

Paper 1, Section A: Memory Knowledge Organiser

Processes of Memory

Encoding – Changing information so that it can be held in the brain.

- Visual
- Acoustic
- Semantic



Storage – Holding information in memory so that it can be retrieved later.



Retrieval – Locating and bringing information into mind.

- Recognition: identifying from options
- Cued recall: Locating information with a clue.
- Free recall: without clues.



Types of Long-Term Memory

Episodic: life events.	Semantic: facts and meanings.	Procedural: how to do things.
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Baddeley's Study of Encoding:

Aim: To see if there was a difference in the type of encoding used in STM and LTM.

Method: Participants learned words similar or dissimilar sounding. Immediate recall.

Learned words with similar or dissimilar meanings. Recall after 20 minutes

Results: Similar sounding words were poorly recalled in STM. Words with similar meaning were poorly recalled in LTM

Conclusion: STM is encoded acoustically and LTM is encoded semantically.

Evaluation:

- ☺ Controlled experiment
- ☹ STM is sometimes visual
- ☹ LTM may not have been tested

Structures of Memory

Atkinson and Shiffrin's Multi-Store Model:

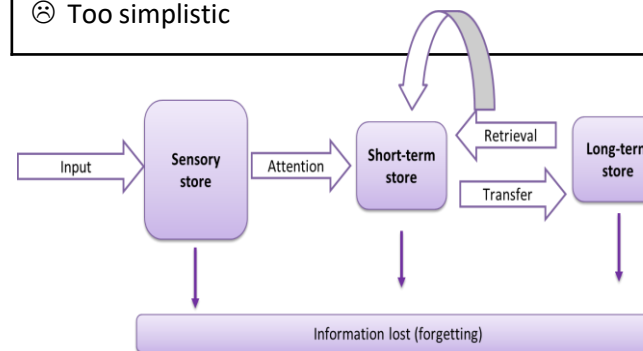
Sensory memory: very short duration, large capacity. Attention transfers to STM.

STM: 30 second duration, 5-9 items capacity, acoustic coding.

LTM: lifetime duration, unlimited capacity, semantic coding.

Evaluation:

- ☺ Supporting research – Baddeley and Murdoch.
- ☹ Too simplistic



Murdoch's Serial Position curve:

Aim: To see if memory of words is affected by location in a list.

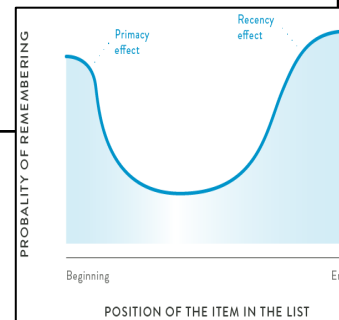
Method: Participants listened to 20 word lists with 10–40-words on them, recalled words after each list.

Results: Higher recall for firsts words (primacy effect) and last words (recency effect).

Conclusion: Shows the serial position effect and supports MSM.

Evaluation:

- ☺ Controlled lab study
- ☹ Artificial task



Memory as an Active Process

Bartlett's War of the Ghosts study:

Aim: To see how memory is reconstructed when recalling an unfamiliar story.

Method: The War of the Ghosts was read by one participant and recalled after 15 minutes, then read by another participant and recalled and so on (serial reproduction).

Results: Participants changed the story to fit cultural expectations (assimilation), leaving out unfamiliar information (omissions).

Conclusion: We use our schemas and cultural expectations to reconstruct memory.

Evaluation:

- ☹ Lacks control
- ☹ Researcher bias
- ☹ Story was unusual



Bartlett's Theory of Reconstructive Memory:

- People rebuild memory as an **active process**.
- **Memory is inaccurate** and not a process of exact reproduction of experiences.
- **Pieces of information are recombined** to tell the whole story.
- **Expectations** come from the world/culture we live in and affect storage and recall.
- **Effort after meaning** – we focus on the meaning of events and make an effort afterwards to make sense of fragments of memory.

Evaluation:

- ☺ Based on more realistic research
- ☺ Real world application – eyewitness testimony
- ☹ Some memories are accurate

Factors Affecting the Accuracy of Memory

Interference

Forgetting may occur if two memories compete with each other. One memory prevents us from accessing the other memory. This is especially likely if the two memories are similar.

- **Proactive interference** – past memories preventing the recall of recent memories.
- **Retroactive interference** – recent memories preventing recall of past memories.

Key Study: McGeoch and McDonald (synonyms, antonyms, numbers, nonsense, adjectives)

Context

Certain triggers can be encoded in memory at the time of learning. Encoding and recalling information in the same context leads to better recall.

Key Study: Godden and Baddeley (divers)



False Memories

A memory for something that did not happen but which feels as if it were true.

This is often applied to eyewitness testimony - creating their version of events using expectations.

Key Study: Loftus and Pickrell (lost in the mall)

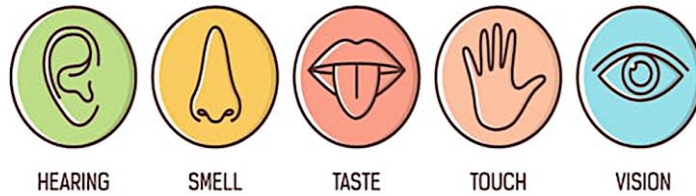


Paper 1, Section B: Perception Knowledge Organiser

Sensation and Perception

Sensation: physical stimulation of the five senses processed by sense receptors.

Perception: The interpreting and organising of sensory information.



Visual Cues and Constancies

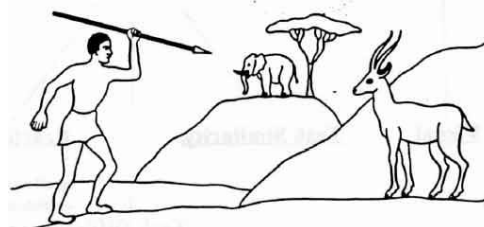
Monocular depth cues (one eye):	Binocular depth cues (two eyes):
<p>Height in plane: objects higher up appear further away.</p>	<p>Convergence: Eyes point closer together when an object is close. Muscles work harder so we know distance and depth.</p> <p>Retinal disparity: difference between the view of the left and right eye gives brain information about the depth and distance.</p>
<p>Relative size: Smaller objects appear further away.</p>	
<p>Occlusion: If one object obscures part of another object, it is seen as closer.</p>	
<p>Linear Perspective: parallel lines appear closer as they become more distant.</p>	

Visual Illusions

Illusion	Name	Explanation
	Ponzo Illusion	Misinterpreted depth cue and size constancy. The converging lines gives the impression of distance. We mentally enlarge the top line.
	Muller-Lyer Illusion	Misinterpreted depth cue The line with the outgoing arrows (exterior wall) is perceived as longer than the line with the inward arrows (interior wall).
	Rubin's vase	Ambiguous Figure This image can be perceived as either two faces staring at each other or as a vase. (Also the Necker Cube)
	Ames Room	Misinterpreted depth cues One person appears taller than the other because the room is actually a trapezoid, but this is not obvious to the observer.
	Kanizsa Triangle	Fiction We perceive a triangle even though there isn't one. This works by crating illusory contours.

Gibson and Gregory

Gibson's Direct Theory of Perception	Gregory's Constructivist Theory of Perception
<ul style="list-style-type: none"> Perception and sensation are the same thing. Bottom-up theory. Perception is innate. We use affordances. We use optic flow patterns. Monocular depth cue – motion parallax. 	<ul style="list-style-type: none"> Perception is constructed. We make inferences – our brains fill in the gaps to create a conclusion about what is being seen. Perception is learned from experience Top-down theory Visual illusions are mistaken hypothesis
<p>Evaluation:</p> <ul style="list-style-type: none"> ☺ Real-world meaning (WW2 pilots) ☺ Supported by the Visual Cliff Experiment ☹ Struggles to explain visual illusions 	<p>Evaluation:</p> <ul style="list-style-type: none"> ☺ Support from research in different cultures ☺ Can explain visual illusions ☹ Doesn't explain how perception starts



Factors Affecting Perception

Motivation (Gilchrist and Nesberg)	Expectation (Bruner and Minturn)
<p>Aim: does food deprivation affect the perception of food?</p>	<p>Aim: is an ambiguous figure perceived differently if the context is changed?</p>
<p>Method: Hungry and not hungry participants shown a slide of a meal. Had to adjust light level to the slide shown.</p>	<p>Method: Participants shown a sequence of letters or numbers with an ambiguous figure in the middle.</p>
<p>Results: Perceived food as brighter the longer deprived of food.</p>	<p>Results: Those who saw letters said B. Those who saw numbers said 13.</p>
<p>Conclusion: Hunger is a motivating factor in perception.</p>	<p>Conclusion: Shows expectation is affected by the context the figure is presented.</p>
<ul style="list-style-type: none"> ☺ Support from Sanford's study ☹ Ethical issues (food deprivation) ☹ Artificial task 	<ul style="list-style-type: none"> ☺ Real world application ☹ Artificial task ☹ Independent groups design



Other factors:

Culture:

- Hudson

Emotion:

- McGinnies



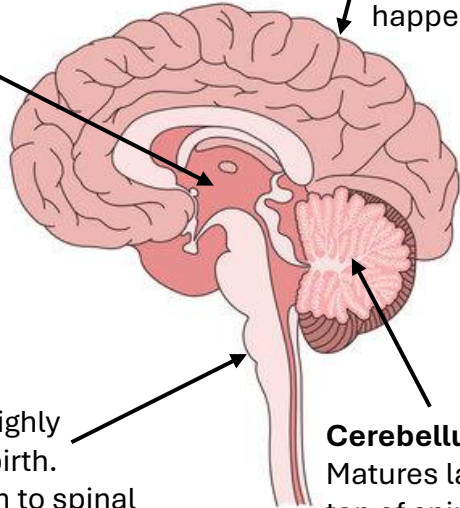
Paper 1, Section C: Development Knowledge Organiser



Early Brain Development

Thalamus: Deep inside the brain in each hemisphere. Information hub, receives and then sends signals around the brain.

Cortex: Very thin and folded cover. Thinking and processing happens here.



Brain Stem: Highly developed at birth. Connects brain to spinal cord. Control autonomic functions.

Cerebellum: Matures late, near top of spinal cord. Co-ordinates sensory of motor.

Roles of nature and nurture:

- **Nature** – inherited (genetic)
- **Nurture** – environmental influence on development

Smoking during pregnancy can lead to smaller brains.

Infection: In the womb German measles can lead to hearing loss.

Voices: babies in the womb can learn to recognise their mother's voice.

The brain forms due to nature but the environment has a major influence even in the womb.

Piaget's Theory

The Theory

Thinking develops over time. Children think differently to adults.

Stages: Different kinds of logical thinking occur at each stage.

Sensorimotor	Pre-operational	Concrete Operational	Formal Operational
0-2 Object Permanence develops.	2-7 Egocentric and lacks conservation	7-11 Can conserve. Logical thinking applied to physical objects only.	11+ Draw conclusions about abstract concepts and form arguments.

Schemas: Mental structures containing knowledge. Schemas become more complex through assimilation and accommodation.

- **Assimilation:** adding new information to an existing schema.
- **Accommodation:** receiving new information that changes our understanding so a new schema is formed.

Application to education:

- **Readiness** – we can only teach something when a child is biologically 'ready'.
- **Learn by discovery** – children must play an active role.
- **Individual learning** – children go through the same stages but at different rates.
- **Application to stages** – Education system is planned to suit each stage. E.g. sensorimotor = stimulating sensory environment.

Evaluation:

- ☺ Real world application
- ☺ Ungeneralisable sample
- ☹ Underestimated children's abilities
- ☺ Basic idea is correct
- ☹ Possible to improve with practice

Effects of learning on development

Willingham's Learning Theory

Rejected learning styles as they weren't based in evidence.

- **Praise** – should be unexpected.
- **Memory & forgetting** – Forgetting occurs because of a lack of cues (Tulving & Pstoka). We should practice retrieving information from memory (Roediger & Karpicke)
- **Self-Regulation** – Self-control ('delay gratification' marshmallow test) is linked to high academic performance (Shoda)
- **Neuroscience:** Brain waves in dyslexics are different. This could benefit progress by receiving help earlier.

- ☺ Evidence based theory
- ☺ Real-world application
- ☺ Neuroscience may be impractical.

Dweck's Mindset Theory

- **Fixed Mindset:** Effort won't help because talent is fixed in genes. Focussed on performance.
- **Growth Mindset:** Can improve with effort, enjoy a challenge. Focussed on learning goals.
- **A Continuum** – we are not simply one or the other, it depends on the situation.

- ☺ Supported by research.
- ☹ Both mindsets involve praise
- ☺ Real-world application.

LEARNING STYLES



Praise and Self-Efficacy

- **Praise** makes someone feel good so the behaviour is repeated.
- **Praise effort** rather than performance.
- **Self-efficacy** – understanding your own abilities.

Egocentrism (Hughes)

Aim: To test if the *Policeman Doll Study* made more sense than *Piaget's Three Mountains*.

Method: 3 ½ to 5 years olds asked to hide a boy doll from two policemen. They were given practice first with one doll.

Results: 90% could hide the boy doll away from two policemen. 3-year olds did less well with a more complex task.

Conclusion: Children aged 4 are mostly not egocentric. Piaget underestimated their abilities.

Evaluation:

- ☺ More realistic
- ☹ Researcher bias
- ☺ Challenges Piaget



Conservation (McGarrigle and Donaldson)

Aim: Would a deliberate change in the row of counters help younger children conserve?

Method: Children aged 4-6. Two rows of counters, teddy messed up on of them. Child asked if rows were the same.

Results: Deliberate change = 41% conserved. Accidental change = 68% conserved. Older children did better than younger ones.

Conclusion: Piaget's method doesn't show what children can do. This study does show there are still age-related changes.

Evaluation:

- ☹ Ungeneralisable sample
- ☹ Distracted by the teddy
- ☺ Challenges Piaget.



Paper 1, Section D: Research Methods Knowledge Organiser

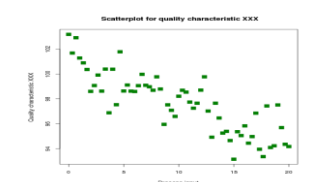
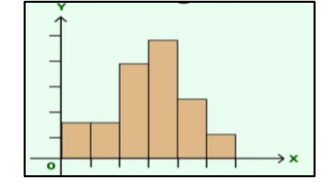
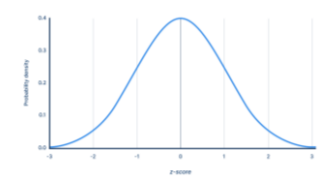
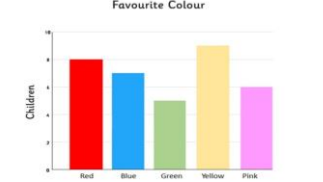
The Experimental Method

The basics:		Sampling:	
Hypothesis	The IV will affect the DV.	<ul style="list-style-type: none"> Random – everyone has an equal chance of selection. Opportunity – selecting people available. Systematic – Selecting every nth person. Stratified – selecting participants in proportion to the frequency in target population. 	Extraneous Variables (unwanted):
Null Hypothesis	The IV will not affect the DV.		
Independent variable	What is manipulated between conditions?		
Dependent variable	What is measured ?		
Validity	Is the result a true reflection of real-world behaviour?		
Reliability	If the study was repeated would the results be the same?		
Ethical Issues:		Demand characteristics	Participants change their behaviour because they know they're being observed.
Informed consent, deception, privacy, confidentiality – do no harm.		Order effects	Participants get better/bored through repetition.
		Participant variables	Difference between participant characteristics between conditions.
		Researcher bias	The researcher knowingly or unknowingly gives clues.

Quantitative and Qualitative Research Methods

Experimental Type:		
Laboratory – all EVs are controlled.		
Field – In a natural setting, IV is controlled, but EVs are not controlled.		
Natural – Natural setting, neither the IV nor the EVs are controlled by researcher.		
Experimental Design:	😊	☹️
Independent Groups: different group of participants for each level of the IV.	No order effects	Participant variables
Repeated Measures: All participants take part in all levels of the IV.	No participant variables	Order effects
Matched Pairs: Participants tested on variables relevant to the study, then matched and one member of each pair goes in each condition.	No order effects Fewer participant variables	Takes time Doesn't get rid of participant variables
Research Methods:	😊	☹️
Case Studies: An in-depth investigation of an individual, group, or event. A qualitative method. Longitudinal – carried out over a long period.	Best way to study rare/unusual phenomena.	Can't be generalised. Analysis may be subjective.
Observations: A researcher watches or listens to participants, and records data. <ul style="list-style-type: none"> Overt = participants aware Covert = participants not aware Participant = Researcher is part of a group Non-participant = Researcher remains separate Interobserver reliability – Two observers should produce the same record of behaviour. Watch, record, compare. 	No demand characteristics (if covert).	Ethical issues. Observer bias.
Interviews: Face-to-face, real-time contact. <ul style="list-style-type: none"> Structured – Pre-prepared questions. Unstructured – No prepared questions, only themes. Semi-structured – Some pre-prepared questions. 	Produce a lot of information.	Data = difficult to analyse. Social desirability.
Questionnaires: Prepared list of questions. <ul style="list-style-type: none"> Open questions = qualitative data. Closed questions = quantitative data. 	Can gather a lot of data. Easy to analyse.	Social desirability bias. Questions may be leading.
Correlations: show how things are linked together. Positive, negative, or zero.	Good starting point for research	Doesn't show cause and effect

Data Handling

Types of data:		Displaying Data																			
Quantitative	Numbers and measures	Scatter Diagram	Histogram																		
Qualitative	Words and images																				
Primary	Obtained first hand	Frequency Table	Normal Distribution																		
Secondary	Second hand data	<table border="1"> <thead> <tr> <th>Colour</th> <th>Tally marks</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>Black</td> <td> </td> <td>1</td> </tr> <tr> <td>Blue</td> <td> </td> <td>5</td> </tr> <tr> <td>Pink</td> <td> </td> <td>2</td> </tr> <tr> <td>White</td> <td> </td> <td>4</td> </tr> <tr> <td colspan="2"></td> <td>Total = 12</td> </tr> </tbody> </table>	Colour	Tally marks	Frequency	Black		1	Blue		5	Pink		2	White		4			Total = 12	
Colour	Tally marks	Frequency																			
Black		1																			
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Descriptive statistics:		Bar Chart	Graph Checklist:																		
Range	Arrange in order and subtract lowest from highest score.		<ul style="list-style-type: none"> Labels for X and Y axis Accurate plotting A title "A ___ graph to show the relationship between..." 																		
Mean	Add up all the scores and divide by the number of scores.																				
Mode	Most common score(s).																				
Median	Middle score when data is ordered from lowest to highest.																				

Paper 2, Section A: Social Influence Knowledge Organiser

Conformity

Asch's Line Study:

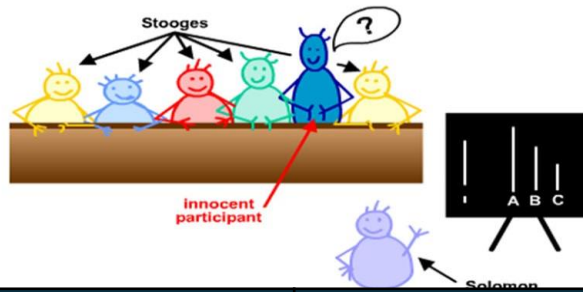
Aim: To investigate group pressure in an unambiguous situation.

Method: 123 American men. Two cards: standard line and three comparison lines.
12 critical trials where confederates gave the wrong answers.

Results: On the critical trials participants gave the wrong answer 1/3 of the time. 25% never gave a wrong answer.

Conclusion: People are influenced by group pressure. Though many can resist.

Evaluation:
⊕ Not applicable to modern society (McCarthyism)
⊖ Artificial task



Dispositional Factors

Personality: someone with an internal locus of control will conform less.

Expertise: more knowledgeable people conform less.

Social Factors

Group size: 3+ = 32% conformity (any more makes little difference)

Anonymity: writing down answer anonymously lowers conformity.

Task difficulty: the harder the task the higher the conformity.

Prosocial Behaviour

Piliavin's Subway Study

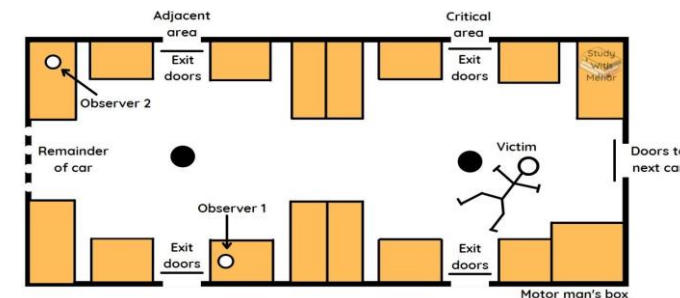
Aim: To investigate if characteristics of a victim affect help given in an emergency.

Method: Male confederate collapsed on subway, 103 trials. Victim appeared drunk or disabled.

Results: Disabled victim helped 95% of trials compared to drunk victim helped 50%. Help was as likely in empty or crowded carriages.

Conclusion: Characteristics of victim affects help given. Numbers of onlookers didn't affect help offered.

Evaluation:
⊕ High ecological validity.
⊕ Quantitative and qualitative data.
⊖ Ungeneralisable urban sample
⊖ Ethical issues.



Dispositional Factors

Similarity to victim: Help is more likely if victim is similar to self.

Expertise: People with specialist skills are more likely to help in an emergency.

Social Factors

Presence of others: The more people present the less likely someone will help.

Cost of helping: includes danger to self or embarrassment. Also costs of not helping e.g. guilt or blame.

Obedience

Milgram's Electric Shock Study:

Aim: To investigate if people would give fatal shocks if told to do so.

Method: 40 male volunteers. 'Teacher' instructed to give a shock if the 'learner' answered a question incorrectly.

Results: No participant stopped below 300v. 65% shocked to 450v.

Conclusion: Obedience is related to social factors (e.g. location, novel situation)

Evaluation:
⊖ Ethical issues
⊖ Lacked realism
⊕ Supported by other research

Dispositional: Adorno's Authoritarian Personality Theory

- **Respect authority.**
- Dismiss those seen as **inferior.**
- Rigid **stereotypes.**
- Originates in childhood – **strict parenting.**
- **Scapegoating** – hostility towards the socially inferior.

⊖ F-Scale Questionnaire
⊖ Overgeneralised

Social: Milgram's Agency Theory

- **Agentic state** follow orders with no responsibility.
- **Autonomous state** own free choice.
- **Agentic shift:** move from free choice to agentic state when given an instruction from an authority figure.
- **Moral strain:** proximity to victim reduces obedience.

⊕ Supported by research
⊖ Can't explain why there isn't 100% obedience.
⊖ Obedience alibi

Crowd and Collective Behaviour

Zimbardo's Deindividuation Study:

Aim: To study the effects of loss of individual identity.

Method: Female participants told to deliver a (fake) electric shock. Individuated group wore normal clothes. Deindividuation group wore large coat with hood.

Results: Deindividuation group were more likely to shock and hold the button down for longer.

Conclusion: Being anonymous increases aggression.

Evaluation:
⊖ Not always antisocial (nurses)
⊕ Real world application



Dispositional Factors

Personality: High locus of control enables individuals to be less influenced by crowd behaviour.

Morality: strong sense of right and wrong helps resist pressure from group norms.

Social Factors

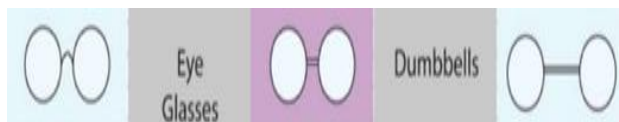

Deindividuation: Group norms determine crowd behaviour.

Social loafing: When working in a group people put in less effort as you can't identify individual effort.

Culture: Individualist cultures (UK, USA) more likely to social loaf. Collective cultures (China, Korea) less likely to social loaf.

Paper 2, Section B: Language, Thought, & Communication Knowledge Organiser

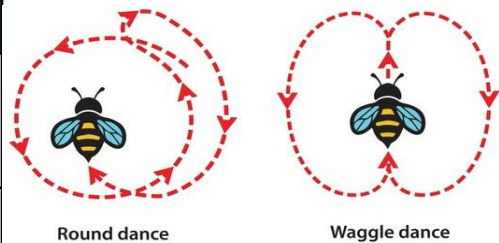

Language and Thought

Piaget's Theory <ul style="list-style-type: none"> • Language depends on thought. • Sensorimotor- start to speak. • Pre-operational – talk about things not present. • Concrete operational – develop own ideas. <p>☺ Supporting evidence – ‘mummy-sock’ ☹ Challenged by Sapir-Whorf</p>	The Sapir-Whorf Hypothesis <p>Thinking depends on language. It is not possible to think of something you have no words for.</p> <ul style="list-style-type: none"> • Strong – language determines thought. • Weak – language influences thought. <p>☹ Cultural differences are exaggerated. ☹ Challenged by Piaget</p>
Language changes how we remember events. <p>The Hopi tribe – don't distinguish between past, present, and future.</p> <p>Carmichael's study – memory for pictures affected by the labels.</p> 	Language changes how we perceive colours. <p>The Zuni tribe – only one word for shades of orange and yellow and have difficulty distinguishing between them.</p> <p>Berimmo people – had difficulty recalling colours as they only have 5 words for colour.</p> 

Non-Verbal Communication

Eye Contact	Body Language	Personal Space
Regulating flow of conversation: we look away when about to speak and prolong gaze when about to finish.	Postural echo: copying body language. Tanner & Chartrand – selling drinks success when presented with postural echo.	Cultural: Sommer: English personal space is 1-1.5m whereas Arab is less.
Signalling attraction: people who use eye contact are judged as more attractive.	Open and closed posture: Closed shows disagreement. Open shows acceptance.	Status: Zahn – people with similar status stand closer than those of unequal status.
Expressing emotion: Anger and happiness are stronger with eye contact. Fear and sadness are stronger without.	Touch: Fisher – if a librarian touched student on hand when returning books the librarian was judged more positively.	Gender: Fisher & Byrne – women feel most uncomfortable when personal space is invaded from the side, for men it's from the front.
☺ Real-world application ☹ Use of rating scales ☹ Artificial studies	☺ Real-world application ☹ Overly simplistic ☹ Unethical	☺ Real-world application ☹ Overly simplistic ☹ Unrepresentative

Human and Animal Communication

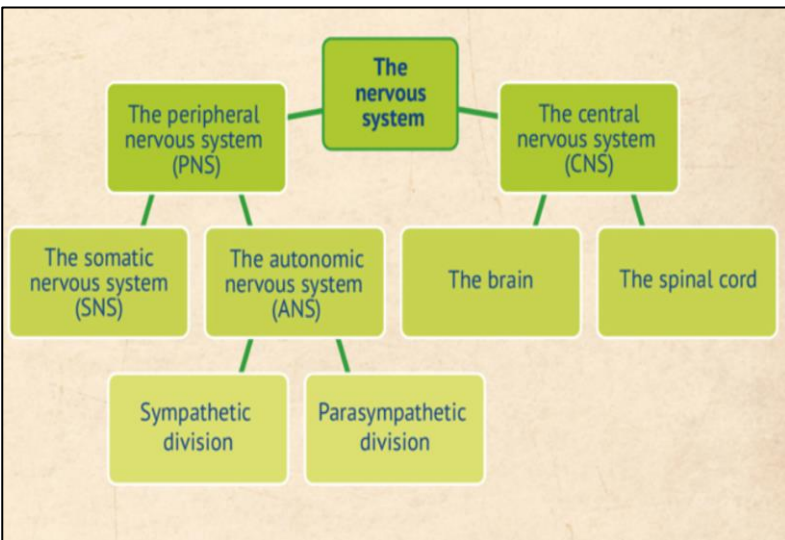
Von Frisch's Bee Study <p>Aim: To describe the dances of honeybees to understand their communication.</p> <p>Method: Put food close to the hive (10-20m) and far away (up to 300m). Observed 6000 times over 20 years.</p> <p>Results: Round dance – food was less than 100m away. Waggle dance – food 100m+ away. 60% bees went to food sources indicated by dances.</p> <p>Conclusion: Sophisticated communication system.</p> <p>Evaluation: ☺ Scientific value ☹ Sound matters too</p>	 <p>Round dance Waggle dance</p>	Functions of animal communication: <p>Survival e.g. vervet monkeys' alarm call.</p> <p>Reproduction: e.g. peacocks displaying feathers.</p> <p>Territory: e.g. rhino poop piles.</p> <p>Food: e.g. ants leaving a pheromone trail.</p> 
Properties of human communication not present in animal communication: <p>Planning ahead: humans can discuss things that aren't present or that haven't happened yet.</p> <p>Creativity: Humans have an open system combining words. Animals have a closed system.</p> <p>Single vs multiple channels: humans can write, sign, speak. Animals tend to have 1 channel.</p>		

Explanations of Non-Verbal Communication

Darwin's Theory of Evolution <ul style="list-style-type: none"> • Genes for survival are passed to the next generation. • Adaptive behaviours – NVC that expresses emotion that aids survival e.g. baring teeth to scare off an attacker. • Serviceable habits – human NVC that expresses emotion but isn't essential for survival anymore e.g. opening eyes wide when surprised. <p>☺ Supporting evidence – Ekman ☺ Research with neonates ☹ Cultural differences in NVC</p>	Yuki's Study of Emoticons <p>Aim: To see if there are cultural differences in the interpretation of emotions between Japan and USA.</p> <p>Method: 6 emoticons with different combinations of eyes and mouths. Participants rated in terms of happiness.</p> <p>Results: Japanese = higher rating to happy eyes. Americans = higher rating to happy mouths.</p> <p>Conclusion: Cultural differences in the way emotion is interpreted in facial expression.</p> <p>Evaluation: ☹ Artificial materials. ☹ Using rating scales - reductive</p>	Is NVC Innate? <p>NVC present from birth – social releasers (e.g. smiling) make others want to provide care.</p> <p>NVC present despite sensory deprivation e.g. blind people can still show emotions using facial expressions.</p>
		Is NVC learned? <p>Cross-cultural research – contact cultures (e.g. Mediterranean) and non-contact cultures (e.g. UK).</p> <p>Social Learning Theory – we imitate those around us.</p>

Paper 2, Section C: Neuropsychology Knowledge Organiser

Structure and Function of the Nervous System



Is NVC Innate?

CNS:

- Brain – cognition
- Brain stem – autonomic functions

PNS:

- Info from outside world to CNS and from CNS to muscles.

SNS:

- Voluntary movements and reflexes.

ANS:

- Automatic functions e.g. breathing
- Sympathetic = fight or flight
- Parasympathetic = rest and digest

Structure and Function of the Brain

Penfield's Study of the Interpretive Cortex

Aim: To investigate the function of the temporal lobe using the Montreal procedure.

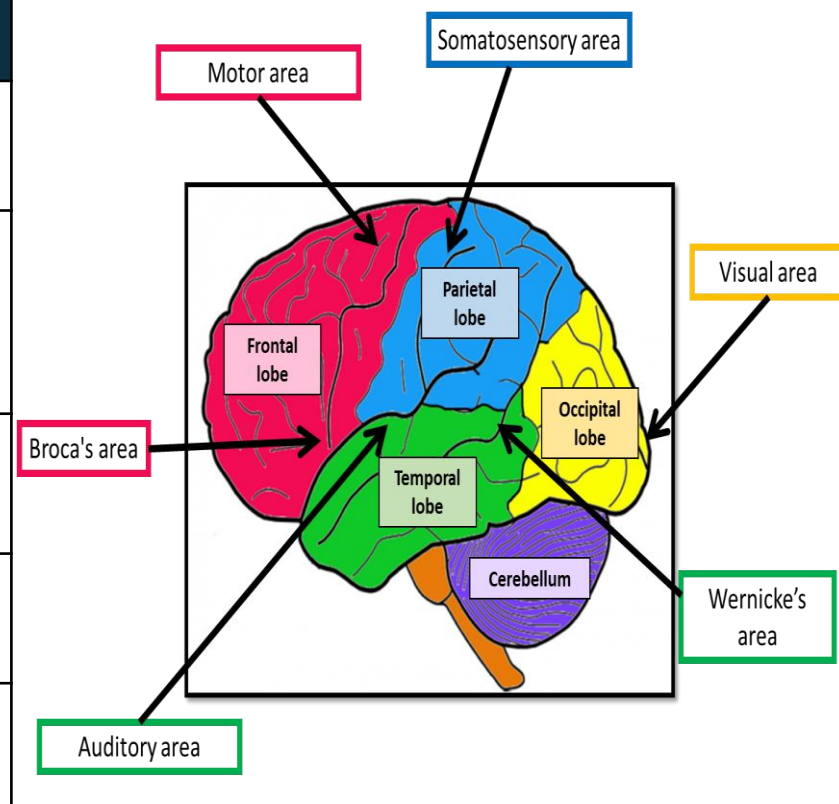
Method: Operated on patients with severe epilepsy. Electrically stimulated areas of the brain in a conscious patient who reported experiences.

Results: Temporal lobe stimulation: experiences and feelings associated with those experiences.

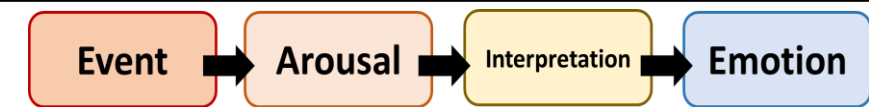
Conclusion: Area of brain called interpretive cortex stores the personal meaning of past events.

Evaluation:

- ☺ Scientific – objective.
- ☹ Ungeneralisable sample



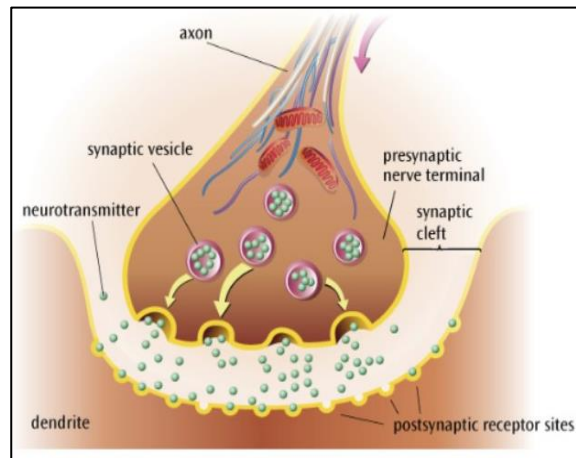
James-Lange Theory of Emotion



No physiological changes = no emotion experienced.

☺ May be too simplistic.
 ☹ Challenged by Canon-Bard theory.

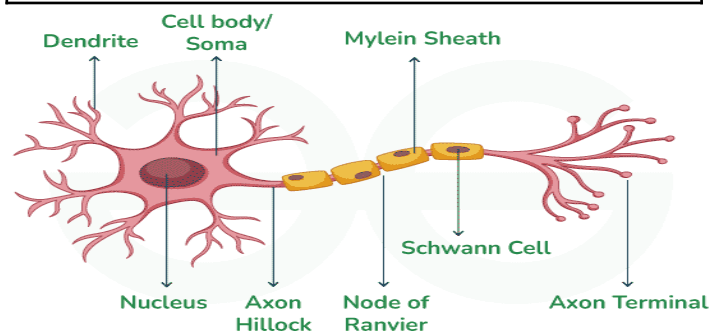
Neuron Structure and Function



Hebb's Theory of Neuronal Growth

- The brain is plastic:** synaptic connections become stronger the more they are used. Brains can change and develop at any age.
- Learning produces an engram** (a temporary trace in the brain) that can be made permanent with rehearsal.
- Cell assemblies** are groups of neurons that fire together. Neuronal growth occurs as cell assemblies rewire.

☺ Scientific and objective
 ☺ Real-world application.



Types of Neuron

Sensory – From PNS to CNS. Long dendrite, short axon.
Relay – Connect sensory to motor. Short dendrite, short axon.
Motor – From CNS to muscles/glands. Short dendrite, long axon.

An Introduction to Neuropsychology

Tulving's Gold Memory Study

Aim: To investigate if episodic memories produce different blood flow patterns to semantic ones.

Method: 6 participants injected with radioactive fluid. 4 semantic trials and 4 episodic trials. Monitored blood flow with PET scan.

Results: Different blood flow patterns in 3/6 participants. Semantic = posterior cortex. Episodic = anterior cortex.

Conclusion: Episodic and semantic memories are localised.

Evaluation:

- ☺ Objective evidence.
- ☹ Small sample size

Cognitive neuroscience

How biological structures (e.g. brain) influence mental processes (e.g. behaviour and cognition).
 Two hemispheres: left controls movement on the right side of the body and vice-versa.

Brain Scanning Techniques:

CT Scans: Takes lots of X-rays of the brain which give a detailed picture.
 ☺ Higher quality than an X-Ray
 ☹ Only produces still images.

PET Scan: Patient injected with radioactive glucose. Brain activity shown on a computer screen.
 ☺ Show brain in action.
 ☹ Expensive and exposed to radiation.

fMRI: Measures changes in blood oxygen levels. Displays as 3D computer image.
 ☺ Clear images without radiation.
 ☹ Expensive and must stay still.

Paper 2, Section D: Psychological Problems

Knowledge Organiser

Introduction to Mental Health

Understanding mental health and illness:	Good mental health is:	Individual Effects of MH Problems	Social Effects of MH Problems
<ul style="list-style-type: none"> 2.6% population will experience depression. 4.7% population will experience anxiety 1.6% population will experience an eating disorder. 1 in 2 people will experience mental health problems. More women than men are diagnosed with MH problems. Increased challenges of modern living: lower income, greater social isolation. Cultural variations: hearing voices, anorexia, koro. 	<ol style="list-style-type: none"> High self-esteem and strong sense of identity. Able to cope with stressful situations. Able to live independently and self-regulate. An accurate perception of reality. Maintain positive relationships. Able to function in society. 	<ul style="list-style-type: none"> Damage to relationships. Difficulties coping with day-to-day life e.g. getting dressed, socialising, etc. Negative impact on physical health. 	<ul style="list-style-type: none"> Need for more social care. Increased crime rates. Implications for the economy.

Depression

What is depression?	Diagnosing depression
<ul style="list-style-type: none"> Sadness = normal emotion Depression = enduring, stops ability to function. Unipolar = one emotional state of depression. Bipolar = depression alternates with mania, and periods of normality. 	<p>Key Symptoms:</p> <ul style="list-style-type: none"> Low mood, loss of interest and pleasure, reduced energy levels. <p>Other symptoms:</p> <ul style="list-style-type: none"> Changes to sleep, change in appetite level, decrease in self-confidence

Biological Explanation	Psychological Explanation
<ul style="list-style-type: none"> Low levels of serotonin present during synaptic transmission. Low levels of serotonin = low mood, lack of concentration, reduced appetite. Genes could be responsible, or it could be due to low levels of tryptophan in diet (found in protein). <p>☺ Supporting research – McNeal and Climbolic</p> <p>☹ Cause or effect?</p>	<ul style="list-style-type: none"> Faulty thinking – irrational black and white thinking. Negative schemas – cause a person to interpret all information about self negatively. Attributions – internal, stable, and global. Learned helplessness – Seligman’s dogs. <p>☺ Real world application</p> <p>☹ Negative beliefs may be realistic.</p>

Antidepressant Medication	Cognitive Behaviour Therapy
<p>Selective Serotonin Reuptake Inhibitor – increases serotonin at synaptic cleft. SSRIs block the reuptake channels so there is more serotonin left in the synaptic cleft.</p> <p>☹ Side effects</p> <p>☹ Reductive</p>	<p>Change faulty thinking to rational thinking.</p> <p>Behavioural activation – do nice activities to feel positive emotions.</p> <p>Dispute negative irrational thoughts.</p> <p>☺ Lasting effectiveness – life skills</p> <p>☹ Not for everyone</p>

Addiction

What is addiction?	Diagnosing depression
<ul style="list-style-type: none"> Dependence = Psychological reliance, stopping will create withdrawal symptoms, Addiction = Dependence + the ‘buzz’ or sense of escape. Substance misuse = not following the ‘rules’. Substance abuse = Using a substance to get high or sense of escape. 	<p>Clinical characteristics from ICD-10:</p> <ul style="list-style-type: none"> Strong desire to use the substance Persisting despite known harm Difficulty controlling use Higher priority given to substance Withdrawal symptoms if activity stopped Evidence of tolerance

Biological Explanation – Kaij’s Twin Study	Psychological Explanation
<p>Aim – to see if addiction is due to nature or nurture.</p>	<ul style="list-style-type: none"> Social learning theory – we learn by observing others and imitating rewarded behaviours. Social norms – we look to others to know how to behave. May be overestimated. Social identity theory – We want to be accepted by our social groups therefore conform to their norms. Peers create opportunities or provide direct instruction. <p>☺ Supporting research – Simons & Morton</p> <p>☹ It may be peer selection</p>
<p>Method – Male twins registered with temperance board for alcohol problems were interviewed as well as their relatives.</p>	
<p>Results – 61% of identical (MZ) twins and 39% of non-identical (DZ) twins both alcoholic.</p>	
<p>Conclusion: Alcohol abuse is related to genetic vulnerability. Not 100% genetic or MZ twins would all be the same. Not 100% environment or MZ and DZ twins would be the same.</p> <p>☺ Supported by later studies</p> <p>☹ May not be representative</p>	

Aversion Therapy	Self-Management Programmess
<ul style="list-style-type: none"> Based on classical conditioning – associate addiction with an unpleasant experience. <p>☹ High drop out rates</p> <p>☹ Poor long-term effectiveness</p>	<ul style="list-style-type: none"> 12-Step Programme e.g. AA Give control to a higher power and let go. Admit and share guilt. Life long process, commit to helping others. <p>☹ Lack of clear evidence</p> <p>☺ Holistic approach</p>