has never known an individual who, when provided with the conditions needed for growth, has chose the 'cruel or destructive path'- Rogers, 1981, In Myers, 2007)

<u>Limitations & Contributions- Humanistic Approach</u>

- Limitation:

• Scientific theories starts with the assumptions about that nature of humanity (e.g not all people agree that we are all motivated by need and striving for potential)

- Hard to test scientifically as based on clinical observation= Subject to bias
- How can we actually measure theory= How can you measure self actualisation?
- Based on belief that all humans are inherently good
- Criticised for unrealistic view of the world as it does not recognise human capacity to be negative and pessimistic
- Does not provide an explanation for aggressive behaviour such as assault or murder
- Theories are subjective (personalised) and non-scientific, cannot be measured using scientific method

- Contribution:
- The theory provides a structure for understanding individual differences
- Can lead to specific predictions that can be tested (however the theory as a whole cannot be tested)
- Humanistic psychology has been influential in psychodynamic therapy, education, parenting and business because the theory is based on "Motivation"
- Rogers has been a major influence in the scientific study of personality- Rogers would take recordings of sessions and attempt methods of classifying, grouping and analysing data, he also would monitor changes during therapy (noting improvement of change in patient)
- Important contribution of personality by focusing on the positive dimensions of personality
- Gives a complete picture of how a person develops, but not accurate
- Provides explanation for the development of an unhealthy personality
- Approach used in counselling (teaching client to help themselves)

<u>Contemporary type theories and their uses</u>

Personality & Health

- Personality type: People who have the same cluster of characteristics
- Contemporary type theories: Used in settings as diverse as health and business
- Meyer Friedman: a cardiologist who developed a well-known type personality
- This theory was driven by empire research designed to find out what type of person was susceptible to heart attacks

- Their research led them to propose that there are basically two personality types:
- Type A: Are ambitious, competitive, pushy, highly motivated, busy and impatient. They are easily irritated and frustrated and can become angry
- Type B: More easy going, low levels of time-urgency, competitiveness and hostility

<u>Friedman and Rosenman (1974)</u>

- Carried out a longitudinal study, following 3524 men aged between 35 and 59 years over a period of 8 and a half years, at the start they interviewed each participant about his work and eating habits noting the manner of speaking and behaviour
- On the basis of this information, they classified the men as having either type A or type B personality
- By the end of the study 257 men suffered heart attacks, 69% of these were Type A
- Not one pure type B suffered heart attack (the most laid-back of all)
- Researchers asked if these findings were reliable? Could they be repeated? If the relationship between personality type and heart disease was reliable, then what aspect of the Type A personality was critical? Was it the competitiveness? The time-consciousness? Or the anger?

- One study indicates that only some components of the Type A personality put a person at risk of heart disease, (which was the negative emotion of hostility- "Reactive anger") The major factor in the link between the Type A personality and heart attacks (Myertek, 2001)
- It is suggested that Type A people respond more quickly and strongly to stress than Type B's. This results in increased blood pressure and heart rate which causes wear and tear on the cardiovascular system

- Milligan and colleagues (1997) found that people with Type A personalities have less healthy eating habits, get involved in more accidents and drink more alcohol, which suggests the link between personality type and healthy may be an indirect one.
- Researchers examined the relationships between prognosis in cutaneous malignant melanoma and a wide range of variables (situational, physical and psychosocial) and have proposed a "Type C personality" (Temoshok et al, 1985)
- They found that while a delay in seeking medical attention had the strongest relationship with prognosis, there were other factors that constituted a Type C personality that were also significantly related

- Type C: passive, bald, helpless and appeasing
• Temoshok and Dreher (1992) suggested that bottled up emotions weakened a persons immune system and made them prone to cancer
• An Australian team (Price et al, 2001) with a very large sample of women with breast cancer found no relationship between development of cancer and personality type
• There is a range of factors including the type of cancer that must be considered when examining links between personality type and cancer

Personality & Business
- Psychologists and human resources personnel working large businesses and organisations have, over the last10-20 years, increased the use of personality measures to try to determine an individual's suitability for a particular job and the compatibility within teams
• Myers-Briggs Type Indicator (MBTI) (Myers and McCauley, 1985) is a popular tool

- MBTI was developed by Katherine Cook Briggs and her daughter Isabel Briggs Myers to identify personality preferences
• Test: 126 forced-chose questions such as; at parties do you prefer to a) talk to someone you know, b) meet someone new

- The Myers-Briggs model is based on preferences that relate to four areas:
1) Where do you primarily prefer to direct your energy? Extraversion (E): preference to the outer world or, Introversion (I): preference to the inner world
2) How do you prefer to process your information? Intuition (N): Seeing relationships through insight or, Sensing (S): gaining information through the 5 senses.
3) How do you prefer to make decisions? Thinking (T): Objective information, analytical approach or, Feeling (F) through basing decisions on what you believe to be important in life
4) How do you prefer to organise your life? Judging (J): planned, stable and well organised or, Perceiving (P): 'Go with the flow'
• When four preferences are put together they produce 16 personality types

Social Cognitive theory
- Some psychologists consider that personality by itself does not determine behaviour even if it is stable it only influences behaviour
- Behaviour occurs in a context such as home, work or school
- Bandura and Mischel have taken this point of view- they are both social cognitive theorists.

<u>Albert Bandura</u>
- Bandura: a psychologist in action (was born in 1925 and has contributed to many fields of psychology (page 243)
- Bandura (1911-1986) explained human behaviour as being a result of the interaction between behaviours, cognitive factors and environmental factors which he called "reciprocal determinism"
- He noted in his studies of observational learning that we not only watch the actions of others, we watch the consequences of those actions, the rules and standards that apply to our behaviour in specific situations and the ways in which people regulate their own behaviour
• Environmental influences are important but so are conscious, self-generated goals and standards that influence our thoughts, feelings and actions

- "Reciprocal determinism": Each factor influences the other factor and is influenced by the other factors
- Bandura was interested in applying his ideas to classroom learning- his theory would predict that learning would be shaped by factors in the environment i.e. reinforcements, but student's own thoughts and belief about themselves and their interpretation of what goes on in the classroom would also influence their behaviour
- So students who think they are bad at maths and that they will be ridiculed if they ask a question would be unlikely to ask for help

- These ideas were further developed in Bandura's notion of "Self-efficacy"
- Self-efficacy: The degree to which you are sure of your own ability and capability to manage and to be effective in meeting the demands of particular situations
- According to Bandura; Our cognitive skills abilities and attitudes, guides how we perceive, evaluate and control our behaviour We acquire a strong sense of self-efficacy by mastering new skills and meeting challenges in specific situations, it develops i early childhood as we develop and master skills (e.g walking, writing and riding a bicycle evolves over the lifespan as we meet new tasks and experiences)

- People fail at tasks if they have the necessary skills because they do not believe in themselves
- Common activities where self-belief is necessary is scuba diving (when you can already swim), climbing heights such as Sydney harbour bridge
- Self doubt can impede successful achievements
- When we succeed in a task our self-efficacy is enhanced

<u>Walter Mischel</u>

- Walter Mischel (Mischel and Shoda, 1998), is another theorist who has tried to take into account social cognitive factors when considering personality and its impact on behaviour
- Cognitive part of theory: People's behaviour in a situation is affected by their perception of a situation and their thoughts about the likely consequences of behaving in a particular way
- He tried to reconcile within a single framework both trait and social cognitive approaches to explain human behaviour
- He considered that this was necessary to deal with apparent inconsistencies in personality in varying situations e.g why a person who seems confident in one situation might appear shy and anxious in another

- There has been productive research that has attempted to reconcile them. Bolger and his colleagues (Bolger 1990; Bolger & Zuckerman, 1995 in Mischel & Shoda, 1998) found that neuroticism (a Big Five trait) affects reactions to stress through both exposure and reactivity to stressful events such as conflicts with others

- Social cognitive theory is well-grounded in scientific research and its concepts have been empirically tested (unlike concepts in psychoanalytic and humanistic theories)
- Social cognitive theory has been very influential due to its wide applicability and robust theory
- Limitation: Some say that it ignores unconscious influences on behaviour and therefore not as rich as humanistic theories that study the whole person including the unconscious elements and irrational behaviour
- Limitation: Social cognitive theory does not explain learning and the influence of beliefs on the self, and how these affect and are affected by particular situations

Some critics say that it doesn't take into account unconscious thoughts and feelings and not all social learning is observable.

Relational Influences

Conflict

- Relationships are important to individuals and groups
- Positive relationships= wellbeing and physical survival
- Therefor interpersonal and inter-group conflict is a source of concern
- This lead psychologists to do research on this subject

- Definition: Conflict is a perception that two parties, whether individuals or groups, believe that they have incompatible goals, ideas or behaviour
- Conflict can be socially destructive

- When people are in conflict it is called "mirror- image perceptions"
- This is where both parties tend to form distorted perceptions of the other
- e.g Each is likely to describe 'them' in terms such as incompetent or untrustworthy while 'we' are the model of integrity and virtue
- This type of behaviour can be seen in conflicts between families, industrial disputes and international disputes

- Example:
- This is seen in domestic disputes where a mother may be convinced that her son leaves his room messy 'just to annoy me' while the son is convinced that the mother tidies his room to irritate him (attributions can lead to conflict)

Resolving conflict

Types of solutions

- Imposed solutions:
- Dictated solutions
- E.g parent settles a dispute,
- Usually one party winning which can lead the underlying conflict staying unresolved

- Distributive solutions:
- Compromise
- E.g Industrial disputes where wages are set at a level between that desired by the employers and employees

- Integrative solutions:
- Win/win, both sides benefit
- Finding a solution is more difficult than reaching compromise as it involves understanding both parties' motives, values and goals (Smith and Mackie 2000)
- Follet provided a classic example of the different between distributive and integrative solutions when he discussed a dispute between 2 sisters over an orange (Follet 1940, Thompson and Hastie 1990). The sisters agreed to compromise and cut the organs in half (A distributive solution). One sister drank the juice and threw the peel away and the other used the peel in a cake and threw the juice away. The sisters overlooked the integrative solution that would have been for one sister to have all the juice and the other to have all the peel.

Techniques for resolving conflict

- Counselling:
- Usually when conflict arises in the family, counsellors will try to help client solve their own problem rather than provide solutions, they will often help their clients by improving their listening skills, to develop assertiveness

- Negotiation:
- Parties have some shared interests but also some opposed interests (talk to each other to reach an agreement)

- e.g countries trying to reach a trade agreement
- Successful negotiation arrives at an integrative solution
- Leigh Thompson and Reid Hastie (1990) investigation the process of negotiation in a study involving participants who were signed to the role of a buyer or seller of a car. They found that most negotiators entered into negotiation expecting the other party's interests to be completely opposed to their own, negotiators typically learned about the potential for joint gain during negotiations- the earlier the better the outcome was for both parties. However a substantial number of negotiators failed to realise that they had interests that were completely in common with the other party and so ended up settling for solutions that were less than ideal

- Mediation and Arbitration:
- Bringing in a third part to settle conflict (Mediators help parties to reach voluntary solution- distributive and integrative)
- In arbitration the third party has the right to hand down a decision after listening to both parties present their arguments, this leads to an imposed solution
- Third-party intervention has several benefits, the mediators can arrange times, venues and agendas for meetings so these do not add fuel to the conflict, they can also improve relationships between the parties, help them see common ground and bring fresh ideas and perspectives

Divorce mediation
- Longitudinal research by Robert Emery and his colleagues (2005) found that mediation can:
- Settle a large percentage of cases otherwise headed to court
- Possibly speed settlement, save money and increase compliance with agreements as well as increase the parties satisfaction.
- Lead to improved relationships between non-residential parents and children
- Lead to improved relationships between divorced parents

Socialisation
- Socialisation: The process whereby we acquire the beliefs, values and behaviours that are thought to be important and appropriate to function effectively as a member of society
- How we become "socialised" and what influences our socialisation is an area of interest for social psychologists

Agents of socialisation
- Families
- Parents influence their children
- Children influence how their parents react to them and raise them
- An infants temperament (easy or difficult) can influence how their parent's respond to them
- Schools
- Mass media
- Religious institutions
- clubs

Attachment
- The formation of a close emotional tie between a mother and her baby
- It is considered by many researchers to be of major importance in a child's socialisation

Harry Harlow
- In 1950s and 1960s an American Psychologist, "Harry Harlow" conducted some experiments to measure the development of attachment of infant rhesus monkeys to their mothers- he believed that emotional bonds were important for healthy development
- His original study (Harlow, 1959) studied the role of nursing attachment in 8 infant rhesus monkeys that has been separated from their mother at birth
- The monkeys were each reared separately in a cage that contained 2 surrogate mothers, which were substitutes for their real mother made of wire mesh
- One was covered in cloth and the other as left uncovered

- A babies bottle was attached to one of the surrogates where the mother's breast would be
- Half the infants had the bottle to the wire mesh surrogate and the other hand to the cloth surrogate
- See page 199- a flow chart of Harlow's experiment
- Harlow predicted that an infants attachment to their mother was based on feeding, the infant monkeys would prefer and become attached to the surrogate mother with the bottle but this did not happen
- Regardless of food the infant monkeys spent more time clinging to the cloth surrogate
- The preference for the cloth surrogate was tested through the introduction of stressful situations for the infants. e,g Harlow placed some frightening objects into the cages such as a technical spider and a small teddy bear beating a drum and the infants showed preference for the cloth substitute over the wire/mesh one

- Harlow concluded that 'contact comfort' was more important in the formation of mother-infant attachment than feeding and he generalised this conclusion to the human mother-infant bond
- Harlow's pioneering work did encourage psychologists to conduct studies into attachment and the effects of different types of attachment on social behaviour

<u>Attachment in humans</u>
- For a long time socialisation in the family was seen as being a one-way process with parents shaping the children's character and behaviour but these days researchers recognise families are complex social systems and see socialisation as involving a network of influences

<u>Bowlby</u>
- John Bowlby (1907-1990) English psychologist and psychiatrist who studied the predisposition of infants for constant contact with their mothers
- He believed that there was an optimum time when infants became imprinted by early contact with their mothers- which refers to the precise and permanent learning that occurs very early on in an infant life to form a bond usually with the mother
- This is termed "attachment"

- Bowlby's theory:
- Mothers have a biological need to be close to their child which is why a mother responds to the cries and smiles of her child
- Bowlby's was the first theory of attachment to consider the pair and not just the infant
- Bowlby suggested that the nature of mono-trophy (attachment as a close bond with just one attachment figure) meant that a failure to initiate or a breakdown of the maternal attachment would lead to negative consequences

- Bowlby (1953) claimed that mothering is ineffective if delayed until after 12 months and this would lead to long term consequences
- He used the term "Maternal deprivation" which refers to the separation from or loss of the mother as well as the failure to develop attachment
- Long term consequences to maternal deprivation might include:
- Delinquency
- Reduced intelligence
- increased aggression
- Depression
- Affection less psychopathy (inability to show affection or concern for others)

- According to Bowlby, the primary caregiver acts as a prototype for future relationships via the internal working model
- The 3 features of the internal working model are:

1. A model of other as being trustworthy
2. A model of the self as valuable
3. A model of the self as effective when interacting with others

- These 3 elements of the model guide future social behaviour and emotional behaviour
- Rutter (1972) points out that several indicators of attachment (such as protest or distress when the attached person leaves) has been shown for a variety of attachment figures such as fathers, siblings, peers and inanimate objects
- Critics such as Rutter have also accused Bowlby of not distinguishing between deprivation and privation- the complete lack of attachment bond rather than its loss

• Rutter argued that if a child faults to develop an emotional bond, this is privation, whereas deprivation refers to the loss of or damage to an attachment

- Bowlby's maternal deprivation hypothesis is supported by Harlow's research as Harlow showed that monkeys reared in isolation from their mother suffered emotional and social problems in older age, the monkeys never formed an attachment (privation) and grew up to be aggressive and had problems interacting with other monkeys
- For researchers such as Bowlby and Ainsworth, the 'marker' of attachment in an infant was behaviour designed to gain and maintain closeness with the parents

• The intensity of the behaviour could be heightened or reduced by changing environmental conditions

<u>Mary Ainsworth</u>
- Mary Ainsworth was a leading researcher in the attachment of infants
- She considered the type of attachment relationship formed between mother and child depended on how sensitive and responsive the mother was to her child's signals and that the nature of this relationship was shown through the infant's responses to the stresses of the "strange situation"

- Using page 202 of Fletcher and Garton, explain Ainsworth and Bell's (1970) experiment 'strange situation'

Types of attachment (Ainsworth)

1) Type A
- Anxious- avoidant attachment

• Baby not upset when mother leaves, insecure
• Ignores mother when returns

2) Type B
- Secure attachment

• Baby may or may not cry when mother leaves the rooms
• When mother returns, wants to be with her

3) Type C
- Anxious-resistant attachment

• Upset when mother leaves
• Remains upset or angry when mother returns, resists their mother by clinging to her but also kicking and pushing away

4) Type D
- Disorganised- disorientated attachment

• Confused when mother leaves
• Does not understand what is going on

<u>Important factors that contribute to attachment</u>
- Attachment is universal to all humans as it appears in all cultures
- Attachment has a biological basis as its main function is to increase chances of survival by helping child to seek someone who will care for their physical and emotional needs so they feel secure
- Seeking attachment is an innate amor inborn behaviour and therefore not a learned behaviour

Consequences of attachment

- Many psychologists believe attachment (first social relationship) lays the foundation for all the infants later social relationships
- Research has found the following:

• 11 year olds were more likely to be more responsive to one another, less critical and more often did things together were securely attached
• Pre school children with disorganised attachment style were more likely to behave in abnormal levels of hostility
• Children with secure attachment interacted more skilfully with their peers and has more close friends during summer camp

Attachment in a nutshell

- In conclusion, secure attachment serves as the prototype for later successful social interactions
- Attachment promotes trust and confidence which leads to more skilled social interactions later in childhood
- Of course attachment is only the first of many steps along the road of social development

Attachment- Cultural differences

- Van Ijzendoorn and Krooenberg (1988) carried out an analysis of studies involving 32 samples from 8 different countries and found evidence that all 3 types of attachment are found in all cultures and differences within are greater than differences between cultures
- Type B (Secure attachment) is most common type in all countries, Type A relatively more common in Western European countries and Type C more common in Japan and Israel

- A study by Abraham Sagi and his colleagues (1994) suggested that early child-rearing practices can lead to differences in the proportion of each attachment type

• Sagi was interested that a high proportion of children raised in traditional Israeli kibbutzim has in past research demonstrated Type C anxious-resistant, attachment.
• He considered it was likely due to the sleeping arrangements
• Infants are moved to an "infants" house at 6 weeks of age, they are cared for by professional carers with mothers visiting to feed and bathe them, at night 2 watch women care for all the children in the kibbutz on a rotational basis, no stable relationship with an adult available to them at night- likely to lead to insecure attachments.
• Sagi found that children from traditional kibbutzim showed a significantly higher level of anxious-resistant attachment (52%) as compared to 20% of children from home-based kibbutzim (children sleep in their parent's home)
• Various researchers have questioned whether this method is measuring the attachment or the "strangeness" of the Strange situation
• Japanese children find the separation part of the situation stressful as they are rarely separated from their mothers (Durkin, 1995)

- Children who spend most of the day in childcare (common in Western countries) may be unperturbed by their mother leaving the room
- The strange situation does demonstrate that in this situation the behaviour of children from different cultures yes vary, and some of this variation can be attributed to cultural differences in child-rearing practices

Parenting

- Child interactions work in both directions
- Other relationships within the family also affect parenting

• Cox and colleagues (1989) found that mothers with close and supportive relationship with their partners are more likely to be patent and nurturing in their relationships with their children

- Two aspects important in determining the development of children and adolescents are:

• Responsiveness: level of support and affection show by a parent
• Control: how the parent supervises and regulates their children behaviour

Parenting styles

- Diana Baumrind is one of the best-known researchers on parenting styles identifying two major dimensions
- Copy the Diana Baumrind's parenting table into you notes from page 204 in book

- Baumrind identified four parenting styles:

• Authoritarian parenting
• Authoritative parenting
• Permissive parenting
• Uninvolved parenting

Authoritarian Parenting

- Demands obedience
- Set rules
- No explanation for rules
- Correlational research has found that it leads to children who are obedient and proficient but they rank lower in happiness, social competence and self-esteem

Authoritative Parenting

- Reasonable demands
- Set rule with explanation
- Set limits
- Correlational research has found that it results in children who are happy, capable and successful (Maccoby, 1992)

Permissive parenting

- Few rules and guidelines
- Children freely express themselves with few restrictions
- Correlational research has found that it often results in children who rank low in happiness and self-regulation, especially in social relationships they are more likely to experience problems with authority and tend to perform poorly in school

Uninvolved parenting

- Parents reject children or overwhelmed by stresses of children
- No limits
- No interest
- Correlational research has found that this ranks lowest across all life domains, the children tend to lack self-control, and have low self-esteem and are less competent then their peers

- Baumrind (1971) found that children of authoritative parents were more achievement-orientated and had a better social skills than children of either authoritarian or permissive parents, as adolescents they were relatively confident and they tended to stay clear of drug abuse and other problem behaviours

Research Methods

Planning and conducting psychological research

- Experiments are conducted to test whether one things, or variable, influences or causes a change in another thing, or variable

Experimental and Non-experimental research

Experimental

- Where the researcher changes a variable or group of variable to see the effect on another variable
- Variable: Any factors that can very in amount or over time (e.g stress, fear)
- Independent variable: The variable that is changed by the experimenter
- Dependent variable: The variable that is measured to determine its relationship to the changed variable
- The researcher develops a "hypothesis" that is a tentative prediction of the relationship between he independent variable and the dependent variable ('an educated guess')
- The research method is used to support or disprove a hypothesis

Non-experimental

- Often involve:
- Observation: the collection of data by carefully watching and recording the behaviours of others
- Interviews: Where the data are responses to questions
- Case studies: of individual examples of behaviour
- Correlational studies: examine the relationship between two variables
- Archival research: were repositories of old material are examined

Scientific and non-scientific research

Scientific

- involves a systematic approach to the planning, conducting and reporting of research, usually in the form of experiments
- researchers collect empire evidence or data that enables them to draw conclusions, based on the experiments

Non-scientific

- Include things such as astrology, numerology, graphology to explain and predict human behaviour
- These re not based on science and they are often labelled "pseudoscience" to indicate that they do not have any scientific foundation

Participant selection

- Sample: A smaller subset of the population
- Population: The larger group of participants from which our sample is drawn.
- Provided the participants in the sample are representative of the population then the findings from the sample can be confidently applied to the population
- If the sample is biased (unrepresentative), then the findings could not be generalised to the population

Ethics in psychological research

Role of the experimenter

- In experiments researchers tend to work with "aggregated data" which means that the results represent the group average rather than individual scores
- Experiments assume that an experimenter will be objective to ensure that the research has no effect on the behaviour being observed or recorded or on the results
- The "experimenter effect" tells us that the experimenter's values and beliefs can influence the research process at any point
- To counter this, it is common practice for researchers to acknowledge any such expectation and potential biases and to put in place strategies to minimise these as far as possible through physical and emotional distance from study

Participants' rights

- Privacy

• The right of protection from unwanted intrusion by government or other people into one's affairs.
• It refers to the collection, storage and sharing of personal information

- Anonymity

• The protection of people's identity through not disclosing their name or not knowing it.

- Confidentiality

• Resides in the relationship between a professional and their patient, and refers to the degree of secrecy attached to the information given by the patient or client.
• Based on the understanding that information given by the patient will not be disclosed to anyone, unless the patent consents to the disclosure and under exceptional, usually legal, circumstances.

- Voluntary participation

• Participants must not be pressured or coerced to participate in any way. This means they cannot be required to participate in order to pass a course

- Withdrawal rights

• Participants have the right to withdraw from the research at any stage and for any reason and they must be informed of this before they give consent

Informed consent

- Researchers must get informed consent from participants
- This means that those taking part in any study should know why it is being carried out and eat they will be expected to do
- If telling participants the true purpose of the study before it is carried out would defeat the purpose of the study, then the researchers must make sure that participants do not experience any distress and they must be fully informed about the study after it is completed
- In situations where he participants cannot give informed consent because they are too young to do not have the intellectual ability to understand what they are being told, then consent must be obtained from those who are legally responsible for them, such as parents or guardians

• Participants must agree to participate in research studies of their own accord
• They must participate voluntarily and must not be coerced into consenting to participate through bribery or offers of rewards, or through threats such as failure on a course
• They must also be informed that they can withdraw from the study at any time without any patently, will suffer no disadvantage and do not need to give a reason.

Deception

- In some circumstances, psychologists choose to hide the real reason for the research in order to reduce the likelihood that participants will behave differently
- Under such "deception" researchers must debrief the participants after the study and explain the real reason for the study and why deception was necessary

Professional conduct

- Any psychological, medical or scientific research work in Australia with patents must comply with the most recent update of the "National statement on Ethical Conduct in human research"
- Psychologist also need to comply with the "Australian psychological Society's code of Ethics" which has a section on research.

• Both of these documents explain the professional code of conduct required of psychologists as they undertake research in Australia
• These documents require researchers to act according to agreed- upon principles for the ethical conduct of psychological research
• In Australia the fundamental principle in scientific research with humans is "beneficence": the benefits to the person must outweigh any risks

- All institutions where research with humans is undertaken have a Human Research Ethics committee which approves all research involving humans
- Detailed applications for research must be submitted for approval and the benefits (and risks) of the research need to be justified
- The welfare of the human participants must not be compromised
- The same, or different committee will also deal with applications to conduct research with animals which is also governed by various codes of ethics

Difference between sample and population data
- The sample selection must reflect the characteristics of the population that are of interest and under study to ensure that any results from the study can be generalised or applied to the population
- Representative sample: The sample drawn is the same as, or at least equivalent to the population from which it was drawn
- Random sampling: One way of obtaining a representative sample
• This type of sample makes sure every member of the study population has an equal chance of being selected to participate in the study
• This can be done in a number of ways such as: names selected from a roll, lottery procedure, drawing names out of a hat etc.

Features of experimental research methods
<u>Independent and dependent variables</u>
- Independent variable: The variable that is changed by the experimenter
- Dependent variable: The variable that is measured to determine its relationship to the changed variable (May or may not change as a result of the IV)

<u>Operational hypothesis</u>
- Operational hypothesis: those that are guiding current research- they are predicted answers to a proposed research question (tentative prediction of the relationship between the IV and DV)
- Null hypothesis: predicts that there will be no change in the DV after the manipulation of the IV
- Experimental hypothesis: predicts that change or difference will occur as a result of the manipulation of the IV

<u>Controlled and uncontrolled variables</u>
- Controlled variable: a variable that is not changed throughout the experiment to ensure that the changes observed are the result of the IV
- Uncontrolled variable: A variable that is allowed to stay random as it would have no predicted effect on the outcome

<u>Other variables:</u>
- Extraneous: Can cause an effect
- Confounding: Has caused an effect

<u>Experimental and control groups</u>
- Experimental group: those in the experimental group are subjected to the manipulation of the IV while those in the control group are not exposed to the IV
- Control group: provides a standard against which the behaviour of the experimental group can be compared in order to assess whether the IV has had an affect or caused a change in the DV
• The experimental and control groups need to be as similar as possible in characteristics that might influence the DV
• The groups should also be treated the same, except for the application of the IV with the experimental group

<u>Placebo and experimenter effects</u>
- Placebo: a dummy pill or a harmless substance given as if it were a treatment
• Used to control the effects of participant expectation

- Experimenter effects: The experimenters own personal variables as well as his or her expectations and behaviours that may bias results due to inaccurate observation, recording or interpreting data, or there may be simple bias in the way the experiment is presented to the participants

Reliability and Validity
- Reliability: They must be consistent within themselves and across time
• Internal consistency: Provided by the split- half method. The participant should respond in the same way to the first half than the second half. Correlation to responses in the questionnaire itself
• Test-retest reliability: involves comparing how people performed on a test at one time with how they performed on it some time later

- Validity: They must measure what the test developer intends them to measure
• Face validity: The items appear to be measuring what they say they are measuring
• Construct validity: examine whether the test items are in keeping with the constructs on which the test was based
• Concurrent validity: Comparing people's performance on the scale we are interested in with their performance on one that we already know about, and look at the strength of the relationship between them. Scores on a questionnaire are correlated with an external variable that reflects the same construct.
• Predictive validity: Extent to which it can predict other attributes or behaviours thought to be related to the constructs tested.

Longitudinal and cross-sectional design
- Cross-sectional methods: Take into account age-related developmental changes by comparing children of different ages
• Cohort effect: A "cohort" is defined as a group of people of the same age who have experienced the same cultural conditions and environmental events. The cohort effect describes the way in which we cant be sure that age differences are due to developmental changes
• strength: quick and easy, cheap
• limitation: cohort effect

- Longitudinal methods: Study the same group of people at different points in time
• Strength: No concern over cohort effects
• Limitation: very costly, time consuming, can loose participants over time (due to death etc)

Features of non- experimental research methods
Case Studies
- An in-depth, direct behavioural observation of a single case or situation
- Provide the opportunity for detailed knowledge about a single 'case' or a small number of related 'cases'
- The case is studied in context and uses a variety of data collection techniques including observation and interview
• Strengths: detailed knowledge
• Limitations: time consuming

Survey
- Researcher gathers self-reported data from participants who, ideally, have been randomly selected
- Surveys usually take the form of a questionnaire in which pre-determined answers are provided as alternatives
• Strengths: quick to administer
• Limitations: low response rate, data affected by the predisposition or mood of respondent on the day

Correlational studies
- Those that look at the relationship between two or more variables that involve assessing the degree and the type of relationship between these variables

- If there is a relationship between the variables, it is not necessarily a causal ('cause and effect') one.
- Correlational studies are generally used in cross-sectional studies look at a number of variables at a single point in time, or they can be used in prediction studies such as academic scores from one time to another

• Strengths: raise alternative hypothesis that can then be tested in research using experimental design that can allow cause to be examined
• Limitations:

Archival research

- Involves the examination of old, usually written, material found in places like libraries, law courts etc.
- Archival research is often used by historians and writers who reanalyse records to better understand events that happened in the past.

• Strengths: cheaper alternative, allows examined of data gathered over a long period of time and allows access to very large scale representative samples.
• Limitations: time consuming, effort required to understand all the factors involved with data, large knowledge and sill required to analyse the data

Behavioural variables in correlational studies

- Correlational studies are non-experimental methods to investigate the relationship between two or more variables that involve assessing the degree and type of relationship between these variables
- Correlational studies are often conducted when experimental ones would not be appropriate
- Behavioural variables in correlational studies are thus often those that pre-exist and cannot be varied as an IV
- The strength of the correlation describes the relationship (strong, moderate or weak)

• Positive correlation: high scores on one variable are associated with high score of the other variables
• Negative correlation: when the score on one variable is high it is low on the other

- A correlation does not indicate causation in most cases, often because there are other variables involved

Qualitative methods of data collection

- Qualitative data: information that is not expressed in numbers
- Self-reports, interviews, surveys and focus groups

Self reports

- When individuals are asked to comment on their own thoughts, emotions and beliefs by answering a series of questions on a particular topic
- Allows researchers to collect subjective data that cannot be overtly seen or measured and hence gain insight into the explanations behind behaviours
- There are several types of self reports: Survey, questionnaire, rating scale, interview

Interviews

- Open ended interviews: The researcher asks the participants in the study to comment on a statement or answer a question. They can answer in any way they like and the researcher records their responses
- Fixed-response interviews: The participants responses are restricted to a range of alternatives offered by the researcher (e.g yes or no)

• Structured interview: Involves predetermined questions in a pre-set order with fixed wording
• Semi-structured interview: This involves predetermined questions, but the order of asking them can be varied by the researcher depending on the circumstances and the answers that are being elicited. Wording of questions can be varied and explanations given if need. Questions can be omitted or even new ones added if required
• Unstructured interview: This involves a conversation around the researchers general area of interest. It is informal and casual but often in-depth.

Focus group
- A researcher asks group members about their ideas, perceptions, opinions and so on in a setting that is more natural than a one-on-one interview
- Often used by market researchers who want to gauge opinion about a product, but also used as a first step in a research project
- In focus groups, each discussion session is recorded and transcribed so it can be analysed to determine themes and key issues

• Strength:
• Limitation: social desirability (group members comments might be affected by the desire to give socially acceptable answers)

Objective quantitative measures in research
- Objective quantitative measures are generally physiological responses and include things such as brain waves, heart rate, body temperature and electrical conductivity of the skin
- Quantitative data – data collected through systematic and controlled procedures that is usually presented in numerical or categorical form
- Objective measure because limitations to self report e.g fitness test instead of asking participants to rate their fitness

Brain waves
- Recorded on an EEG (electroencephalogram)
- Brain waves are measured in terms of the number of waves per second (their frequency) and also in terms of the size of their peaks and troughs (their amplitudes)
- The brains electrical activity is at its highest during normal waking consciousness. At this time the brain waves are fast and small. The shape of the wave changes during the different stages of the sleep cycle

Heart rate
- Changes in our heart rate accompany changes in our level of awareness
- When we fall asleep, our heart rate slows
- Slow, deep breaths result in a lowered heart rate, Fast, shallow breathing has the opposite effects
- Heart rates can also be raised by the use of stimulants that lead to altered state of consciousness, or by anxiety and irritation

Body temperature
- Our body temperature is not as variable as our heart rate but it does change with changes in consciousness
- During sleep, temperature drops by more than one degree celsius

Electrical conductivity of the skin
- Changes in the electrical conductivity of the skin are known as the galvanic skin response (GSR)
- The GSR is measured by attaching electrodes to hair free parts of the body
- If we sweat and our skin is wet, an electrical current passes more easily then if our skin is dry
- As sweating occurs during times when we are aroused, such as when we are anxious, fearful or excited, the GSR indicates our level of arousal

Subjective quantitative measures
Checklists
- Researchers use these in observational studies with predetermined criteria to guide observations and recording responses

Rating scales
- Rating scales have been developed by psychologists for a range of abilities, attitudes, views and opinions
- They can be regarded as versions of questionnaire or interviews

- These tests provide a scale on which an individuals standing on an issue can be measured and they are commonly used for attitude measurement, although the same principle apply to the development of any rating scale

- Likert scale
• Focuses on the direction of an attitude
• About 20 questions/ statements
• Respondent indicates their degree of agreement/disagreement on a five-point scale (War is sometimes necessary to maintain justice (*strongly agree, agree, neither, disagree, strongly disagree*)
• Half the attitudes are negative and half positive

Types of sampling

Stratified sampling
• Involves dividing the population into groups, or strata, where each group has a particular characteristic
• It is usual to have the numbers of each group reflecting the relative numbers in the population

Convenience sampling
• Quick and easy way of selecting participants
• Involves selecting participants based on the researchers accessibility to them, or to the participants availability
• Advantage: it is convenient, does not require forward planning, quick to administer

Random Sampling
• Ensures that every member of a population has an equal chance of being selected for the sample being used in the study (e.g pulling names out of a hat)
• Advantage: very quick, inexpensive as sampling procedures are easy to set up
• Not biased- every member of the population has an equal chance of being selected to be part of the sample

Experimental research designs

Independent-groups design
- Involves randomly allocating the members of the sample to either the control or experimental group
- Advantages
• Very quick and easy to administer
• Allows us to research large numbers of participants fairly easily
- Disadvantages:
• There may be participant differences between the groups
• Does not effectively minimise differences in participant characteristics between the groups

Matched-Participants design
- Seeks to eradicate participant differences
- Involves pairing each participant based on a certain characteristic that they share
- Once participants have been matched, you randomly allocated one to the control group and one to the experimental group
- Advantages:
• Helps to achieve an even spread of participant characteristics between the groups and helps to minimise extraneous variables due to participant differences
- Disadvantages:
• Involves a pre-test to match participants on particular characteristics and is therefor more time consuming than other designs
• One participant may drop out during experiment so therefor the other participant from the pair must be removed from the study

Repeated-measures design

- Implemented by using only one group of participants and exposing that group to both the control and experimental conditions
- As the same participants are used in both the control and experimental conditions, they are obviously completely identical in characteristics and abilities
- Eliminates impact of participant differences as an extraneous variable but it does create a different problems known as "order effects"

• Order effects: occur when there is a change in results due to the sequence in which two tasks are competed (that is, due to the order in which participants complete the control and experimental conditions)
• The change in results may be an increase in performance due to knowledge or experience in task, or may be a decrease in performance due to boredom or fatigue with carrying out a task more than once
• An individuals experience may therefor have an impact on the results of the study and this would be an extraneous variable

- One way to minimise the impact of order effects is to use "counterbalancing"

• Counterbalancing involves dividing the group of participants in half an arranging the order of the conditions so that each condition occurs equally as often in each positions (that is, it involves exposing half of the participants to the control condition first and the control condition second)
• This counterbalances the potential impact of order effects on the results
• Counterbalancing does not eliminate order effect occurring, but it removes the influence that order effects have on results

Processing and evaluating psychological research

Methods of displaying quantitative data

Tables

- Use clear headings
- Use headings and sub headings that highlight research questions
- Specify what the numbers represent

Graphs

- Line graphs

• Show the relationship between two variables, things that can vary (change) in some way, such as an amount

- Histograms or bar graphs

• bar graphs show unpontinuous information
• Histograms represent how one variable changes in relation to another (bars touch each other)

- Frequency polygons

• Looks like a line graph, but while line graphs can be used to show a relationship between any two variables of interest, frequency polygons are only used to show information about frequency (how something occurs)
• advantage: several sets of data can be displayed in one graph

- Pie charts

• Show the proportions of data

Measures of central tendency

Descriptive statistics

- Mode: most frequently occurring variable
- Mean: the average score
- Median: the middle variable
- Range: difference between the highest and lowest score

Measures of dispersion

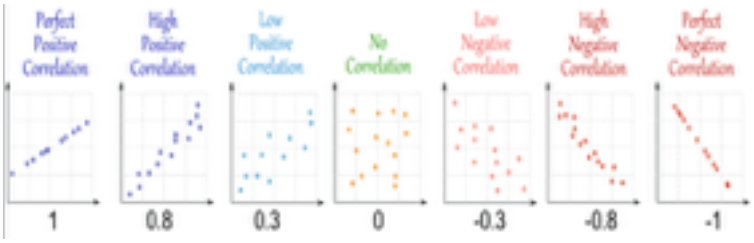
- The standard distribution is called the "bell curve" or "normal distribution"
- Symmetrical around mean, Denser in centre and less dense at tails, mean/median/ mode are identical
- Best to use variation of standard deviation
- The variance of scores tells us how spread out the scores are around the mean
- Psychologists prefer to use the standard deviation to describe the spread of a group of scores (it is the squared root of the variance and represents the average amount by which scores differ from the mean)

Role of probability

- When testing for statistical significance, these are the comparisons that we make- between the distribution of our scores and that of the wider population
- If our results are more extreme then those assumed by a normal distribution, or by chance, then we conclude that our results are statistically significant
- p value >0.05= probability due to chance is less than 5%
- p value <0.05= Results are likely due to the independent variable, hypothesis accepted, conclusions can be drawn.

Use of correlation to establish association between variables

- Correlation: statistical term that tell us about the relationship between two measures
- Correlation coefficient: number the describes the strength and direction of the relationship between two variables and be described as positive or negative
- Bivariate correlation: Only two variables
- Multivariate correlation: more than two variables



Sources of error in data

Participant sources of error

- Hawthorne effect: Refers to the finding that simply knowing that they are a part of a study can lead participants to change their behaviour
- Placebo: A neutral substance that is presented in such a way that it looks like "the real thing"- participants will not know which one they received, that is, they will be 'blind' to the group they are in, which is known as the "single-blind procedure".
- Any differences in the effects of the drug should then be due to the drug itself, rather than to beliefs about the treatment

Experimenter sources of error

- Experimenters may also influence participants behaviour
- An "experimenter effect" can occur when the experimenters actions, such as smiling or shaking hands, affect how the participants respond, especially if one group is treated differently from another
- "Experimenter bias" can also occur when the person measuring the dependent variable knows which group the participant is in.
- This has shown that verbal responses may be interpreted in a particular way and so on without intending to do so
- Differential treatment of groups can leads to the dependent variable being affected by factors other than the independent variables, and incorrect conclusion being reached.

- Experimenters use the “double-blind procedure” where neither the participants now the person collecting the data knowns which group the participant is in.
• This required an independent person to allocate participants to the experimental or control group
• The researchers desire for the treatment to work does not lead to bias in the measurement of outcomes
• Only after the data has been collected is the researcher made aware of which group each participant was in.

- A simple way of reducing differences between experimental and control groups is through the use of random allocation
- Random allocation is used to allocate participants to groups

Source of Error	Description	Ways to reduce it
Demand characteristics	Participant responds in a way they think the experimenter will be pleased	Cross-checks, double blind procedures
Experimenter effect	The experimenters behaviour may change the participants reaction	Double-blind study
Placebo effect	Participant changes the behaviour in the belief that treatment is working	
Sampling error	Sample of participants is biased	Select participants randomly
Order effects	Impact of the order of items/ tasks impacts results	Counterbalancing: present items in a different order
Observer bias	Observer sees what they want or expect to see	Use a systematic approach to record or process information

<u>Types of Sampling</u>
- Stratified random sampling:
• Involves dividing the population into groups, or strata, where each group has a particular characteristic
• It is usual to have the numbers of each group reflecting the relative numbers in the population

- Proportionate sampling:
• The proportions of the groups would differ according to the representation in the general population

- Disproportionate sampling:
• Occasionally used where small, sometimes rare, groups are oversampled to ensure there is at least some representation of the stratum

- Snowball sampling:
• Used in qualitative research
• The researcher identifies particular individuals of interest who are interviewed, and who then provide names of others of interest in the population who may consent to being interviewed for the study.

- Convenience sampling:
• Quick and easy way of selecting participants
• Involves selecting participants based on the researchers accessibility to them, or to the participants availability

• Advantage: it is convenient, does not require forward planning, quick to administer

- These sampling techniques reduces sources of data error and reduce the likelihood of error when generalising the results from the sample to the wider population

- Placebo effect:
• It is shown that participants who take inactive substances or undergo useless procedures may feel much improved, provided that they do not know that the treatment is fake
• The placebo effect is not just due to psychological processes

- A more rigid form of double-blind studies can be found in "Randomised controlled trials (RCTs)
• Provide the best

Concept of statistical significance
- Refers to the significance of the difference between two scores (That is, whether we can attribute the results to the IV or to merely chance alone)
- Provides statistical proof of a causal relationship, yes the IV does cause the DV to change!
- When testing for statistical significance we make comparisons between he distribution of our scores and that of the wider population
- If the results are more extreme (at either end of the distribution) than those assumed by normal distribution, or by chance, then we conclude that the results are statistically significant
- Statistical significance is also used to indicate whether a difference between the results for the experimental group and the control group is real, that is, due to the independent variable and not simply due to chance.
• Researchers accept that a difference is a true difference due to independent variable when the probability is due to chance 5 times or fewer in 100 repetitions of the same study. This results in a P-value of 0.05 or 5% chance that the difference between the groups score was due to chance.
- Some tests of significance are:
• T-tests
• Chi-squares

If $p < 0.05$:
- Results are statistically significant Results are highly likely to be due to the IV
- Hypothesis accepted; conclusions may be drawn.

If $p > 0.05$
- The results are not statistically significant and the results are likely to be due to chance and not the IV.
- Therefore the hypothesis IS rejected! No conclusions can be drawn.

It is not correct to draw a conclusion, all that can be said is that a correlation lists between to the two variables
• Correlation does not mean causation

Social Psychology

The Influence of groups on behaviour

Impact of the presence on others

- Our behaviour is influenced by others
- As long ago as 1989 Normal Triplett notices that cyclists rode faster when they raced against each other and hypothesised that the presence of others boosted performance (Triplett, cited in Myers, 2007)

• He tested this by asking adolescents to wind in a reel as quickly as they could, he found that their performance was better when they were with another person who was also winding a reel than when they were doing the task alone
• He referred to this boost in performance due to the presence of others as "Social facilitation"

- Later research showed that the presence of others did not always have this helpful effect. It could lead to worse performance= "Social inhibition"
- These different effects of the presence of others can be understood when we consider that being watched increased our level of arousal

• Yerkes and Dodson (1908) found that people generally perform best at moderate levels of arousal
• With simple or well-learned tasks we perform better with a relatively high level of arousal
• For new tasks, we perform better at lower arousals

Diffusion of responsibility

- The effects of group membership can have more dramatic consequences
- In New York in 1964, there was a brutal murder that received a lot of publicity, kitty Genovese was walking home when a man attacked her with a knife, she fought the man off and screamed loudly for help, no one came to her assistance. She escaped, but he found her and attacked her again and it took 30 min for her to die

• 38 people heard her scream from the safety of their rooms and yet no one phoned the police, the media asked why?

- This question was of interest to two social psychologists Bibb Latane and John Darley, who began carrying out a series of studies
- In one of these studies (Darley and Latane, 1968), individual students were placed in small rooms and told they would take part in a discussion using a microphone and headphones, some students were led to believe that they would have a discussion with one other person, others were told that they would be having a discussion with a small group of students

• One student was actually an accomplice of the researchers and told others that he was epileptic and suddenly made noises that sounded as if he was having a fit
• The findings showed that the percentage of students who went for help depended on the number of students they thought were in the discussion group
• All the participants who thought that they and the epileptic were the only members went for help with 85% going in the first 80 seconds
• By contrast 62% of students who thought that there were 6 people in discussion group went for help with only 31% going quickly

- The research showed that the more people who are present in an emergency, the less likely it is that each person will try to help which is known as the "Bystander effect"
- Latane thought that this effect was due to "diffusion of responsibility", if a person is alone, he or she accepts responsibility, if several people are present, each assumes that the other will do something so he or she does not need to take responsibility

Social Influence

- Another way individuals are affected by groups is through social influence, this happens when we change our behaviour in response to other people
- A recent Australian study (Platow et al, 2005) has shown that the influence of the groups to which we belong is stronger if we identify with the group

- University students listened to a tape of a stand-up comedian telling jokes, half of the students heads the tape accompanied by 'canned laughter' after each joke, half heard the joke without the laughter
- Half of each group was told that the tapes had been recorded at a show attended by students from their university- a group that they had identified with
- The other half were told that the tapes had been recorded at a show put on for members of a political group- a group unimportant to the students
- Students who heard the joke accompanied by canned laughter supposedly from their fellow student rated them funnier than the students who though the laughter came from members of a group that was of no important to them or who heard no laughter at all

- Peers are usually important to us and can influence us greatly, they have similar status, own social norms (e.g style of dress, taste of music and attitudes towards things such as alcohol, marriage and bullying, slang terms or expressions that are not understood by others outside the group)
- Research studies show the influence of the peer group starts to increase around middle childhood and continues until middle adolescence, when it starts to decline as the influence of close friends on adolescents behaviour increases
- Social influence from peers is often given the negative label of peer pressure (pressure from the group for individuals in the group to think, feel or behaviour in certain ways whether they want to or not)

- People who are "fringe" members of groups or who are less sure of their standing in the group are more likely to be influenced by peer pressure than other members who have higher standing, they try to gain favour with other members of the group by acting the way they think the group would approve of (Kaplan, 2004)

Group Polarisation

- Group Polarisation: When individuals are in groups with others who hold similar attitudes or beliefs, discussion within the group tends to strengthen opinions
- David Myers and George Bishop (1970) found that when students who were low in racial prejudice talked together about racial issues, their attitudes become even more accepting, however when highly prejudiced students talked about the same issues, they became even more prejudiced
- Group polarisation can help us understand the processes that can lead to actions such as suicide bombers and the young men and women joining isis.

- Terrorists are members of groups whose beliefs become stronger and more firmly entrenched as a result of discussion with like-minded people
- Clark McCauley (2002, in Myers, 2007) notes that a terrorist mentality does not come out of thin air, rather it arises when people with shared grievance get together and talk in a group in which there are no moderation influences

Conformity

- Conformity: Changing behaviour in response to group pressure
- This process was firsts studied experimentally in a classic study reported by solomon Asch in 1955

<u>Soloman Asch's study- Conformity</u>

- Asch's experiment was set up as a simple visual judgment task
- Groups 8-10 participants seated around a table were shown two cards, on one was a set of three lines of different lengths and on the other there was a single line
- One by one the participants were asked which of the three lines was the same length as the single standard line
- Unbeknown to the real participant the others in the groups were not real participants but stooges- confederates of the experimenter

- The were 18 comparison trials, for the first few trials everyone agreed about which line was the same length as the standard, giving the obviously correct answer

- But on 12 of the 18 trials the confederates all agreed on an answer that was incorrect, sometimes obviously so
- What would the real participant in the study do- give an answer in agreement with the rest of the group or follow the evidence of his or her senses
- Asch found that 75 per cent of his participants agreed with the confederates on at least one trial and 50 percent of his participants agreed with the confederates on 6 or more trials
- Only a quarter of the people in the study actually stuck with the evidence of their senses all the time

- Normative social influence: when we conform to group standards in order to be part of a group and be accepted by the group
- Friendship groups exert strong influence on the ways we dress, speak and behave
- Breaking social norms can lead to disapproval or even exclusion from the group

- Some conformity exists otherwise behaviour would be unpredictable (e.g children are socialised into group norms and expected behaviours in different situations and parents and teachers are to teach children what is expected
- Conformity means that people will assume behaviour of others in any particular social group without explicitly being told how to behave or act
- Informational social influence: We take our cues on how to behave from watching the people around us

- Later studies by Asch and other psychologists who have been stimulated by his research have investigated the factors that influence the extent to which we are likely to conform to group pressure
• Group size: Has been found to have some effect-conformity increases with the size up to a group of four, after that increasing the group size has little influence
• Degree of unanimity: Is of greater importance, when others are unanimous- agree completely- it is difficult to stand out

- Asch found that if only one confederate disagreed with others, the amount of conformity by the real research participant was greatly reduced (80%)
- The presence of another person who shares one's views or who at least doesn't agree with the others in the group strengthens resistance to conformity
- Asch's classic line-judgement task has been repeated by experimenters in many parts of the world, Bond and Smith (1996) compared the data from 133 Asch- type studies carried out in 17 countries and they found evidence for cultural differences in conformity
- The highest levels of conformity were found collectivist cultures and lower levels found in individualist cultures
- Remember: Achieving group goals is highly valued in collectivist cultures whereas being independent and achieving personal goals is valued in individualist cultures

Obedience
- As well as responding to the social pressures of groups we may also change our behaviour when we are in a situation in which obedience is expected
- When an authority figure asks us to do something there is an explicit expectation that we will obey or face negative consequences
- 1963- famous experiment on obedience by Stanley Milgram

<u>Milgram's experiment- Obedience</u>
- Recruited a range of men to take part in his research on the effects of punishment and learning with a financial inducement for participation, were from a range of occupations and education levels
- Payment was made for turning up and they could leave at any time
- Arrived in pairs and one was a teacher the other the learner
- The learner had to learn a list of pairs of words and the teacher had to administer an electric shock each time the learner gave the wrong answer

- After the teacher had watched the learner being attached to all wires necessary for the shock, he was taken to another room and shown the shock equipment, administer larger shock for every single mistake made.
• Labels of shock ranged from slight (15 volts) to danger severe shock (375 volts) 2 final switches (435 and 450 volts) were labelled XXX
- The teacher was shown how to operate the shock generator, when the lever was pulled a light came on, buzzing sounds then meter showed the reading. Some clicks were heard and the teacher experienced a slight shock himself
- The teacher could not see the learner, so assumed the shock had been administered
- Milgram conducted several versions of the experiment and the teacher would administer larger and larger shocks even when the teacher could hear the learner groan, at 150 volts the learner would yell our that he had to get out of the experiment as he had heart trouble and refused to continue
• But the experimenter continued to insist that the teacher continue
- 26 out of 40 participants administered 450 volts even believing they were hurting someone else
- All participant administered 300 volts but 5 refused to continue (at this stage the learner went silent- no longer responded to the shocks)
- The whole experiment was a deception: 40 men were the teachers, the learner a male was an actor- it was a hoax
- Participants were debriefed and were reassured that their behaviour as the teacher was normal

- Milgram's experiment was to study obedience to authority and was partly derived from questions about why Nazi SS officers obeyed orders from their superior officers to gas millions of jews during the Second World War
- Such obedience to authority resulted in million son deaths- why did it occur?
- The main factors influencing such obedience:
• Immediacy and proximity to the victim were not seen: subsequent studies had situations where the teacher could see the learner and obedience dropped
• Immediacy or proximity of the experimenter: was also influential- removing the experimenter from the same room as the teacher reduced obedience
• Authority of the experimenter: in Milgram's experiments, the experimenter was a white lab-coated Caucasian university professor, conducting the experiment in a non- university setting also reduced the levels of obedience

- Conclusion drawn from Milgram's research for the reasons people obey authority:
1) Belief in legitimate authority figure
2) Commitment to successful achievement of the experiment
3) Lack of disobedient role models, conduction of the experiment in social isolation meant that social norms or expected behaviours were not present
4) Lack of personal responsibility, Milgram as the experimenter assured teachers that they were not personally responsible for the distress of the learner
- Milgram's studies suggest that soldiers would be much more willing to fire a rocket or drop a bomb on a city than they would be to shoot civilians at close range

<u>Zimbardo- Obedience</u>
- Another study which gives further insights into role of individuals' power and status in determining social behaviour is Zimbardo and his colleagues
- At Stanford University- they carried out a study to determine the effects of being either a prisoner or a prison guard (Zimbardo et al, 1973)
- Recruited 70 young male university students through newspaper advertisement which sought men who were prepared to participate in a prison experiment for two weeks
- 24 healthy average males with no psychological problems were selected
- Half of these were randomly assigned to the role of the prisoner and half to the role of the guard
- Basement of the Stanford University- cells, security doors, guards were issued uniforms, dark glasses, whistles, handcuffs and truncheons and instructed to enforce the rules
- Prisoners were stripped, sprayed for lice, issued with smocks with numbers and shared a small cell with 2 other inmates

- Guards developed rules to keep prisoners in their place- brutal, humiliated them, subjected ringleaders to solitary confinement, they were dehumanised

- The guards in Zimbardo's prison study were dressed in similar uniforms and dark glasses to increase anonymity
- This lead the guards to act more aggressively towards prisoners with was due to deindividuation
- Deindividuation: The loss of social identity and inhibition causing a person to lose responsibility for his or her own actions and causing them to ignore possible consequences

- 4 prisoners had to be released over the first 4 days of the study as a result of severe negative reactions-crying, hysteria, rage and one person had a severe body rash
- After 6 days the experiment was halted
- The assignment roles had become reality for those involved
- Zimbardo was concerned that even he was becoming the Prison Superintendent and was becoming more concerned for the security of his prison than for the study participants

- Zimbardo's study made him realise that social roles influence behaviour in more complex ways then he had ever realised
- The behaviour of the guards and prisoners was due to the social environment of the prison and the roles of the participants influenced the way both the guards and prisoners behaved
- Zimbardo's study received renewed publicity in 2003-2004 because of its relevance to the behaviour of US guards at Abu Ghraib during the US military campaign in Iraq

- It should be noted that there are always some individuals who resisted group influence
- A committed individual or two who hold a minority view can eventually sway majorities
- Some of the most influential people of the past century held views that were initially opposed by the majority of people or those in power e.g Mahatma Gandhi, Nelson Mandela and Martin Luther King

<u>Theories of Social Psychology</u>
- Social Psychology: the scientific study of the nature and causes of individual behaviour in social situations, how thoughts, feelings and behaviours are influenced by others
- Social psychology is related to perception, language, cognitive psychology, sociology and cultural history, it is applied to sport psychology and organisational psychology
- Some titles of a few papers presented in 2005:
• Do mass media affect stereotypes even when exemplar information is available?
• Perception of Juvenile offenders: The impact of age, race and outcome

- Historically, social psychology grew out of German discipline of Volkerpsychologie or folk psychology in the mid 1800's, which studied the collective or group mind, which means a societal way of thinking and behaving
- William McDougall 1908 text sparked the debate by claiming the beliefs, attitudes and thoughts were institutionalised and became part of individuals who reflected those beliefs
- McDougall argued that social behaviour was innate- this view is discredited nowadays
- 1924 Floyd Allport attacked McDougall's view of the origins of social psychology and argued that it is concerned with the scientific study of individual behaviour

- Allport postulated the use of behaviourist approach to the study of social psychology- this was the start of experimental social psychology
- Allport argued that social behaviour is derived from the behaviour and actions of others and introduced ideas such as conformity, facial expression of emotions and the influence of an audience on individual behaviour
- Social psychology expanded rapidly in the 1950's when social psychologist started to look at groups and group membership
- Two theories developed:

1) Cognitive dissonance

2) Attribution theory

Attribution Theory

- Attribution theory- how people infer the reasons behind the behaviour of others
- e.g why did your neighbour donate $50 to save the children? Was she altruistic? Did someone pressure her? Does she really believe in the work of the agency?
- Which of the possible causes the action that should be attributed?

• Internal or dispositional attribution: We infer something about the person- their attitude, personality etc
• External or situational attribution: We conclude that some external cause- peer pressure of threats for example is responsible for the behaviour

- Fritz Heider, the originator of attribution theory, noted that we usually take an individual's behaviour at face value and do not sufficiently consider the surrounding circumstances (Heider, 1985) in other words we favour a dispositional attribution for the behaviour- this bias is fundamental attribution error
- Jones Harris (1967) provided strong support for this attribution bias in a series of experiments in which they asked students to judge the true attitude of a person after reading limited information presented in either an essay or speech by him on a controversial topic

• In one of the studies the students read what was portrayed as the opening statements in a college debate that "Castro's Cuba is a legitimate member of the family of nations" Speeches either supported or opposed this position
• Despite the fact that participants in the study were told that debaters were assigned which side of the argument they were to take, they inferred that the debater held an attitude towards Castro that was close to the one they argued in the debate.
• Therefore we can see that the dispositional attribution was stronger than the situational one

- It has been found that children showing reactive aggression (an angry response) are likely to show attribution bias and interpret situations as hostile when no hostility is intended (Crick and Dodge, 1994)

• e.g Toby and Jonas are running around a corner and bump into each other, based on previous experience, Toby has developed a hostile attribution bias, so that he thinks Jonas is a nasty person who has deliberately tried to hurt him, Toby might push Jonas.

- We make attributions on ourselves. They can be dispositional- I bought the bag because i need it, or situational- I bought the bag because the lady pressured me
- De Michele and colleagues (1998) suggest that we distort the facts and make situational attributions to maintain self-esteem: this is known as "self-serving bias"

• e.g we bought the bag which we could not afford and blamed it on the assistant and protecting our self-esteem

- Kelley's theory of causal attribution (1973) explains how people make causal explanations and answers questions about the 'why' something happened- i.e. not on face value

- Following this theory if we were trying to decide among possible causes as to why e.g Harry failed an exam we would consider:

1) Personal Factors: does he like maths?, is he lazy?
2) Time factors: had he failed maths tests in the past?
3) Entities: Other relevant info about the situation- was it a hard test? Did other people pass the exam?

• If we knew that Harry was hardworking then we would likely attribute his failure to the test being too difficult

- Kelley (1973) acknowledged that there were still issues about attributions theory that need to be addressed such as why prior beliefs such as stereotypes affect the intake information about possible competing causes of behaviour and events

- This theory does not explain why some people prefer simple causal explantations over ones that take into account the person, time and entity information
• To use the earlier example: some people may jump to the conclusion that Harry is unintelligent

Cognitive Dissonance Theory

- Festinger (1957) was interested in the fact that people experience discomfort or psychological tension when they hold two beliefs that are in conflict of when they behave in ways that are inconsistent with their beliefs
- Cognitive dissonance: people attempt to reduce this dissonance by changing the belief, attitude or behaviour
• e.g a smoker beliefs that smoking is bad for his health may decide that the evidence against smoking being a health hazard is flawed or inconclusive (change in the belief) or he may join a quit program (change in behaviour)

- Cognitive dissonance research has provided explanations for some unexpected phenomena- the dissonance and hence attitude change is created when there are not compensation reasons for the change
- This is seen in an experiment by Festinger and Carlsmith (1959, in Atkinson et al, 1996) in which college student participated in a series of dull tasks
• After they completed the tasks, half were offered $1 to tell the next participant that the tasks were interesting and would be fun- the other half were paid $20 to do this
• Those who were paid $1 rated the tasks enjoyable but those who had been paid $20 rated it lower- similar to that of control participants who had not spoken to another participant
• It would appear that the small incentive led individuals to believe what they had said, whereas who were paid the larger amount had a compensating reason for changing their belief