

## Topic 1

## Development

## \* The Brain

- Organ in the head

3-4 weeks old long tube develops in brain which is divided from the front into three sections:

- Fore brain - Anterior part of brain - Hemispheres - Central structures

- Midbrain - Middle section, forms part of central nervous system.

- Hind brain - Lower part of brain - Cerebellum - medulla

Fore brain splits into 2 Anterior + Posterior

Mid brain splits through the middle.

(Brain doubles size over the first year, reaches 80% of its size by 3 years old.)

5 weeks split into 2 cavities

## \* Cerebellum + medulla

- Cerebellum near the brainstem

- Cerebellum seen in foetus at about 6 weeks.

- 3 times its size a year after

- controls physical skills - Motor skills

- involved in responses such as fear and the function of processing info.

- Medulla connects upper brain to spinal cord

- Is in the hind brain

- formed when foetus is 20 weeks old

- Controls involuntary responses - sneezing, breathing and heart rate.

## \* Neural connections from birth

- Birth → 3 years old

→ 1000 new connections every second.

Connections allow very fast communication with different parts of brain.

Early connections is said to be of importance, babies should get plenty of stimulation.

## Topic 1

## Piaget's Theory

## ★ Stages of Development (cognitive development)

- A change in thinking indicates when next stage is reached

Four stages:

## 1. Sensorimotor Stage (birth → 2 years)

- They live in present rather than understanding time and space around them.
- They link what they see, hear, touch, taste or smell to objects they use.  
<sup>5 senses</sup>
- reflex actions, learn to control their movements.
- 6 months they learn that objects exist even when they aren't visible (object permanence)
- 4 months children repeat action

## 2. Pre-operational Stage (2 → 7 years)

- 2 stages

## a. The symbolic function stage (2-4 years)

- Start imitating others and can use objects as symbols
- Symbolic play - box used as a stool and using role play
- words as symbols, beginning of language development
- Egocentrism - Children see the world through their own eyes

Animism - Children believe objects can behave as if they're alive.

## b. Intuitive thought stage (4 → 7 years)

- Start of questioning - Children ask a lot of questions
- Centration - only focusing on one aspect / feature of a situation
- Conservation is not yet achieved - Children do not realise that changing how something looks doesn't change its volume, size or weight
- Irreversibility - a child is not able to use thought to reverse an event

### 3. Concrete operational stage (7 → 12 years)

- Children begin to apply rules and strategies to help their thinking
- Use objects to help their understanding
- They struggle with abstract ideas like morality (right and wrong)
- Senciation - sorting objects
- Classification - naming and identifying objects
- Decentration - ability to take multiple views into consideration

### 4. Formal operational stage (12+)

- They understand:

- actions have consequences
- Time changes things
- Events have a sequence
- They and others exist in the world and separate from each other

(Children build their own schemes through personal experiences.)

### ~~Piaget's understanding of the world~~

- Children develop through adaptation. Their experiences help them adjust to the world
- Intelligence is developed via adaptation over the four stages.

Schemas - Plans and patterns are formed about what we experience.

Assimilation - Fitting new things / experiences into existing schemas.

Accommodation - A schema no longer works and has to be changed to fit with a new experience.

Equilibrium - Schemas work and fit into & explains their experience, the child is in a mental state of balance.

### Topic 1

TOPIC

Dev.

## Dweck's mindset theory

Carol Dweck is an american psychologist.

Mindset is the of beliefs we all have about our ability to succeed in education and other areas.

### A Fixed mind set

A fixed mind set is when a person believes that they are either good or bad at something based on their genes/inherited it. If they are bad at something they believe they can not improve and just give up.  
• The ability is fixed at birth.

### A Growth mind set

A growth mindset is when a person believes they can improve in something if they put in effort. Effort brings success.  
• The ability isn't fixed at birth.

research/  
backs up

In one of Dweck's experiments (Mueller and Dweck 1998), it was found that praising a student's/person's ability led to a fixed mind set. Whereas, praising them for their effort led to a growth mindset. (Same with yeager and dweck's experiment 2012.)

↑  
Research/  
backs up

B

## Willingham's learning theory

Daniel Willingham is a cognitive scientist.

Working memory - different process for information coming in from our senses.

Short-term memory → Practice/rehears → long-term memory

Willingham related muscle movements (motor skills) to brain processing.

### Three mountains task

The three mountains task is an experiment that Jean Piaget and Barbel Inhelder carried out to study children's ways of looking at the world. (1956)

#### Aims

- The extent to which children of different ages are able to take the view of another person
- Children's overall view/system of putting together multiple of different views.

The children were asked about their view point and ~~a dolls~~ view point of the mountains.

100 children

4A

according to Figure 9  
only two major faults are found in Japan. Although  
there are many smaller and less prominent faults, only the  
two major ones, Denzan & Toto, are mentioned.  
Denzan is the most prominent fault in  
Japan. It is located in the central part of the country, and runs  
parallel to the coast line. It is about 100 km long  
and has a maximum depth of about 10 km.

### Geological features (Ch. 10)

Japan is a country of islands, consisting of three main groups of islands, the Ryukyu Islands, the Japanese Islands, and the northernmost group, the Hokkaido Islands. The Japanese Islands consist of four main islands, Honshu, Shikoku, Kyushu, and Okinawa. Honshu is the largest island, followed by Kyushu, Shikoku, and Okinawa. The northernmost island, Hokkaido, is the second largest island in Japan. The Japanese Islands are situated in the North Pacific Ocean, and are separated from the mainland of Asia by the Sea of Japan.

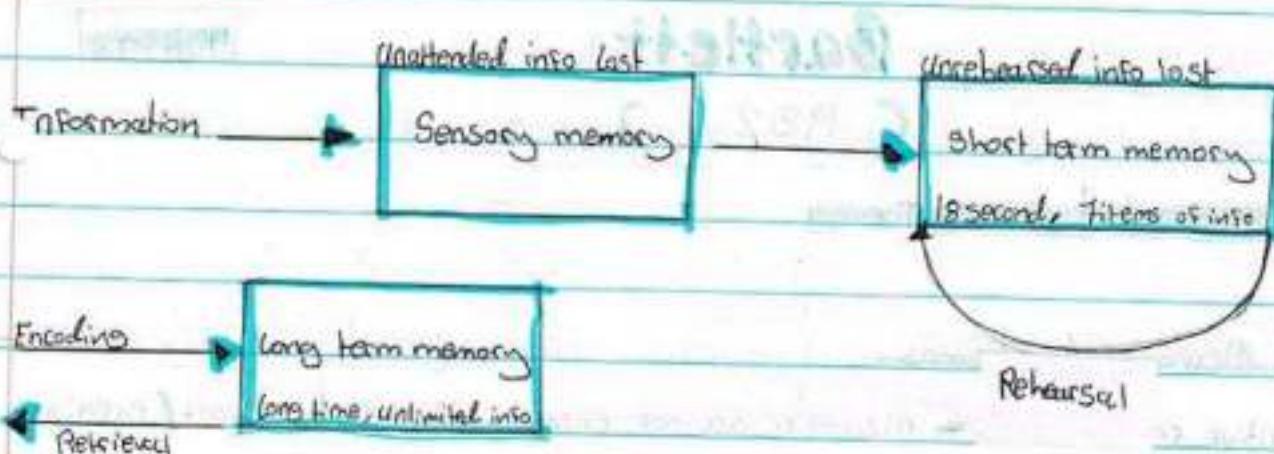
The Japanese Islands are formed by the collision of the Pacific Plate and the Eurasian Plate. This collision has created a series of mountain ranges, the most prominent being the Hida Mountains, the Kiso Mountains, and the Sanuki Mountains. These mountains are composed of metamorphic rocks, such as gneiss and schist, which have been folded and thrust upwards by the pressure of the colliding plates. The Japanese Islands are also characterized by numerous active volcanoes, the most famous being Mount Fuji, which is located on the island of Honshu. Mount Fuji is a stratovolcano, and is one of the highest peaks in Japan, reaching a height of approximately 3,776 m. Other active volcanoes include Mount Asama, Mount Ontake, and Mount Yotei.

## Topic 2

Memory

## \* Stages of memory:

1. Input - Information is inputted into our brain through our five senses.
2. Encoding - The sensory information is changed into a form our brain can process easily (electrochemical memory trace). Three ways of encoding:
  - Acoustic encoding - sound
  - Visual encoding - images
  - Semantic encoding - the meaning of information
3. Storage - Encoded information is then separated into long term and short term memory.
4. Retrieval (output) - Stored information we can / want to recall (retrieve), recognise or relearn.



## \* Forgetting:

Short term = displacement (new incoming info pushes old info out, when limited capacity is reached).

Long term = Memories decay not used, overwritten by new info (interference), lost link.

## Amnesia

Amnesia is a condition about forgetting or memory loss, mainly after an experience / brain trauma. There are two types:

### 1. Anterograde

Long-term memory broken. Cannot make new lasting memories after an incident. Short-term memory is intact. Long-term memories from before an incident will be remembered.

### 2. Retrograde

Cannot remember some long-term memories from before the incident. Possible to regain some or all of the lost memory.

## Bartlett

(1932)

Holism

### Reconstructive Memory Theory

## Memory / Schemas

- Active reconstruction - memories are not exact copies of an event / experience, but an interpretation influenced by our schema.
- Schema - a group of knowledge about an event, person or place that influences how we perceive / remember.

Schemas are formed throughout our lives through experiences.

How does schemas influence our memory? Bartlett found out that over time, when people recall/remember pictures or stories they remember it differently because they're influenced by their schemas.

- Omissions - leave out unfamiliar/unpleasant ~~also~~ details
- Transformation - changing details • Cognitive interview
- Familiarisation - changing unfamiliar details
- Rationalisation - add details to give reasons

### Strengths + Weakness:

#### Strengths

1. It has real-world practical application and helps us understand why memory can become distorted.
2. His Theory is ecologically valid (Explains behaviour in diff situations)

#### Weaknesses

1. His findings could be subjective (based on personal opinion or feelings)
2. He was not particularly scientific in his procedures.

### Reductionism

### Atkinson and Shiffrin (1968)

multistore model of memory

- sensory register (sensory memory)
- short-term memory
- long-term memory

Sensory register receives all of the sensory info around us and holds on to it very briefly. If we pay attention to some of the info it goes into our short term memory, if not it quickly decays.

- Iconic memory - visual info, lasts around 1 second then decays.
- Echoic memory - sound (auditory) info, lasts a few seconds then decays.
- Gustatory (taste)
- Olfactory (smell)
- Tactile (touch)

Short-term memory is described as modality free.

George Miller (1956) found that the average short-term memory can hold 5-9 chunks of info.

### Strengths + Weakness:

Strength -

1. A lot of evidence to support the theory of separate memory stores.

Weakness -

1. Do not need to rehearse EVERY piece of info in order to remember it. If it's meaningful to us we are more likely to remember it.
2. Unlikely we have only one type of long-term memory store.

- Ben Murdock (1962), serial position effect, primacy - recency

## Bartlett

(1932)

### War of the ghosts

#### Aims

- To test the nature of reconstructive memory using an unfamiliar story.

#### Procedure

- Participants read 'The war of the hosts', then Bartlett used both dictated / reported reproduction to test recall of story.

#### Results

- Theme of story stayed the same.
- Changes were made. They rationalised, familiarised and simplified the story.

#### Schemas affect memory

#### Strength + Weakness:

- Using a story is more naturalistic than other methods but was unfamiliar making it a strength and weakness.

#### Strength -

- The findings of the study are reliable.

- Use of qualitative and statistical analysis.

### Weakness -

- He did not follow a standardised procedure.
- Not scientific as it could have been.

## Peterson and Peterson (1959)

### Short term retention of individual verbal items.

#### Aim

To test the true duration of short-term memory.

#### Procedure

24 students -

- Trigram, numbers, red light repeat (trigram).

Different time delay in between red light and numbers.

(3, 6, 9, 12, 15 and 18 seconds)

#### Results

- The longer a student counted backwards the less likely they were able to recall trigram. (3 sec they remembered over 80%, 18 sec 10% correctly recall)

info held in our short-term memory fades rapidly

## Strength + weakness:

### Strength -

- Uses standardised procedures
- Scientific
- Reliable
- Avoided distractions e.g. noise

### Weakness -

- Lacks mundane realism

Extraneous variables  
are controlled well.

## Reductionism and Holism

- Reductionism is only looking at one individual and **one** aspect that effects them.
- Holism is looking at an individual and **ALL** the aspects that effect them.

## Annihilation

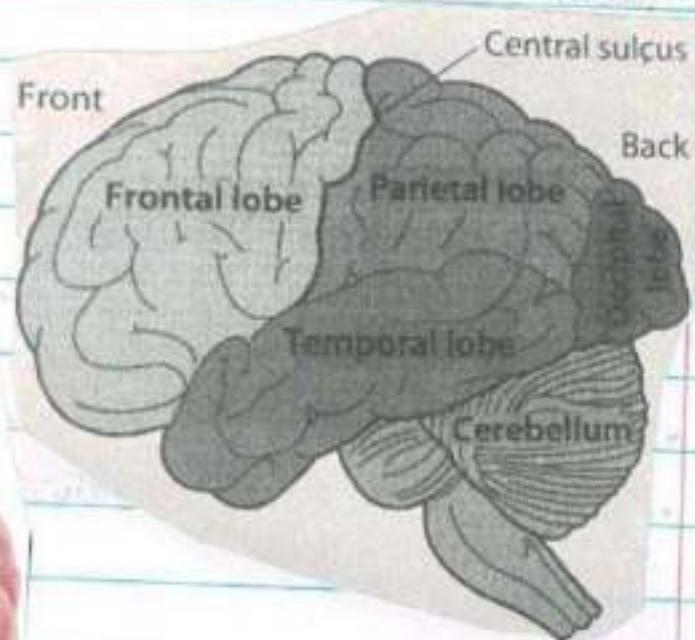
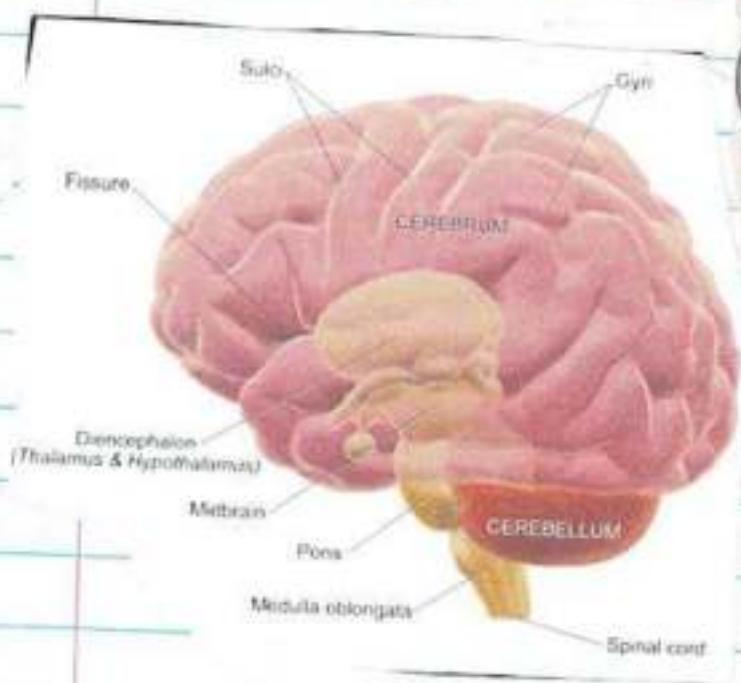
annihilate /əˈnɪhɪlɪteɪt/ v. to completely destroy or do away with something

annihilation /əˌnɪhɪlɪˈeɪʃn/ n. the complete destruction of something

# The Structure + Function of Brain

The Brain and Neurophysiology

- Weighs approximately 1.4 Kg
- Hemispheres: Right + left
- Large surface area = more nerve cells



## Functions of Brain:

### 1. Frontal lobe

- Decision making + impulse control
- Helps with problem solving skills + Concentration / Paying attention
- Back of lobe = motor cortex (voluntary movements).

at

## 2. Temporal Lobe

- Hearing + understanding sounds and speech + helps creating speech.
- Auditory cortex.
- Help control memory functions.

## 3. Parietal Lobe

- Understanding visual around us (Perception)
- Front of lobe = Somatosensory cortex (sense of touch)

## 4. Occipital Lobe

- Ability to see
- Visual cortex

## 5. Cerebellum

- Motor skills
- Takes info from diff senses, combines them to coordinate behaviour.

# Localisation of function in hemispheres

- Each hemisphere has diff jobs
- The brains 2 hemispheres are asymmetrical Due to the fact they don't mirror each other's functions + structures.
- Each side of the brain controls the functions on the opposite side of the body.
- **Corpus Callosum** - allows both sides of brain to communicate with each other.
- The right and left hemisphere are linked to the ear on the opposite side.

## Left hemisphere:

- Processing of language
- Broca's area - Controls production of speech.
- Other areas control ability to write and understand language.

## Right hemisphere:

- Spatial awareness
- Control ability to recognise faces + is more creative.
- Visual / auditory info

# Males + Females Brain

- The behaviour of females and males are different as well as how their brains develop.

## Difference in lateralisation:

- It is thought that females were better at language skills (left brain tasks) while males were better at spatial skills (right brain tasks).
- Females may have a thicker corpus callosum. They might use both sides of brain while males don't.

## Strength + Weakness:

Strength -

- Evidence
- Harczyg 1997
- Riley 2005
- Research is well controlled + scientific

Weakness -

- Riley 2005
- Sommer 2004 + No strong evidence females use both hemispheres.

## Role of central nervous system

- Central nervous system helps brain and body communicate.
- Spinal cord can activate peripheral nervous system which makes body do the actions the brain is telling it to do.
- Neurotransmitters are chemicals released from neurons. They help pass messages from one cell to another.
- Neuron → Synaptic transmission  
 Synapses → Axon → terminal button (small vesicles) → Ntm. into synapse → Receptors.

## Impact of neurological damage

- Neurological damage = Any kind of damage to parts of the nervous system.

### Visual agnosia:

- Problem brain has with processing sensory info, brain unable to make sense of info.
- Disorder where ppl can see perfectly but cannot understand what they are seeing.

- Damage to parietal lobe - Disorder of perception

### prosopagnosia:

- Being unable to recognise faces even tho they can be seen
- Damage to a part of the brain near the back of the temporal lobe  
next to occipital lobe, fusiform face area.

### Symptoms:

- Some people see faces all the same or cannot recognise faces of ppl that they knew very well.

### Pre-frontal Cortex:

- Helps control impulses + keep emotions balanced.
- If damaged = difficult for ppl to control emotions.
- Adrian Raine 1997
- Damasio 1994

StudyDamasio Phineas Gage 1848Background Study:

- 1848 Gage working railway line USA when explosion happened, iron rod fired through head.
- His personality permanent change.
- Before - Calm + responsible
- After - Rude + irresponsible
- Died 12 years after due to severe epilepsy.
- John Harlow - Gages Doc - asked for body to be exhumed to study skull.

Aims:

- 1894 Damasio + researchers created 3D computer representation of skull.
- Most damage around forehead mainly in frontal lobe.

Procedure:

- Damasio began taking pics + measurements of skull.
- Built 3D replica.
- Rod = 3cm in diameter, 109 cm long.
- 20 diff entry points, 16 diff exit points were tested to try find most likely path of rod. Found / narrowed it down to 5 paths.

## Results:

- Damage in both right + left hemisphere of frontal-lobe
- Confidently assumed damaged suffered likely only  
h<sub>v</sub> affected frontal-lobe.
- Icon cool → through left eye socket → upwards  
through head.
- More damage to white matter → left hemisphere
- Damage in both hemispheres seemed to be worse in middle  
of underside.

## Conclusion:

- Ventromedial area of frontal lobes → sensible decision making + impulse control. Gage found that difficult.
- Damasio had evidence of 12 other ppl with similar damage who acted same/similar as Gage.

## Strength + Weakness:

### Strengths:

- Scientific - use of modern tech for 1848 data.
- Help make predictions if sm<sub>1</sub> damages their frontal lobes.

### Weaknesses:

- Reports over 150 years old, info might not be accurate or reliable.
- Problem in generalising info, the damage was unique to Gage.

Study

# Sperry 1968

## Hemisphere Deconnection

### Background:

- Ppl with severe epilepsy taking treatment that didn't work got offered surgery to reduce seizures.
- Cutting Corpus Callosum to separate right & left hemispheres. "split brain"

### Aims:

- Roger Sperry 1968 - what effects could be seen in these ppl by monitoring how they processed info using "split brain".

### Procedure:

- 11 participants whose corpus callosum was cut.
- visual task - Center of screen where info presented to left + right side of visual fields sometime. Then ppl asked to say what they had seen on screen.
- ppl were shown variety of objects / pics then asked to identify / point to what they had seen either same hand or opposite.
- These tasks = sending info to left + right hemisphere using diff types of sensory info.

## Results:

- words shown to right visual field - ppl had no problem repeating words to the researchers.
- left visual field - had trouble.
- word / pic shown to left visual - ppl had little trouble selecting object to match what they had seen.
- right visual field - struggled to point out correct object.
- objects felt by right hand ppl could name it when felt by left ppl found it difficult.
- ppl were able to identify an item that they had felt before but only with the hand that originally held it, if opposite hand picked it up they could not identify it.

## Conclusion:

- Each hemisphere is capable of working separately to some degree.
- Left hemisphere = better at naming items when held by right hand.
- Right hemisphere = better at identifying object by feeling with left hand after being held with same hand previously.

## Strength + Weakness:

### Strength:-

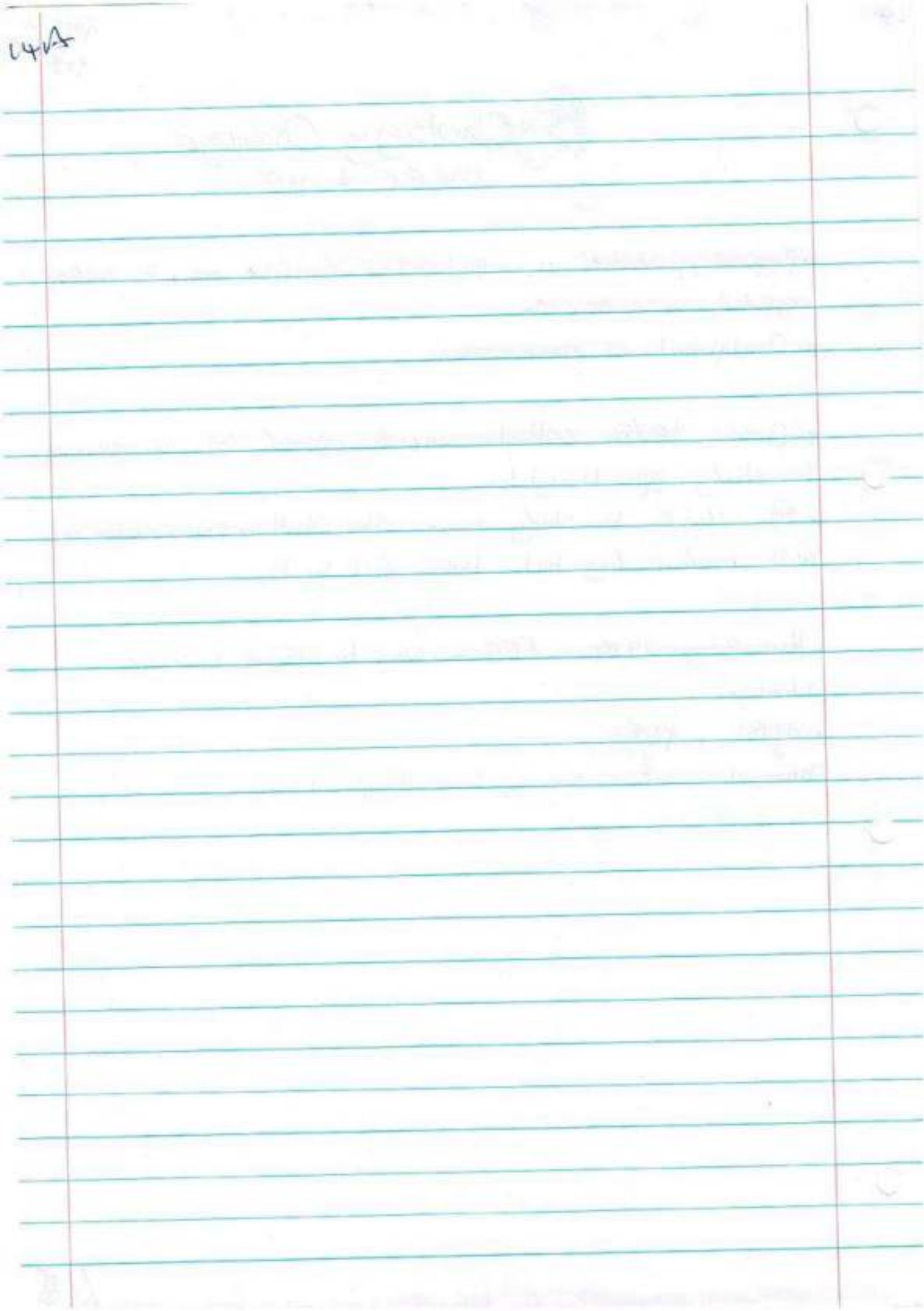
- Detailed information = Reliability, Data gathered in a reliable way.

### Weakness:-

- 11 participants too small sample to generalise results confidently.
- Tasks may be very artificial.
- Lack of ecological validity.

# Psychology Change over time

- Psychology started as a philosophical discipline now it's widely regarded as a science.
  - Development of neuroscience
  - 'Bain' 1875 anton mohr opened lab in germany to study ppl's thoughts.
  - Ppl used to study brain after death = post-mortem = now with modern day tech they don't have to.
  - Hans Berger 1924 , EEG - way to measure brain wave activity.
  - MRI , PET
- Electromagnets      amount of energy used through out brain



# uni bipolar

Uni bipolar is the type of depression where people suffer from periods of feeling down/upset. Their mood only goes in one direction (uni).

## Symptoms:

- General depression symptoms - Suicidal, poor sleep, guilt, nervous, etc.

- Main 3 symptoms -

1. lowering of mood
2. lack of energy even after resting.
3. lack of motivation.

## Features:

- 1 in 15 people will suffer from a serious depressive ep each year.
- Unipolar affects twice as many females as males, and affects women for longer.

Mild - 4 symptoms

Moderate - 5-6 symptoms

Severe - 7 or more symptoms

## ① Incidence:

- people in the future have been diagnosed with depression more than people in the Past. Martin (1988), Kings Fund (2008)
  - Brandon Hidaka (2012) suggests that 'modern living' could be associated to depression.
  - Teens + young adults, increase in diagnosis.
  - High lots of social media = higher risk of depression.
  - <sup>individual</sup> suicide risk increase, <sup>society</sup> missing days of work, <sup>society</sup> treatment expensive.
- NHS 1.7b

## Genetic explanation

- Unipolar depression might be inherited through genes.
- Craig Higle 2019 found 17 diff gene variations were linked to depression.

## ② Twin studies

- Identical twins (<sup>100%</sup> monozygotic), Non-Identical (<sup>50%</sup> dizygotic).
- Other siblings share <sup>50%</sup> genes.
- Peter McCullagh 1996 if one monozygotic twin is depressed 46% chance the other twin will develop depression

If one ~~twins~~ dizygotic is depressed only 20% chance the other will become depressed

- Genetic predisposition
- diathesis stress model. Triggers depressive thoughts through a gene if put in a stress full situation.

## All Strength + Weakness

### Strength:

- Take away stigma of being diagnosed with depression.
- Society more accepting.
- Lot of research evidence.
- Caspi 2013

### Weakness:

- Deterministic - assumes (Cus gene) - Some people believe its free will to get depression.
- Reductionist
- Simplistic - assumes - abnormal gene

# Cognitive

## theory

as an explanation of depression.

- Cognitive theory - behaviour can be explained by how brain processes / how we think.

### M Beck + Ellis

Beck: cognitive model

- Aaron Beck said that depression could be explained by 3 negative thought patterns - Themselves → the future → the world.
- Cognitive biases • Can't see positive side of situation.
- Negative track might develop from bad experiences.
- Negative mindset = perceive things in abnormal way.
- Negative self-schema
- Might end up being prone to magnification.

Ellis: ABC model

- Albert Ellis had a slightly diff view to Beck.
- He thought that there are 3 stages before neg thought processes, which can then lead to depression:

1. Activating event - smthng happens, makes person feel unsettled.
2. Beliefs - Thoughts person associates with the event.
3. Consequences - rational or irrational thought about why the event happened that way.

## Strengths + Weakness

### Strengths:

- Takes into account the events in a person's life + combination of nature and nurture factors. - Holistic
- Has been applied to therapy (CBT). CBT is one of the lead treatments for depression.

### Weakness:

- Hard to tell whether irrational thoughts are a cause / symptom of depression. Unclear how smt's behaviour or thought process changed before diagnosis.
- Some types of depression may not be so easily explained by thought process. Caused by biological factors than cognitive ones.

## C B T

cognitive behavioural therapy

Treatment for depression.

CBT is used to:

- Help ppl change the way they think (cognitive part).
- Help ppl the way they act to improve the symptoms they have (behavioral part).

### Stages of CBT:

- Discuss all their symptoms with therapist, explain how they feel and what makes them feel that way.

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2. Challenging irrational ways of thinking. When SM's able to recognise these irrational / negative thoughts they should try and replace them with more rational / positive ways of thinking.

- The patient will have many sessions of CBT + homework.
- Evidence by NHS (2012) suggests that ppl with depression given CBT along side their previous treatment have improved significantly in their symptoms.

## Strength + Weakness

### Strengths:

- There is evidence to suggest CBT is effective.
- Matthijs Beltman (2010)
- Longer lasting treatment than antidepressants
- Independence in controlling their symptoms whenever they want.
- Help patients feel better bcs they learn how to deal with their own ~~symptoms~~ symptoms. They have a perception that they can act to do something about their state.

### Weakness:

- Relies on persons wanting to change their behaviour. Symptom of depression is "lack of motivation".
- Ethical issues. Therapist might abuse their power and tell the patient that they should change to suit what the therapist thinks is okay.

## Drug

## Therapy

Treatment for depression

- Antidepressants - Raise neurotransmitters (serotonin or noradrenaline). Help last longer.

## Types of Ad.

Not all drugs work the same for every one:

1. Selective serotonin reuptake inhibitors
  2. Serotonin + noradrenaline reuptake inhibitors.
  3. Monoamine oxidase inhibitors
  4. Tricyclics - around since 1950's
- } Similar

## Strength + Weakness:

## Strength:

- Improve patients symptoms, make easier to get other psychological therapies.
- Royal College of Psychiatrists, 50-60% ppl improve with antidepressants vs 25-30% placebo. Strong evidence.

## Weakness:

- Unpleasant side effects - MAOIs Dangerous if mixed with wrong food. General - drowsy - nausea - dizzy - suicidal - sleep back - diabetes.
- Tricyclics - Too many taken = bad

- Improve symptoms, Not treating the disorder

Joanna Moncrieff + Irving Kirsch (2005) — ppl are too reliant on the antidepressants so might relapse without them.

## Addiction

- ppl feel they "need" to "have" or "do" somthin to feel normal. body depends on it
- ICD-10 says addiction is known as "dependence disorder".
- Withdrawal
- Symptoms present at same time for 1 month.
  - symptoms of Dependence disorder in :

Person needs Sub / thing → Stopping = difficult → physical withdrawal — Shaking — Vomiting when thing not in use for a while → tolerance to thing — increase amount → replacing normal stuff with just using / doing thing → ignoring that it's bad.

Symptoms of behavioural addiction:

Need to do activity a lot → Reducing = difficult → They have to do activity or do smthing more "risky" → They Do activity more than usual things → They ignore that it's unhealthy.

## Features + Change over time:

- 2015-16 PHE say most ppl out of 141,646 were being treated for addiction.
- Numbers of ppl with addiction hard to tell
- NHs, 2mil ppl in UK estimated addiction
- ICD-10 "internet addict" is not mental health but a behavioural addiction.
- 6% of world hv problem internet use. Cheng + Yee-lam Li 2014 said highest addiction rate = middle east (10.9% world), lowest rate = North + west Europe (2.6% world).
- 2014 UK, 16% of 1300 18-24 year olds use internet 15 hours per day. Young adults

~~cot~~ Past Addiction = Substance misuse only.

Present Addiction = sub misuse + behavioural

• Center for Social Justice 2016 say sources of addiction becoming cheaper.

• 2014 research, The Guardian = 2008, 27% ppl who click survey said they had used illegal sub, 2014 31%.

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## Affect on individuals + society:

- Quality of life and smt's health could be affected, may not be able to invest in looking after themselves individual
- Impact on workplace, costs of company in covering workload of smt. society
- Health care services costs, NHS 488 mil per year. society
- Addicts criminal behaviour, NHS' crimes cost UK society 13.9 Bil per year.

## Genetic explanation of addiction

- If addiction was genetic, explains why not everyone becomes addicted. some ppl don't have addiction genes.
- Don't carmeli 1992, If one identical twin was a smoker high chance other one will smoke. Not same with non-identical cus identical share more genes.
- Donald Goedde 1973, adopted kids who had at least 1 bio parent with alcohol addiction were likely to have signs of addiction to it. Inherited gene from parent
- Remi Cabolet 1987, supports suggestion. found that if there was alcohol misuse in adoptive family higher chance child will become addicted to alcohol. Environmental influence

- DOR2 gene, shown to be related to addiction
- Diff addictions, gambling or alcohol linked to variation of this gene, A1.
- Gene thought to affect way brain reacts to pleasurable activities. Need to do things more to get normal "buzz".
- Diana Martinez 2004, heavy users of cocaine likely to have particular version of a dopamine receptor gene. Fewer D2 receptors in brain. Genetic variation = ppl more prone to developing cocaine addiction.

## Strength + Weakness:

### Strength -

- lot of scientific evidence. research more reliable
- Explains why only some ppl are prone to becoming addicts.

### weakness-

- Reductionist, fails to take in social factors.  
Home environment might be factor in twin's smoking addiction.
  - Not been able to find a single gene to explain where addiction comes from. Hard to pinpoint exact cause.
- DOR2 A1 has also been linked to autism. Not clear.

## Learning Theory Explanation of Addiction

- Behavior of addicts learned through experience.

### Classical conditioning:

- Behavior learned through associations.
- Things happen around same time, mind links them.
- In future, experience one thing other auto triggers.

### Operant conditioning:

- Learning from consequence of action.
- Behavior repeated if outcome is positive, not if negative.
- Reinforcement
- If addict is addicted to smthng that makes them feel good, reinforces behavior.

### Social learning:

- Behavior learned as a result of observing smth. If smth looks up to smth who has an addiction of some sort they might copy it.

### Strength + weakness:

Strength -

- By assuming addiction is result of learning, there are behaviors that can be unlearned.

- Classical conditioning helps to explain why previous addicts may relapse
- Weakness -
- Ignores role of bio factors that could influence addiction. Reductionist
- Conditioning theories do not explain why lots of ppl try stuff but only certain amount become addicted.

### cognitive behavioural Therapy treatment for Addiction

- Developed in 1950s + 1960s, Ellis and Beck.
- CBT
- Helps ppl understand triggers for addictive behaviour + learn how to control it.

### Function analysis:

- looking closely at addicts behaviour + cracking out what makes them turn to their addiction.

### Skills training:

- Helps the patient to learn skills they can use to avoid engaging in addictive behaviour.

In CBT sessions patient will keep diary of important events.

## Strengths + weakness:

### Strength -

- It aims to give patient control to stop their own addictive behaviour.
- CBT is supported by research evidence • Kimberly Young 2007.

long-term results.

### Weakness -

- ~~Addict~~ Addict has to be motivated to change.
- CBT does not always mean that the behaviour problem will reduce. Jon Macgestern + Richard Langbaugh 2000, Addicts can cope after CBT but not always practice these skills.

## Drug therapy as

### a treatment for addiction

- Detoxification
- Medication help reduce effects, help patient control addiction
- When addict stops using substance they are addicted to, they face withdrawal symptoms. Drugs cannot be given to reduce symptoms.
- Addicts crave substance they are addicted to when they stop using it. Nervous system becomes used to effects, need it to 'feel normal'.
- Medication. Methadone → Heroin, Smokers → gum-patches, naltrexone → alcohol.

- Drugs can be effective to some behavioural addictions.
- Naltrexone → gambling
- Anti-depressants SSRIs help patient control urge to participate in addictive behaviour. Belinda Winder 2014

## Strengths + Weakness:

### Strength-

- Research evidence supporting effectiveness. Suck Won Kim 2001, 75% gambling addicts improvement.
- May help patient access other types of therapy. Control long-term CBT etc.

### Weakness-

- Evidence supporting effectiveness very mixed, not all evidence agrees. John Krystal 2001 12 month period.
- Giving medication to sm1 already addicted to smthing might make problem worse. might become dependent on medication.

### Study-

## Cat Spi 2003 Influence of life stress on Depression

### Background:

- Stressful life events may cause depression but not everyone becomes depressed.
- Study looks at whether a gene linked to neurotransmitter serotonin makes some ppl likely to become depressed after event more than others.
- SSRIs, low lris serotonin = depression. Gene that causes lower lris

more likely to become depressed after event.

## Aims:

- Avshalom Caspi, stressful life events depression.
- 5-HTT Gene

## Procedure:

- 847 members of Dunedin Multidisciplinary Health and development study. Divided into 3 groups based on the version of 5-HTT gene:
  - 2 copies short version 17-1.
  - 1 copy short 1 long 51-1.
  - 2 copies long 31-1.
- Longitudinal Study - questionnaire life events 21-26 today

## Results:

- ppl with at least 1 short version  $\rightarrow$  increase depression symptoms.
- Short version of gene  $\rightarrow$  more likely diagnosed with depression than sim1 with 2 long version.
- 2 short version = Severe depressive symptoms.

## Conclusion:

- Interaction between life events + genetic influence cause depression.
- Nature + Nurture increase likelihood of depression
- specific gene + stressful event = depressed.

## Strength + weakness:

### Strength -

- Large sample, 847 ppl
- Info from study could be useful to doctors.

### Weakness -

- Researchers thought some ppl naturally more likely to put themselves in situations where stressful events might happen.
- Evidence from questionnaire is self-report data. Not reliable.

### Study -

#### Young 2007 CBT internet Addiction

### Background:

- Internet addiction has become a specific mental health problem.
- Kimberly Young, CBT → internet addiction.

### Procedure:

- 114 participants taken from center of online addiction.
- Complete IAT test. ppl with other psychological stuff not chosen.
- online course of CBT sessions.
- Background of person, help develop skills.
- Questionnaire 3rd, 8<sup>th</sup> and 12<sup>th</sup> session, + 6 months after treatment finished. COQ

### Results:

- More males 58% than females 42%. 61% educated to uni lvl.
- 30% males addicted to web online stuff. 30% females to chat rooms online.
- Clients attitude towards CBT sessions, over 12 sessions average rating of the quality improved. No significant drop in rating goals 6 months after.

### Conclusion:

- CBT can be an effective treatment for internet addiction.
- long-term benefits.

### Strength + weakness:

#### Strength -

- Online CBT sessions useful for treating addiction
- Data at sessions 3, 8, 12 and 6months later = Reliable.
- consistent and standardised.

#### Weakness -

- Might not be accurate. Clients filled questionnaire about their own feelings.
- There are multiple of diff types of internet addiction. Not clear whether all types achieved same effects after treatment.

# Nature + Nurture

- A Debate about whether our behaviour is the result of bio make-up - nature - or learning from environment - nurture -

## Nature -

- Biological factors influence smt's behaviour. Generally in place before we are born. e.g. genes from parents.

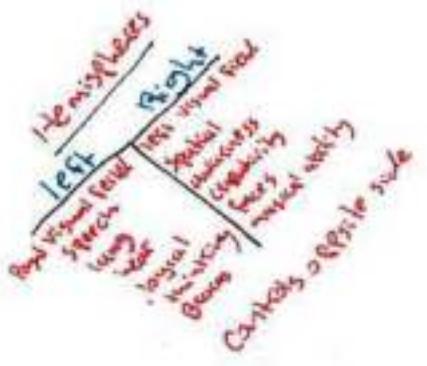
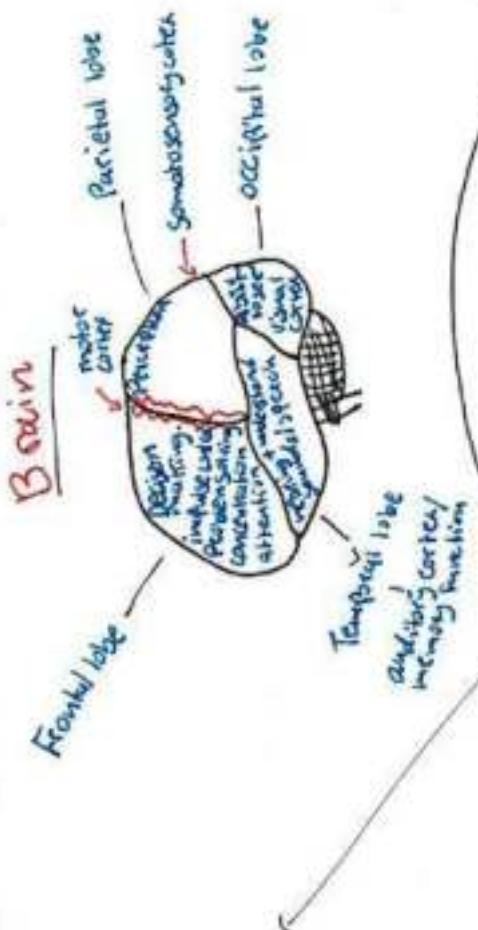
## Nurture -

- Environmental factors influence smt's behaviour. After being born. our experiences that influence behaviours.

Caspi 2003, nature, gene 5HTT.

Cognitive explanation of depression and learning theory offers an explanation for addiction, Nurture, problems are learned as a result of what happened in a persons environment.

Caspi 2003, both nature + nurture, Gene + Stressful life event.



## Learning theories

- Classical : Associations
- Operant: Consequence
- Social : Observing

S      W  
 S = stimulus  
 W = response  
 I = learning  
 = reinforcements we condition ourself to.  
 Conditioned response = certain things can trigger small amount of people's same adults reflexes after being

## Revision Notes 1

Amnesia: difficulty cannot remember information from before  
Retrograde amnesia: unable to remember things that happened before incident. Recent memories affected by incident. Long-term memories affect any new memory.

Conformity: matching beliefs and behaviors of others in order to fit in.

Sensory register → short-term memory → long-term memory

Iconic memory  
 • Echoic memory  
 • Gustatory  
 • Olfactory  
 • Tactile

Operant conditioning  
Learning from  
consequence.

Temperament  
biological  
nature not  
effect behaviour.

In controlled experiment  
IV, DV, control, environment  
investigate how

1  
2  
Revision Notes

Validity:

Extent to which a  
study measures what  
it intends to measure.

Reliability:

Consistency of an outcome  
Same results found over time  
over 3 occasions

Quantitative:  
Drawing research  
Tests a prediction / theory.

Qualitative:  
Emphasis is on  
clarification, gathering  
info, lots of info.

### Experimental research designs

- Independent measures design:
  - splitting participants into groups - each group tested only one condition of study.

- Repeated measures design:
  - same participants used in all conditions.
- Matched pairs design: Diff pop in each condition, matching them on variables or important characteristics.

### Methods of sampling

- Target population  
group of people which the investigation is conducted about
- Sampling methods
  - Random technique
- Stratified sampling:
  - identifies subgroups in target pop and takes random sample from each.

Single blind technique:  
Conf control characteristics  
Participants are blind to  
particular information, researcher is  
certain information  
within article.

Double blind:  
Both patients nor researcher  
involved in data collecting  
know the study using  
control drug within investigator  
control

### Erikson 1959

- we develop ~~ourselves~~ through eight stages.
- how we build our identity through crises.
- Each stage / challenge occurs at a particular age.

### Revision Notes

#### Personality traits

### Eysenck 1964

- Extraversion / introversion
- Agreeableness - shareable, unshareable
- Psychoticism - lack of empathy towards others
- Reduced extraversion linked with personality High extraversion - open and given isn't good

## Young 2007

CBT with internet  
addicts

## Peterson + Peterson

Aim: investigate duration of short-term  
memory

### Procedure:

- 24 Students individually tested
- Pictures exposed to visual and verbal (auditory) after asking testing subject number and by questionnaire than count back words
- ~~Red light - green~~ Red Light = Green
- Five delays 26, 9, 12, 15, 18 seconds
- Repeated 48 times

### Results:

- longer each student had to count back words, less able tends more to make errors
- 3sec 80% - 18sec less than 10%

### Conclusion:

Information is stored among links (schemas)

### Study:

- Good control, used standardised procedure
- Scientific
- lacked mundane regimen.



## Bastillett war of chess, (1932)

Aim: reconstructive memory test

### Procedure:

- Read war of chess then asked to recall
- **Serial Reproduction:** Recall story 15-20 mins later
- **Repeated Reproduction:** asked to write story after 15 mins. Then asked to recall minutes, always later

### Results:

- True - about first reproduction tended to decline in later repetitions
- working connecting / recents = earlier and unimportant - unimportant parts
- Conclusion:
- Schema's influence over memory / recall

### Saw:

- Remembering a story is reconstructive
- Recallable, but sometimes some schema's
- Conflicting data
- Encyclopedic search
- Story was very familiar, illegal,
- Stories were weak + complex. Remained, song was more engrossing & took.
- lack of good controls
- Nature vs Scientific as control lesson.

## Medulla oblongata

- Affectionate
- Controls involuntary response
- 2 weeks old

### Strengths

- General stabilty
- Mundane realism
- Context / setting
- Particular parts e.g. number, face, gender

## Revision

### Notes

3

### Significant figures

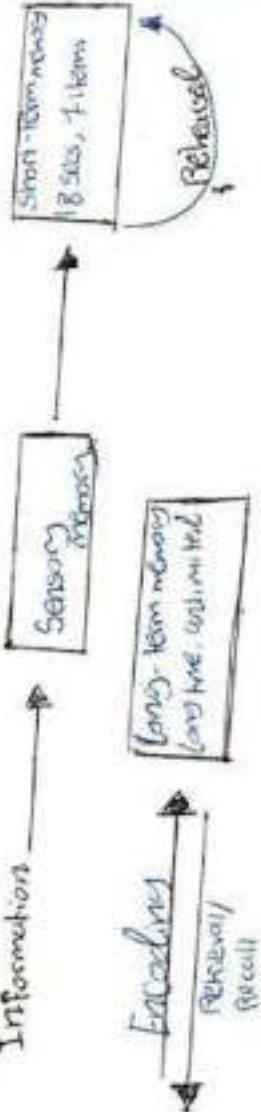
$$\begin{aligned}
 & 1.234 = 4.59 \times 10^{-2} \\
 & 13.999 = 1.3999 \\
 & 0.001 = 1.3999 \\
 & 4.000 = 1.3999
 \end{aligned}$$

Mundane Realism:  
 Criteria valid, close, it is applicable.

### Multi-sensorial

#### Observation

Information



## Cerebellum

- Seen at about 6 weeks
- Controls physical skills - motor movement
- Involved in reflexes such as face functions such as processing taste information

**Short-term memory:** 4 chunks or items

Example of planning and 8 to 12 mark question

**Q. EVALUATE SOCIAL IDENTITY THEORY AS AN EXPLANATION OF PREJUDICE (8 MARKS)**  
REFERENCE PAGE 40 & 41 AS TEXTBOOK

A01 (Description)	A03 (Evaluation)
<ul style="list-style-type: none"><li>In groups and outgroups</li><li>Social Categorisation</li><li>Social Identification</li><li>Social Comparison</li></ul>	<p>Evidence from studies:</p> <ul style="list-style-type: none"><li>Tajfel (minimal groups experiment)</li><li>Sherif (Robbers cave experiment)</li><li>Application: explain how this theory can be applied to real life</li><li>Reference to alternative explanations such as Realistic conflict theory</li><li>Individual differences in prejudice and other factors affecting prejudice</li></ul>

You can use a plan if you want but make sure you hit the points if you can remember then just carry on explaining to score any further marks

- 1) Description would be 4 marks – so you need to go into some detail of the actual theory itself and definitely hit a few points. What is the theory? Explain the underlying issue – behaviour the theory is trying to explain etc....
  - a. Go into any of the stages / phases/ steps or categories of theory
  - b. Use examples if you can but make sure they are relevant – will help examiner know you know!
- 2) Now use some at least one study to provide support either for or against the theory. Best if you can remember the studies name and talk about the details of the study. If you can't remember the name just say "research evidence ..." But you will lose marks because of this
  - a. use this to evaluate the theory and if it actually works
  - b. Great to be able contrast other studies and or theories too
  - c. Explain the study itself and its application -
  - d. Any alternative theories which may also apply.
  - e. Go into detail on the reliability, validity, generalization etc... of the studies.
- 3) Finally write a conclusion and hedge, hedge, hedge that this could be one explanation but another theory may be more appropriate.