Psych Exam Notes

Forgetting

Forgetting: inability to retrieve memory from long term storage

- Normal forgetting help us remember and use important information
- **Ebbinghaus =** *methods of savings* → shows how forgetting happens rapidly, it would take less time and effort to relearn something you were taught but forgot how to do instead of learning it for the first time→ difference b/w the original learning and relearnings is **savings**
- **Schacter = SEVEN SINS OF MEMORY**
  1. Transcience
  2. Absentmindedness
  3. Blocking
  4. Misattribution
  5. Suggestibility
  6. Bias
  7. Persistence → post traumatic

1,2,3 are forgetting

1. **Transience → pattern of forgetting over time**
   - Forgetting = memory decay in NS → unused memory forgotten
   - But really: because of **interference** from other information
   - **Interference from other information can lead to forgetting by PROACTIVE interference vs RETROACTIVE INTERFERENCE**

   - **Proactive =** OLD info inhibits the ability to remember NEW ones (old phone # blocks remembering new one)

   - **Retroactive** = NEW inhibits OLD (new phone # makes forget old one)

2. **Blocking → person TEMPORARILY is unable to remember something**

   - **Tip of the Tongue phenomena →** Brown and McNeill
   - Blocking occurs because of interference from other words that are similar in some way (sound/meaning)

3. **Absentmindedness → inattentive or shallow encoding of events**
   - Ex. Forgetting where you put your keys or forgetting name of person you met 5 mins ago, **change blindness too**

- **Major cause of absentmindedness is failing to pay attention when encoding memory**
- Asians were more likely to notice changes in the background of images (collectivistic) while Americans more likely to notice changes in the foreground → therefore, there are cultural variations in attentiveness to information

- **Amnesia →** deficit in LTM by injury or disease to brain
  - **2 Types:**

1. **Retrograde →** lose past memories for events, facts, or people
2. **Anterograde →** lose ability to make new memories (H.M)

- **Amnesia =** damage to the **MEDIAL TEMPORAL LOBE** and also damage to other subcortical structures (thalamus)
- **Korsakoff's syndrome =** amnesia by alcoholism

<u>Consciousness</u>

Consciousness → moment by moment subjective experiences…reflect current thoughts or paying attention to immediate surroundings

- 2 components of consciousness:
  1. **CONTENTS →** the things that we are conscious of
  2. **LEVEL →** coma v. sleep v. awake

- **Also differentiated by consciously doing something vs unconsciously**

- **Descartes →** mind is separate from the brain → **dualism** …but this was rejected because the mind and the brain are inseparable (neurons) → activity of neurons cause consciousness

- **Qualia →** properties of our subjective experience, like perception of things

- Experiment:

  - Tong studied relationship between consciousness and neural response
  - Found that **neural activity in temporal lobe's FUSIFORM FACE AREA when noticed the face but activity increased in the TEMPORAL LOBE areas with object recognition when noticed the house**
  - Different types of sensory info processed by different brain regions

- Consciousness is not steady (tired, sleeping, awake) and it can be altered by drugs (caffeine)
- Driving and walking are called **automatic tasks** because we can do them without conscious awareness
- **Controlled processings** are those that need more conscious efforts and are slower to accomplish → snowing while driving, more conscious and careful.

- Brain damage that leaves people in a coma for a very long time is called **persistent vegetative state** → but brain still processes info in this state

- Between vegetative state and full consciousness is **minimally conscious state** → make some movements like following an object with their eyes or trying to communicate

- Doctors will cut connections of brain regions to stop the spread of seizures to other brain areas

    - The brain area most likely to be cut w/o damaging the grey matter is the **corpus callosum** → results in no connection between the two hemispheres of the brain (**split brain**)
    - **LEFT HEMISPHERE = LANGUAGE**
    - **RIGHT HEMISPHERE = SPATIAL RELATIONS**

- With split brain, people could identify and claim to only the image coming to the right eye was shown and not the left eye → because right side = left hemi and need language to say you saw it. → BUT if shown a picture of a spoon, they can use their left hand (controlled by mute right hemisphere) to pick up a spoon (spatial relationships)
- THEREFORE, splitting the brain creates two half brains, each with own perception, thoughts and consciousness

- Left hemispheres ability to make world that makes sense is called the **interpreter** → shovel and chicken experiment

- Maximum reward experiment and 70% of the time the red light flashes → why do humans try to figure out patterns? Because the left hemisphere interpreter tries to come up and figure out patterns that may not exist

- Unconscious cues = **subliminal messages** → they can affect our cognition → subliminal messages are perception stimuli that are not processed strong enough to reach our conscious awareness

- Sometimes making decisions unconsciously rather than consciously gives the best outcome → Jam experiment and tasting → Schooler = **Verbal overshadowing**

- **Blindsight:** condition where person who has some blindness because of damage to the visual system continues to show evidence of some sight, but is unaware of seeing at all → when a dot is moving in their blindspot, they will guess better than average the direction that it is travelling.

- Patient who was blind in visual perception cortical but amygdala could still recognize emotions of faces.

- **Global workspace model →** consciousness arises as a function of which brain circuits are active

<u>Altered Consciousness</u>

Altered states of Consciousness → increased/decreased level of self-awareness, disturbances in sense of control of physical actions → **hypnosis, meditation, immersion in an action**

- **Hypnosis** → social interaction where person responds to suggestions and experiences changes in memory, perception and actions
    - After hypnosis, person will experience changes in memory, perception and actions (**post-hypnotic suggestion)**
    - Hypnosis only works for people that are highly **suggestible** (absorbed in activity, not distracted and high imagination)
    - **Sociocognitive theory of hypnosis:** the person being hypnotized does not have an altered state of consciousness, rather they are playing the role of a hypnotized person
    - **Dissociation Theory of Hypnosis:** hypnotic state IS an altered state where conscious awareness is DISSOCIATED from rest of conscious aspects → MORE SUPPORTED (black and white images creating colour perception areas activate when hypnotized) and (Stroop effect not working on hypnotized)

    - *Uses of hypnosis?* **Hypnotic analgesia → PAIN REDUCTION →** reduces persons INTERPRETATION of pain rather than diminishing it (feel sensation, but are deattached from the sensation) → research found that it does not change sensory processing of pain but rather alters the brain regions needed to interpret pain (DISSOCATION THEORY)

- **Meditation →** mental procedure that focuses attention on an external object or a sense of awareness
    - There are two forms of meditation:
        1. **Concentrative meditation** → focus attention on ONE thing like breathing (**MANTRA)**
        2. **Mindfulness meditation** → let thoughts flow freely, paying attention to them but not reacting to them
    - **Transcendental meditation (TM) →** meditating with concentration for 20 mins 2x a day

- **Runner's high =** random increase in energy when exercising, caused by release of **endorphins →** but also occurs because of a shift of consciousness

- **Flow →** activity that has no reward but is so fucking satisfying → playing music or sports (they make life worth living)

<u>Social Factors</u>

- **Social Facilitation:** presence of others enhance performance
- **Zajonc = model of social facilitation in 3 steps:**

    1. Animals are **genetically predisposed** to become aroused by presence of others of own species
    2. Arousal leads to emitting **dominant response** (response most likely to be performed)

PRESENCE OF OTHERS → AROUSAL → ENHANCEMENT OF DOMINANT RESPONSE

- Correct response the performance is enhanced, incorrect response the performance is impaired

- **Social loafing:** peoples efforts are shared so no one ind. feels responsible for group output (less effort when working in a group than individually).

- **Deindividuation:** people are not self aware and not paying attention to personal standards (losing individuality when becoming part of a group) → losing self-awareness is losing values and morals (crowds and riots)

- **Risky-shift effect:** groups performing more risky actions than an individual by themselves would

- **Group Polarization:** groups enhancing the initial attitudes of members who already agree → discussion makes juries enhance already attitudes of persons guilt or innocence → extreme case of polarization is **group think →** doing poor decisions to keep cohesion of group (Bush and Iraq War) → group think happens when the group is under pressure, threatened, or bias in certain direction

- Conformity and **Sherif's AUTOKINETIC EFFECT→** stationary point of light appears to move when viewed in totally dark env. → when asked how far they thought the light was, the answers ranged a lot → but when put together, they all agreed on specific distance → **shows that in ambiguous case, people react same way as others (**but this experiment was a SUBJECTIVE one)

- Asch did an OBJECTIVE experiment with 5 confederates and one naïve → length of line and conformity to obvious wrong answer.

Things that Decrease Conformity?

1. **Group Size →** increasing the size is increasing the conformity, but it levels off at some point
2. **Lack of Unanimity →** if one confederate gives the right answer, no conform

Aggression

Aggression = behaviours with an intention to harm someone else (children more physical aggression than adults)

Biological Factors

- The **SEPTUM, AMYGDALA, HYPOTHALAMUS** lead to changes of aggression
- Rhesus monkeys and removing their amygdala → friendly and curious to normally threatening stimulus → condition called **Kluver-Bucy syndrome**
- **SEROTONIN** important for control of aggression → increase serotonin = decrease aggression

Individual Factors

- Dollard and **frustration-aggression hypothesis**
- Berkowitz and **cognitive-neoassociationistic model** → frustration leads to aggression by bringing out negative emotions (any negative emotion can lead to aggression, not just frustration)

- Aggression is evolutionary, but extent and tendency is cultural based

- **Culture of honour:** belief that men need to protect reputation by physical aggression → shows why some cultures more violent than others

Helping Others

- Humans are **pro-social** → tending to benefit others → due to empathy and inborn predisposition

- **Altruism** → helping others without any reward

    - Why? (since non-adaptive) → Hamilton and idea of **inclusive fitness → adaptive benefit of transmitting genes rather than focusing on ind. survival**

- Those whom are altruistic toward others with same genes → **kin selection** → ex. Bees and giving honey to eggs even though they aren't reproducing themselves, they are helping the whole colony grow as a whole

- There is also altruism to NON relatives →**reciprocal helping** → helping other because they might return the favor later on → benefits > cost for it to work

- Kitty Genovese and the **bystander intervention effect** → **Failure to offer help to someone in need** → also the smoke in the room experiment (only 10% did something)
- Bystander intervention effect also called **bystander apathy**

Why does the Bystander Effect Happen??

1. **Diffusion of responsibility**
2. **Fear of making Social Blunders in Ambiguous Situation** → fear of looking foolish
3. **People will less likely help when they are anonymous**
4. **Could harm themselves by helping the other** → weighing cost of helping vs benefits

Chapter 15 Treatment of Psychological Disorders

- Two ways of treating mental disorders:
  1. **Psychotherapy** → practitioner and the client by making the client understand their symptoms and finding solution to solve them (psychological)
  2. **Biological Therapy** →medication to disease, assumption that mental disorders are abnormalities in neural and bodily processes
     - **Psychopharmacology → medication that effects brain or body functions (**good for short term)

- Getting a better understanding of the etiology of mental disorders (causes) does not mean better knowledge for treating it → also treating a type of disorder with same type of treatment not always effective → autism is biological disorder but treating it with behavioural treatment rather than biological is more effective

Types of Therapies

1. **Psychodynamic Therapy and Insight → FREUD**

- Psychoanalysis → sitting in chair and speaking your mind and access unconscious thoughts
- Unconscious thoughts and conflict lead to maladaptive thoughts and behaviour
- Techniques:
  - **Free Association:** saying whatever came to mind
  - **Dream Analysis:** interpreting meaning of client's dreams
- This lead to **INSIGHT** or personal understanding of psychological processes
- Freud practices were later changed to **psychodynamic therapy → understand needs, defence and motives**

2. **Humanistic Therapies and Whole Person**

- **Based on personal experience, belief system and individuals** → treatment of person as a WHOLE rather than collection of behaviours
- **Client-Centred Therapy → Carl Rogers →** safe and comfortable environment with friendly therapist → **reflective listening** (repeating clients actions or thoughts to allow focus on subjective thoughts)
- **Motivational Interviewing** → problem drinkers and using client-centred therapy

3. **Cognitive-Behavioural Therapy**

- Type of therapy where you are changing the clients cognition directly → targeting maladaptive thought directly
- Bases of: **behaviour is learned and can be unlearned through the two types of conditioning**
- **Social skills training** → way of getting desired behaviour
    - First step is **modelling** the situation or desired behaviour

- **Cognitive Restructuring →** changing maladaptive thoughts
- **Rational-Emotive Therapy** → therapist is like teacher and teach adaptive behaviour

^^^ Both based on individual belief system and not objective conditions

- **INTERPERSONAL THERAPY** → mixture of INSIGHT and COGNITIVE → focuses on relationships the client is trying to avoid

- **COGNITIVE-BEHAVIOURAL THERAPY (CBT)** → most used → for phobias they use CBT of **exposure** (using basis of classical conditioning)

Family Therapy

- **Systems Approach →** individual is part of larger context, and any change in individuals behaviour will effect whole system (FAMILY LEVEL)
- Family members **NEGATIVE EXPRESSED EMOTIONS** → hostile and emotionally overinvolved could lead to relapse → Schitz relapse more in hostile India than Japan but relapse more in overinvolved Japan than India

- **Aristotle → CATHARIS** → certain messages evoke strong emotional reactions and relief

- **Psychotropic Medications:** drugs that affect mental processes → changing neurochemistry(altering synaptic transmissions or inhibiting action potentials)

    - Really grew after deinstitutionalization

- Psychotropic Medication fall under 3 types:

    1. **Anti-Anxiety →** Tranquilizers → increase inhibitory GABA
    2. **Anti-Depressants →** Monoamine oxidase (MAO) inhibitors → increase serotonin, norepinephrine and dopamine → **tricyclic antidepressants used now** → inhibit reuptake of neurotransmitters → ex. **Selective Serotonin Reuptake Inhibitors (SSRI)** → PROZAC
    3. **Anti-Psychotics →** aka **neuroleptics** → bind to and block effects of dopamine → can lead to bad side effects: **tardive dyskinesia** → twitching

- **Lithium and anti-convulsants** help with bipolar

- **Trepanning** → used in old times and put holes in head to release evil spirits

- **Psychosurgery** → removing parts of frontal lobe to get rid of schiz → prefrontal lobotomy (Moniz)

- **Transcranial Magnetic Stimulation (TMS)** → powerful current that makes an electric field, when switched on and off, causes electrical current in brain region directly below the coil → single pulse vs repeated pulses

- **Deep Brain Stimulation (DBS)** → implanting electrodes in brain and giving stimulation for optimum frequency and intensity → used for Parkinson's → implanted in motor regions to alleviate motor symptoms of disease

<u>Effective Treatments</u>

- Distinctions between **psychological treatment** (evidence-based treatments) vs. **psychotherapy** (any type of therapy)
- Barlow says that 3 features that characterize psychological treatment:
    1. **Vary according to mental disorder**
    2. **Techniques have been formulated in labs using behaviour, cognitive and social psychologists**
    3. **No overall grand theory guides treatment, rather it is based on EVIDENCE and EFFECTIVENESS**

BEHAVIOURAL and COGNITIVE treatment for ANXIETY

- Cognitive behavioural theory good for treating anxiety
- Anxiety reducing drugs → only short term and addictive like tranquilizers
- Anti-Depressants that block reuptake of serotonin good for anxiety too

- For **phobias** → behaviour techniques are nice

    - Client makes FEAR HIERARCHIES
    - Change muscle tension to relaxation
    - Then do exposure therapy → exposure and not relaxation alleviates the fear
    - Can use **virtual environments/reality**
    - **SSRIs better than tranquilizers for social phobia**

- For **Panic Disorder**
    - **Imipramine** prevents panic attacks but not reduce anxiety of getting an attack
    - **Cognitive-behaviour** good for breaking association of physical symptoms and feelings of doom → fear of fainting even though irrational so client becomes aware
    - Use cognitive restructuring

- For **OCD**
    - **SSRI** is nice for OCD…NOT anti-anxiety ones
    - Especially good is: **potent serotonin reuptake inhibitor clomipramine**
    - **CBT** also nice for OCD → **exposure and response prevention** → done to break the conditioned link between stimulus and compulsive behaviour
    - **CBT > clomipramine > placebo**
    - For severe cases of OCD where CBT no work, **deep brain stimulation (DBS)** is used to remove symptoms → electrodes to the **caudate**

Treatments for Depression

- No best way to treat depression

1. **Pharmacology Treatment**
    - MAO inhibitors, but could be toxic
    - **Tricyclics** → good for clinical depression
    - **SSRI Prozac** has less side effects than tricyclics, no effect on histamine and acetylcholine
    - People with placebo showed improved activity in prefrontal cortex, different from anti-depressents

- Usually do trial and error approach for treating the depressed

2. **Cognitive-Behavioural Treatment**
   - People become depressed from automatic and irrational thoughts
   - Anxiety worry about future, depressed worry about past
   - Treatment to think more adaptively
   - CBT + drugs = good
   - Psychotherapy and drugs work on same brain regions, but activity in those regions was different

- People with SAD and mild depression can do aerobic exercises that release endorphins → causes an overall feeling of well being

- **ECT** can also alleviate the symptoms of depression by effecting neurotransmitters or the neuro-endocrine system → increase acetylcholine → better for pregnant woman than medication → ECT could cause memory impairment though by depressed having high levels of cortisol

- **Transcranial magnetic stimulation (TMS)** can reduce depression → good over the LEFT hemisphere → good because has long term value of effectiveness even for those who have not responded to treatment of antidepressants

- **Deep Brain Stimulation (DBS)** → feel relief right away when turned on → research in France found that DBS in caudate alleviated symptoms of OCD but DBS in **nucleus accumbens** alleviated symptoms of Depression

Treatment for Bipolar Disorder

- Depression and bipolar are mood disorder that require different treatments
- **Psychotropic medication → LITHIUM** good for Bipolar
- Lithium is paired with SSRI because they don't cause mania
- **Bipolar is 100% medication**

Treatment for Schizophrenia

- Freuds techniques only worked for neuroses and not psychotic symptoms
- **Psychotropic Medication** is good for schiz
- First treatment was extracted from dogbane and called **reserpine** → then synthetic version with less side effects called **chlorpromazine** (major tranquilizer that reduces positive symptoms) → then **haloperidol** (less sedating effect)

- Problems with these drugs:
    - Don't remove the negative symptoms
    - Side effects like the **Tardive dyskinesia** → muscle movement in mouth

- Then came **clozapine**
    - Acts on DOPAMINE receptors and for SEROTONIN
    - Treats both symptoms of schiz
    - No signs of Parkinson's or Tardive
    - BUT: decreases white blood cells
- New drugs called **second-generation antipsychotics**

- These drugs only help the symptoms but not the social aspect to get back to a productive life → go through **social skill training**

- some symptoms of schitz can decrease with age, might be because as age dopamine levels decrease

- Schitz is less severe in DEVELOPING countries than the developed→ more family ties in developing countries

Types of Specialized Mental Practitioners

Specialty	**Degree**	**Placement**
Clinical Psychologist	Ph.D or Psy.D	Academic or hospital
Psychiatrists	MD	Hospitals or private practice
Counselling psychologist	Ph.D	Schools
Psychiatric Social Work	Master in social work (MSW)	Psychiatric hospital/house call
Psychiatric Nurse	Bachelor in nursing (bSN)	Hospital or residence
Paraprofessional	Limited Training	Outreach programs

Personality Disorder

- Extremely difficult to treat → patients usually blame environment rather than own behaviours

For **Borderline Personality Disorder**

- Linehan and **Dialectical behaviour therapy (DBT)** is best solution
- There are three stages for this treatment, and the therapist and client have each responsibilities:
  1. Therapist targets most extreme behaviours → better coping with bad and dangerous behaviours
  2. They explore past traumatizing events that led to their condition
  3. They develop self-respect and individual problem solving
- Their symptoms remain unchanged over time (before thought that borderline developed into schitz)

Anti-Social Personality Disorder

- Even harder than borderline to treat → seems impossible
- Want to manipulate the therapist instead of seeking help
- They are given stimulants to normalize arousal → but short term
- **Psychotropic medication is no good**
- Good treatment is with group not individual and in residential area where they cannot leave
- Extremely hard with psychopathic traits, it remains even with old age → therapy has minimum effect
- Therapy in trying to prevent it from happening during childhood → **conduct disorder: childhood condition that is precursor for anti-social personality disorder**

Adolescents and Medical Treatment for Depression

- SSRI for children was controversial because it increased suicidal thoughts
- **Treatment for Adolescents with Depression study (TADs)** was research program that gives evidence that SSRI Prozac is EFFECTIVE for treating adolescent Depression
  - **Found that 61% of participants taking Prozac showed improvements compared to 43% doing CBT and 35% with placebo**
- So first its saying it does increase suicide rates and now they're saying it doesn't → suicide rates have decreased when SSRI became widespread
- Psychotherapy is more effective in long run.

Children with ADHD

- Most common treatment for ADHD is **methylphenidate aka Ritalin** → it is more potent than caffeine but less potent than amphetamines → effects **DOPAMINE levels**
- Ritalin does not increase likelihood of substance abuse in adulthood
- Treatment better when drugs are involved though
- Ritalin **slightly increases positive behaviour but REALLY decreases negative behaviours**
- **Multimodal Treatment of ADHD (MTA)** is research program for ADHD
  - Three treatment groups:

1. **Medical management → use of Ritalin**
2. **Intensive behaviour treatment**
3. **Combination of both**

- Results showed that kids taking medical management and both meds and behaviour treatment showed a lot more improvement than intensive behaviour treatment alone. → but those taking both showed improved social skills with family, academics → also found that they regressed if only medication rather than both

Children with Autism → STRUCTURED TREATMENT APPROACH

- Hard to find effective reinforcers for autism because lack interest in many things
- Need to be taught **generalizability of skills** → if taught to set plates they'll be like wtf do I do when they are given bowls

<u>Behavioural Treatment for Autism</u>

- Lovaas → **applied behavioural analysis (ABA)** → based on operant conditioning
  - Engaging in joint attention during ABA is good → maintaining eye contact and imitating the child's actions
  - Drawbacks: emotional and financial strain on family because of time and effort the family has to put in to teach the child proper behaviour

<u>Biological Treatment for Autism</u>

- **Serotonin** → giving the autism children SSRI to stop compulsions
- also **Oxytocin** was given to adults and it improved ability to distinguish emotion in persons speech

- high IQ means they are better able to generalize learning

Intelligence

Intelligence: human ability to use knowledge to reason, make decisions, solve problems, and adapt to environmental changes

- Galton was first to study intelligence → thought that intelligence related to speed of neural responses and sensitivity of sensory/perceptual systems → **the quicker our response and keener the perception, the most intelligent that person is → GALTON = QUICK PROCESSING OF INFORMATION**
- 3 ways of understanding intelligence:

    1. **Psychometric approach** → how people perform on standardized achievement tests (problem solving and knowledge)
    2. **Cognitive approach →** mental abilities (processing info and speed of reaction, also memory is involved)
    3. **Biological approach →** how BRAIN processes info and different brain activity involved and how genes and env. Effect brain activity

Psychometric Tests

- Has to do with the psychometric approach
- **Achievement Test:** based on current levels of skills and knowledge
- **Aptitude Test:** based on whether people will be good at doing a particular task in the future and what jobs will be good for people in the future
- **Binet** → made first method of assessing intelligence → said that intelligence was a collection of mental processes → made the **Binet-Simon Intelligence Scale**
- **Stanford → Stanford Revision of B-S intelligence Scale →** took into account age
- **Wechsler Adult Intelligence Scale (WAIS)** → verbal and performance parts

- Binet invented the **mental age** → measured intelligence compared with those of same age peers

- Stern developed the **Intelligence Quotient (IQ)** where you **divide child's mental age by their chronological age and then multiply by 100**

    - This is good only for children but not with adults → for adults, they do **what the person knows relative to the average adult and not comparing age**
    - Across large groups, distribution of IQ forms bell curve (**normal distribution**)
    - There is a correlation between IQ and work performance, income and jobs requiring complex skills
    - IQ is important but other factors play a role in success like work ethic

Why are these standardized tests Poor?

- They show **bias** by penalizing people for belonging to a particular culture or group
    - Might not have been exposed to that information before and also a person answers determined by the meaning for their culture → some words have different meanings
    - To avoid bias, some tests do not use language and are based on patterns (WAIS)

- **Factor Analysis:** technique that clusters items similar to each other (items are factors) → people that do good in one factor do good in the others because they are similar

- Spearman → **general intelligence (g)** → tests are on basis that one general factor effects and determines one's intelligence

- There are two types of General Intelligence: **CATELL**

    1. **Fluid Intelligence** → info processing and thinking quickly (non-verbal and culturally fair) **WM**
    2. **Crystallized Intelligence** → knowledge we get through EXPERIENCE (vocab or culture info) **LTM**

- They are both part of G so when one is high the other is too, but as we age, our fluid decreases but our crystallized grows

- **Multiple Intelligences: GARDNER → recognizes that people can be average and deficit in some domains but outstanding in others**

    1. Musical
    2. Bodily-kinesthetic
    3. Linguistic
    4. Math/logical
    5. Spatial
    6. Intrapersonal
    7. Interpersonal

- **Gardner → each person has unique pattern of intelligence and NO ONE SHOULD BE VIEWED AS SMARTER THAN THE OTHER, JUST DIFFERENTLY TALENTED**

- **Sternberg = THEORY OF THREE INTELLIGENCE**

    1. **Analytic Intelligence** → problem solving
    2. **Creative Intelligence** → ability to get insight to solve novel problems (innovative)
    3. **Practical Intelligence** → dealing with everyday tasks (knowing if parking spot is big enough, being good judge of people)

- Salovey and Mayer = **Emotional Intelligence (EQ)** → ability to use social intelligence to perceive and understand emotions to guide actions
    - Manage own emotion
    - Use own emotions to do actions
    - Recognize others emotions
    - Understand emotional language
- **EQ has strong genetic component**

- **G is most important** → predicts performance in school as well as LONGEVITY

- Low socio-economic status best predictor for early death

- **G's main value is allowing people to adapt fast (FLUID) to environmental changes**

- General Intelligence is needed for solving complex novel tasks so it helped us live better lives through the improvement of technology

- **Simple reaction time vs CHOICE reaction time**

- **Inspection time Test:** stimulus presented then covered up, intelligence based on how long needed to know answer

- **Response time GOOD INDICATOR of LONGEVITY**

- **LINK BETWEEN WORKING MEMORY AND INTELLIGENCE IS ATTENTION**

- **Volume of volume of neural cell bodies (Grey Matter) in frontal and other regions for attention control related to FLUID intelligence but NOT FOR CRYSTALLIZED**

- **Parietal lobe** in Einsteins brain (visual thinking and spatial reasoning) is 15% bigger than average

- **Savants: People who have little intellectual capacities in most domains but have exceptional ability in some** → Mr. Peek → no corpus callosum and deficiency in left hemi

- EVEN IF INTELLIGENCE HAS A GENETIC COMPONENT, THE WAY THAT INTELLIGENCE BECOMES EXPRESSED IS DUE TO THE ENVIRONMENT

- **Social multiplier:** env. Factor that increases a possible slight advantage to begin with

Environmental Influences of Intelligence

- **Prenatal factors** → toxins in developing fetus
- **Post Natal → Breast Feeding** leads to an increase in IQ
- Environment influences how genes involved in brain development are expressed
- **Flynn effect** → rise in IQ scores in society recently → increase must be due to environmental conditions and not genes because genes couldn't have changed much during the short time span.

Is Intelligence Gendered?

- Intelligence is not gendered, males are not smarter than females they just score higher in different categories…woman better grades and good with WRITING and LANGUAGE but males are nice at MATH APTITUDE and VISUOSPATIAL processing

- For race, it is not scientifically appropriate to conclude that **genes cause differences among groups**

Why do Racial Groups Score Differently Though?

- Could be due to **stereotype threat** → fear that believe their performance on test might confirm Negative Stereotypes about that racial group → distracts + anxiety

- Walton did meta-analysis:

    - Participants came from a range of stereotyped groups
    - Found that **stereotyped groups perform worse than non-stereotyped groups in evaluative condition, BUT the effect is reduced in a non-evaluative condition**

Positive Psychology

- Has to do with the **Humanistic Approach (**Maslow, Rogers, Erikson)
- **Positive Psychology** → stengths and virtues that help people thrive
    - Has Three Components:
        1. **Positive emotion and pleasure**
        2. **Engagement in life**
        3. **Meaningful life**
- Optimistic people have stronger immune system and are healthier than their counterparts

- Social networks increase longevity too → men with few friends are 2.3 x more likely to die compared with a lot of friends

- **Social Integration** → quality of social relationships a person has

- Social Support helps maintain good health in two ways:

    1. People with social support experience less stress overall → single vs. married parent and juggling job and child care
    2. **Buffering Hypothesis:** when others provide emotional support like caring or listening, the person is better to cope with stressful events

- **Emotional Disclosure** → talking or writing about emotional events to increase positive cognition

- A GOOD marriage has positive effects on health, especially for **MEN** rather than for women

    - Single women have 50% higher mortality rate
    - Single Men have 250% higher mortality rate

- Marital conflicts have more negative effects on women than on men
    - Glaser and Newton found that **women who are more attuned to emotional quality of marriage than men, and are more responsive physiologically** → that is why women seek divorce more than men

<u>Trust</u>

- **OXYTOCIN IS INVOLVED IN TRUST** → oxytocin involved in Tend and Befriend Response
- During the trust game, some participants were sprayed in the nose with oxytocin and others with a placebo, the ones sprayed with oxytocin gave more money than those with the placebo→ shows how oxytocin is involved in trust
- With **DISTRUST,** Men released more testosterone and women's testosterone remained the same → shows how there are different levels of hormone activity for men and women

<u>Religion/Spirituality and Well Being</u>

- People who are religious report better feeling of well-being → because of spirituality they feel
- Religious beliefs can achieve well-being through SOCIAL and PHYSICAL support by faith communities
- Religions also may not support poor health habits

Assessing Personality

- Allport divided personality into two ways:
  1. **Idiographic →** PERSON CENTRED → DIFFERENT metric to compare
  2. **Nomothetic →** CHARACTERISTICS COMMON WITH ALL PEOPLE BUT WHICH INDIVIDUALS VARY → SAME metric to compare

- **Ideographic = everyone is UNIQUE**
  - **Central Traits** (those that really define the individual) vs **Secondary Traits** (less personal)
  - Central Traits are more predictive of behaviour
  - Case studies follow individual throughout their lives because assume personality changes
  - McAdams = **life story →** giving life meaning and make sense of world, it **integrates self-knowledge into the whole →** this can create **Personal Myths (bind past events and future possibilities)**
- **Nomothetic = QUESTIONNAIRES**

- Assessment measures can be grouped into:

  1. **Projective Measures:**
     - **Projective = UNCONSCIOUS mind →** people tell story about ambiguous stimuli
     - Their stories will reveal hidden personality aspects like their motives
     - Used to assess Psychpathology
     - Projective Measure is the **Rorshach ink blot test →** people look at meaningless inkblot and tell story about it → bad because too much people diagnosed as fucked up
     - **Thematic Apperception Test (TAT) →** Murray and Morgan → shown a picture and asked to tell a story about it → scoring is based on **motivational schemes →** bad because **TOO SUBJECTIVE and POORLY VALIDATED**

  2. **Objective Measures:** *measures only what rater believe of observe*
     - Usually self-report questionnaires or observer rating
     - **NEO Personality Inventory →** used to assess BIG 5 PERSONALITIES
     - **California Q-Sort →** assesses traits, people sort 100 cards of personality into 9 piles according to how accurate the statement describes them

- Walter Mischel = **situationism →** behaviour more determined by situations and not personality traits → controversial because the whole concept of personality is that it is stable and if it changed through situations then it would be highly unstable.

- Rebuttal to this claim is that psychologists say: Traits predicts behaviour depends on **centrality** of the trait, the **aggregation** of behaviours over time, and the **type** of trait being evaluated

    - Also the **self-monitoring trait,** where people monitor their behaviour based on the situation that they are in.
    - Situations differ the extent to which they constrain expression of personality

- **Strong Situation** (funeral, job interview, elevator) vs. **Weak Situations** (Bar, park, home)

- **Trait theorists are INTERSECTIONISTS** → behaviour determined by situations and underlying disposition (NATURE + ENV)

- Self-reports DO NOT match cultural stereotypes

- men and women are more similar than different in terms of personality, but the differences between them support the stereotype

- **Gender differences in personality in more egalitarian countries and individualistic ones because they differentiate themselves from men and describe themselves differently, thus, causing a gender difference in personality** → culture difference due to how they compare themselves rather than genuine differences in the absolute personality of that person