

# Biological Approach to Behavior

## The brain and behavior :

### **Explain one technique used to study the brain in relation to behavior.**

- One technique used to study the brain is Functional magnetic resonance imaging (fMRI). fMRI measures changes in blood flow that occur with brain activity.
- Measures blood flow, not neural activity. Able to show the ongoing brain process.
- Used to map cognitive functions in different brain regions as well as brain functions at the level of neural processes.
- Serotonin is a neurotransmitter that helps to form neural networks.

Passamonti et al (2012)

A - To investigate the relationship between neurotransmission (serotonin levels) and violent behavior

S - Healthy volunteers, 19 participants, 9 women and 10 men, average age of 25

M - Healthy participants' serotonin levels were manipulated by altering their diet using tryptophan (an amino acid that builds serotonin levels). Placebo with normal levels of tryptophan and drink that lacked tryptophan. Took place in two weeks, 1 session each week. fMRI scans are used to measure brain activity when serotonin is manipulated and they are exposed to emotional faces as well (happy, sad, etc.) and participants then self-reported mood.

- Reduced activity in the frontal lobe during low serotonin conditions when participants viewed an angry face. Reduced activation of the prefrontal cortex may affect violence and react impulsively.

Strengths and limitations :

- It doesn't use radiation like X-rays, PET scans, and CT scans
- The images fMRI produces is a very high spatial resolution
- Therefore provides a clear picture on how the brain is localized
- It is expensive compared to other techniques and can only capture a clear image if the person stands still
- Random noise during scan can cause motion and therefore muddle the results, so a lot of trials are required.
- Poor temporal resolution because of a 5 second lag between initial neural activity and image
- Therefore, does not truly represent moment to moment brain activity

### **Explain one study of localization of function.**

- Localization of function is the idea that different parts of the brain perform different functions

Under it:

- Strict localization is the idea that very particular parts of the brain perform particular functions.
- Relative localization is the idea that different functions are handled by larger areas, like hemispheres.
- One of the earliest discoveries in this was the discovery of a speech center by Paul Broca in 1861 while studying "Tan". Tan lost the ability to speak when he was 30 and could only say the word "tan". An autopsy of his brain once he died showed a lesion in the frontal area of the left hemisphere in an area now known as "Broca's area".

Maguire et al (2000)

A - Investigate neuroplasticity for spatial memory in taxi drivers

S - 16 right handed male licensed taxi drivers, Average experience was around 14 years (range of 1.5 to 42 years). All healthy.

MRI scans of control subjects taken from a database where brain scans were performed with taxi drivers. Control subjects were between 32 and 62 years, right handed, and healthy. 50 in total.

M - MRI scans of taxi drivers and control subjects

R - increased brain matter volume in the brains of taxi drivers in the posterior hippocampus.

Control subjects had more grey matter in the anterior hippocampus. General volume of the hippocampus was the same, but redistribution from anterior to posterior (i.e. front to back). (however another explanation is the people with more grey matter in the front CHOOSE to be taxi drivers).

So to test this.

M - correlation between hippocampal volume and time as a taxi driver

R - grey matter volume in posterior hippocampus correlation with experience being a taxi driver.

Reverse relationship with grey matter in anterior hippocampus.

Lashley (1929) - Refuting Study

A - Investigating whether lesions in the cortex of rats changes their behavior

M - In a typical study, he trained a rat to go through a maze without mistakes in search of food, then removed a part of its cortex and observed what effect this would have on its memory of the maze. He removed 10 - 50% of the cortex on different trails

R - Results of these experiments did not support Lashley's original hypothesis and led him to formulate the following ideas.

- The principle of mass action: memory of the maze depended on the percentage of cortex destroyed, but not on the location of the lesion.

- Equipotentiality: the idea that one part of the cortex can take over the functions of another part of the cortex when necessary.

Based on these observations Lashley concluded that memory is not localized; it is widely distributed across the cortex as a whole. Even if one part of the cortex is lost, other parts may take over the functions of the missing part

## **Explain one study of neuroplasticity./ Explain neuroplasticity, making use of one study.**

- Neuroplasticity is the ability of the brain to change through the making and breaking of synaptic connections between neurons

- Smallest scale is synaptic plasticity which is the ability of the neuron to form new synaptic connections and break up the old ones.

Largest scale is cortical remapping which is the phenomenon where a brain area assumes the functions of another brain area.

Draganski et al (2004)

A - to investigate whether the human brain can really change structure in response to environmental demands

S - random sampling design, self-selected sample, volunteers split up into group: jugglers and non-jugglers

M - both groups had no experience in juggling and brain scan performed. Juggler group had 3 months of classes and then second brain scan performed. Another three months where jugglers were not supposed to practice juggling. 3rd brain scan.

R - 1st brain scan, no difference between groups. 2nd brain scan, juggler group had more grey matter in some areas of the cortex, especially the mid-temporal area (known for coordination and movement) in both the left and right hemispheres. 3rd brain scan, difference decreased but still remained. Jugglers with better performances had more grey matter than others.

## **Explain one effect of neurotransmission on human behavior, making use of one study.**

- Neurotransmitters are brain chemicals that communicate information via electrical impulses throughout our brain and body.

- Neurons have dendrites, which are branch-like extensions that connect other neurons via a synapse (the connection between two dendrites of neurons, which help electrochemical messages to travel around the brain), this is known as dendritic branching. Information travels along these networks/synapses that enable us to do things.

- A synapse can be excitatory or inhibitory when a neurotransmitter arrives at the end of a nerve fiber by the arrival of an action potential.

- Excitatory neurotransmitters make a target neuron more likely to fire an action potential (transfer information to the next neuron) producing stimulating effects on the brain, while inhibitory neurotransmitters make a target neuron less likely to fire an action potential producing calming effects on the brain.

- There are also artificial chemicals that enhance or disturb the binding of a neurotransmitter. They are either agonists (promote the binding by replicating to the receptor's site) or antagonists (counteract the binding of a neurotransmitter by blocking a particular receptor that a neurotransmitter binds to).

- So, neurotransmission of impulses can have an effect on behavior in different ways depending on changing the levels of different neurotransmitters.
- Serotonin is a neurotransmitter that helps to form neural networks. It is inhibitory and has been linked to aggressive behaviors.

Passamonti et al (2012)

A - To investigate the relationship between neurotransmission (serotonin levels) and violent behavior

S - Healthy volunteers, 19 participants, 9 women and 10 men, average age of 25

M - Healthy participants' serotonin levels were manipulated by altering their diet using tryptophan (an amino acid that builds serotonin levels). Placebo with normal levels and drink that lacked tryptophan. Took place in two weeks, 1 session each week. fMRI scans are used to measure brain activity when serotonin is manipulated and they are exposed to emotional faces as well (happy, sad, etc.) and participants then self-reported mood.

- Reduced activity in the frontal lobe during low serotonin conditions when participants viewed an angry face. Reduced activation of the prefrontal cortex may affect violence and react impulsively.

CE - Because serotonin helps form neural networks, reduced serotonin could cause a disruption to these networks and could lead to less connectivity between areas of the brain. An example of this is the amygdala-PFC neural network. Our amygdala generates emotions (especially negative ones like fear and anger). Our prefrontal cortex (PFC) can help control our emotions. Low serotonin levels is linked to more aggressive behaviors.

## **Explain the formation of neural networks using one study.**

- A neural network is a series of connected neurons.
- Neurons have dendrites, which are branch-like extensions that connect other neurons via a synapse (the connection between two dendrites of neurons, which help electrochemical messages to travel around the brain), this is known as dendritic branching. Information travels along these networks/synapses that enable us to do things.
- The development of neural networks through repetition and neural pruning is both genetic and subject to environmental influences
- These synaptic connections appear as grey matter in the brain. The more the grey matter, the more the synaptic connections in the brain.
- subset of neuroplasticity

Draganski et al (2004)

A - to investigate whether the human brain can really change structure in response to environmental demands

S - random sampling design, self-selected sample, volunteers split up into group: jugglers and non-jugglers

M - both groups had no experience in juggling and brain scan performed. Juggler group had 3 months of classes and then second brain scan performed. Another three months where jugglers were not supposed to practice juggling. 3rd brain scan.

R - 1st brain scan, no difference between groups. 2nd brain scan, juggler group had more grey matter in some areas of the cortex, especially the mid-temporal area (known for coordination and movement) in both the left and right hemispheres. 3rd brain scan, difference decreased but still remained. Jugglers with better performances had more grey matter than others.

### **Explain the role of one agonist, making use of one study.**

- Neurotransmitters are brain chemicals that communicate information via electrical impulses throughout our brain and body. They are released at the end of a nerve fiber by the arrival of an action potential.

- Neurons have dendrites, which are branch-like extensions that connect other neurons via a synapse (the connection between two dendrites of neurons, which help electrochemical messages to travel around the brain), this is known as dendritic branching. Information travels along these networks/synapses that enable us to do things.

- There are artificial chemicals that enhance or disturb the binding of a neurotransmitter. They are either agonists (promote the binding by replicating to the receptor's site) or antagonists (counteract the binding of a neurotransmitter by blocking a particular receptor that a neurotransmitter binds to).

- Serotonin is a neurotransmitter that helps to form neural networks. This process begins in the womb and continues throughout our lives. SSRI's (selective serotonin reuptake inhibitory drugs) naturally increase the levels and activity of serotonin by inhibiting reuptake of it. So, SSRi acts as an agonist.

Passamonti et al (2012)

A - To investigate the relationship between neurotransmission (serotonin levels) and violent behavior

S - Healthy volunteers, 19 participants, 9 women and 10 men, average age of 25

M - Healthy participants' serotonin levels were manipulated by altering their diet using tryptophan (an amino acid that builds serotonin levels). Placebo with normal levels and drink that lacked tryptophan. Took place in two weeks, 1 session each week. fMRI scans are used to measure brain activity when serotonin is manipulated and they are exposed to emotional faces as well (happy, sad, etc.) and participants then self-reported mood.

- Reduced activity in the frontal lobe during low serotonin conditions when participants viewed an angry face. Reduced activation of the prefrontal cortex may affect violence and react impulsively.

## **Explain the role of one antagonist, making use of one study.**

- Neurotransmitters are brain chemicals that communicate information via electrical impulses throughout our brain and body. They are released at the end of a nerve fiber by the arrival of an action potential.
- Neurons have dendrites, which are branch-like extensions that connect other neurons via a synapse (the connection between two dendrites of neurons, which help electrochemical messages to travel around the brain), this is known as dendritic branching. Information travels along these networks/synapses that enable us to do things.
- There are artificial chemicals that enhance or disturb the binding of a neurotransmitter. They are either agonists (promote the binding by replicating to the receptor's site) or antagonists (counteract the binding of a neurotransmitter by blocking a particular receptor that a neurotransmitter binds to).
- Ketamine is an antagonist that blocks the neurotransmitter glutamate (helps with synaptic plasticity and memory formation) from binding to the receptor site which in turn reduces its activity.

Feder et al (2014)

A - investigate the effectiveness of ketamine on reducing the symptoms of PTSD/depression

M - participants diagnosed with PTSD were given ketamine or another antidepressant (2 weeks apart (repeated measures)). Their symptoms of PTSD and depression were measured before and after the treatment using a questionnaire. Randomized order (preventing order effect) and double blind procedure (to prevent researcher bias).

R - ketamine reduced symptoms drastically compared to the other drug (was more effective in reducing PTSD symptoms)

ketamine is an effective anti-PTSD drug; blocking glutamate receptors may be an effective treatment for depression and PTSD (because ketamine is the antagonist for glutamate)

## **Explain neural pruning, making use of one study.**

- It is the process of removing neurons (i.e. losing synaptic connections in a neural network) that are no longer used or useful to the brain
- Neurons send signals along the brain through neural networks. Networks are formed by the dendrites of one neuron connecting with another. The two dendrites don't fully touch and the small space between is called the "synapse." This is where neurotransmitters are fired from one neuron to the other.
- Neural pruning is when we lose these synaptic connections. This pruning happens a lot when you're a teenager. This is a healthy adaptation – your brain loses lots of neural networks that are infrequently used so it can have stronger connections between the networks that are used more frequently.

Luby et al (2013)

A - To see how children's brain development and therefore their cognitive development is affected by behavior

S - 145 children already enrolled in a 10 year study of pre-school depression who had already undergone testing before

M - longitudinal study. Once a year (for 3-6 years), children had taken cognitive, emotional, and social aptitude tests, along with parental involvement and stressful or negative events.

Collecting this info, two MRI scans, one of the entire brain and one of the hippocampus and amygdala.

R - Hippocampus and amygdala showed less grey matter in the MRI scans of the poorer children, with a positive correlation between income/needs being met and brain volume.

Children grown under positive care had less negative effect in hippocampus. Stressful events affected only left hippocampus.

CE - Stress may accelerate neural pruning during adolescence. This could explain links between people who have high levels of stress and reduced brain development

### **Explain how excitatory synapses (neurotransmitters) play a role in one behavior, making use of one study.**

- A synapse is a structure that permits a neuron to pass a chemical signal to another neuron. A synapse can be excitatory or inhibitory when a neurotransmitter arrives at the end of a nerve fiber by the arrival of an action potential.

- Neurotransmitters are brain chemicals that communicate information via electrical impulses throughout our brain and body. They are released at the end of a nerve fiber by the arrival of an action potential.

- Excitatory synapses make a target neuron more likely to fire an action potential, they produce stimulating effects on the brain. They allow the impulse to cross the synapse.

- Glutamate is an excitatory neurotransmitter that plays a role in synaptic plasticity and memory formation.

Feder et al (2014)

A - investigate the effectiveness of ketamine on reducing the symptoms of PTSD/depression

M - participants diagnosed with PTSD were given ketamine or another antidepressant (2 weeks apart (repeated measures)). Their symptoms of PTSD and depression were measured before and after the treatment using a questionnaire. Randomized order (preventing order effect) and double blind procedure (to prevent researcher bias).

R - ketamine reduced symptoms drastically compared to the other drug (was more effective in reducing PTSD symptoms)

ketamine is an effective anti-PTSD drug; blocking glutamate receptors may be an effective treatment for depression and PTSD (because ketamine is the antagonist for glutamate)

## **Explain how inhibitory synapses (neurotransmitters) play a role in one behavior, making use of one study.**

- A synapse is a structure that permits a neuron to pass a chemical signal to another neuron. A synapse can be excitatory or inhibitory when a neurotransmitter arrives at the end of a nerve fiber by the arrival of an action potential.
- Neurotransmitters are brain chemicals that communicate information via electrical impulses throughout our brain and body. They are released at the end of a nerve fiber by the arrival of an action potential.
- Inhibitory neurotransmitters decrease the likelihood that the neuron will fire an action potential, so they have calming effects on the brain. They stop the impulse from crossing the synapse.

Passamonti et al (2012)

A - To investigate the relationship between neurotransmission (serotonin levels) and violent behavior

S - Healthy volunteers, 19 participants, 9 women and 10 men, average age of 25

M - Healthy participants' serotonin levels were manipulated by altering their diet using tryptophan (an amino acid that builds serotonin levels). Placebo with normal levels and drink that lacked tryptophan. Took place in two weeks, 1 session each week. fMRI scans are used to measure brain activity when serotonin is manipulated and they are exposed to emotional faces as well (happy, sad, etc.) and participants then self-reported mood.

- Reduced activity in the frontal lobe during low serotonin conditions when participants viewed an angry face. Reduced activation of the prefrontal cortex may affect violence and react impulsively.

CE - Because serotonin helps form neural networks, reduced serotonin could cause a disruption to these networks and could lead to less connectivity between areas of the brain. An example of this is the amygdala-PFC neural network. Our amygdala generates emotions (especially negative ones like fear and anger). Our prefrontal cortex (PFC) can help control our emotions. Communication between the amygdala and the frontal lobe was weaker in this low serotonin condition. Adequate amounts of serotonin are necessary for a stable mood and to balance any excessive excitatory neurotransmitter firing in the brain. The reduced activity in their PFC as a result of the low serotonin may also affect their ability to inhibit impulsive reactions and think through their actions.

## **Hormones, pheromones, and behavior :**

### **Explain the role of one hormone in human behavior, making use of one study.**

- Hormones are chemical messengers that are released into the bloodstream and travel with blood to their destination

[ Difference from neurotransmitters:

- Hormones regulate long term processes (growth, digestion, metabolism, etc.) while the nervous system focuses on more rapid processes. Hormones allow less voluntary control compared to neural regulation ]
- Oxytocin is a hormone produced in the hypothalamus and released into blood by the pituitary gland
- It has a role in sexual reproduction, childbirth, and social bonding. Also known as "the love hormone", "the bonding hormone", and the "the cuddle chemical"

Kosfeld et al (2005)

A - To investigate the role of oxytocin in interpersonal trust

S - 128 healthy male students, mean age of 22 years

M - Oxytocin and placebo group administered intranasally. Subjects assigned the role of investor and trustee and partook in a trust game with monetary stakes. Starts with all getting 12 monetary units. The investor then decides how much to send to the trustee (0,4,8, or 12 units) which is then tripled and sent to the trustee. The trustee then decides how much to send back. This happens 4 times.

R - The level of trust in the oxytocin group is higher, median transfer of 10 while 8 in placebo group. 45% of the oxytocin group showed maximum trust while only 21% in the placebo group did.

CE - Oxytocin reduces risk aversion or oxytocin increases people's trust in other humans.

Follow up study with computers done,

M - independent group of subjects played a similar trust game but against a random mechanism. The algorithm is modeled on the previous game's players.

R - No difference between oxytocin and placebo group, median transfer of 8 for both.

CE - Oxytocin affects trust in interpersonal interactions.

### **Explain one study of the role of pheromones in human behavior.**

- Pheromone is derived from the Greek "phero" (I carry) and "hormon" (stimulating). Pheromones are airborne chemical messengers released by the body among members of the same species.

- The role of pheromones in animals has been supported time and time again but its role in humans has been debated heavily

The best known candidates for sex pheromones:

- Androstadienone (AND) - A derivative of testosterone and one of the chemical components of sweat, Estratetraenol (EST) is produced by females

Lundstrom and Olsson (2005)

A - Investigate the effects of AND

M - studying a woman's mood after being exposed to either AND or placebo, and in the presence of a male OR female doctor.

R - AND increased women's mood around male experimenters and had no effect when the experimenter was female. (AND was higher than normal)

Refuting study:

Hare et al (2017)

A - Investigate whether AND and EST signal gender and affect male perception

M - hetero participants completed two computer based tasks twice on 2 days consecutively. On either one of the days, they were exposed to the pheromone (AND or EST) and on the other, a control scent (clove oil) which were taped under the nose. This was a double-blind experiment. The first task showed 5 gender neutral facial morphs and participants were made to choose whether they thought it was male or female. The second task, they were shown the opposite sex's photographs and made to rate them from 1 to 10. Two experimenters, one male and one female alternated each day.

R - First task, no difference in gender assigned in both groups. Second task, no difference in average ratings. Gender of experimenter had no effect either.

## Genes and behavior :

### **Explain the role of one gene in human behavior.**

- Genetics is the study of genes. A gene is a unit of heredity (passing of characteristics). It is a region of DNA that encodes a specific trait or function.
- The nature vs. nurture debate on whether human behavior is determined primarily by biological factors such as genetics and brain structure (nature) or environmental factors such as education and friends (nurture)
- Estimation of genetic heritability (quantitative measurement of the relative contribution of genetic factors into a trait or behavior) in twin studies is based on the Falconer model. This model assumes that phenotype (the set of traits that actually manifest in an individual's body) is composed of three types of influences: genetics, shared environment, and individual environment.
- The DLX1 gene is known to be involved in the production of neurons that form a part of the stress center of the brain.

Kaminsky et al (2008)

A - Investigating epigenetics (the study of how the environment affects gene expression)

S - 49 year old female MZ twins, one a war journalist and one an office manager in a law firm

M - Twins were close and lived together until 17. War twin traveled and experienced war. Law twin settled down early. War twin sometimes drank alcohol in excess which the law twin never did. Epigenetic testing performed on DNA extracted from blood cells.

R - In personality questionnaires, the law twin had a tendency to overreact to minor problems with tension and anxiety. Law twin was also more risk-averse. DLX1 gene was differently methylated in both twins.

IE - DNA extracted from blood cells and gene expression in blood and brain cells may be different.

## **Explain one evolutionary explanation of one behavior.**

- Evolution is the process by which organisms change from generation to generation as a result of a change in heritable characteristics.
- The theory of evolution, proposed by Charles Darwin, is based on the idea that organisms are driven by the need to survive and reproduce, organisms that have different traits are adapted to their environment to varying degrees (differential fitness), survival of the fittest (organisms with traits better adapted to the environment survive), and natural selection (more adapted organisms produce more offspring).
- If certain behaviors are inherited through genes, and that the principles of evolution dictate that only traits that aid in their survival are passed down, then behaviors observed today should have an evolutionary explanation,

Fessler et al (2005)

A - Investigate whether disgust sensitivity is adjusted as a function of the immune system.

H - Disgust sensitivity varies across pregnancy in a manner that compensates for the changes in the vulnerability of disease

S - 496 middle-aged pregnant women, 155 participants were in the first trimester, 341 in the second and third.

M - web based survey, 2nd and 3rd trimester women's responses compared with 1st trimester women's answers

R - participants in the 1st trimester had greater overall disgust sensitivity than the other 2 and experienced more nausea. Overall disgust sensitivity was positively related to the current level of nausea.

Criticism of evolutionary explanation:

- Testability low. Explanations may rest on a logical fallacy (known as an ad hoc fallacy) by taking a phenomenon and making up an unverifiable story about how it was formed.
- could be other evolutionary mechanisms like genetic drift (natural random variations in genotype), spandrels (a trait that developed due to evolution of another characteristic), etc. instead of adaptation
- cultural variations in traits exist
- assumptions of linearity of development (some may have evolved to perform another function than the one it is performing now)

## **Explain the use of twin studies and/or kinship studies using one study.**

(for twin studies - Kaminsky et al (2008) and for kinship studies - Weissman et al)

- Used mainly in studies in genetics (the study of genes)
- Twin studies estimate the similarity between identical/monozygotic twins and compare it to the similarity between fraternal/dizygotic twins. Identical twins share 100% of genotype (the set of traits coded in an individual's DNA) while fraternal twins share 50%.
- Estimation of genetic heritability (quantitative measurement of the relative contribution of genetic factors into a trait or behavior) in twin studies is based on the Falconer model. This model assumes that phenotype (the set of traits that actually manifest in an individual's body) is

composed of three types of influences: genetics, shared environment, and individual environment.

- Kinship/Family studies uses the principle of genetic relatedness, and compares relatives on a broad scale across generations.
- Estimation of genetic heritability (quantitative measurement of the relative contribution of genetic factors into a trait or behavior) done through this]
- Used to answer the nature vs. nurture debate on whether human behavior is determined primarily by biological factors such as genetics and brain structure (nature) or environmental factors such as education and friends (nurture)

[Kaminsky et al \(2008\)](#)

Weissman et al (2005)

A - To study the potential genetic nature of Major depressive disorder over 3 generations.

S - 161 grandchildren and their parents and grandparents

M - Original sample of depressed patients taken from an outpatient clinic with a specialization in treating mood disorders. Non-depressed participants taken from the same local community. These patients/participants and their children interviewed 4 times 20 years later. The children, now adults with their own children. Data collected from physicians blind to past diagnoses. Children were evaluated by two experienced clinicians, one a child psychiatrist and the other a psychologist.

R - Inter-rater reliability of their diagnoses was 0.82 for MDD, 0.65 for anxiety disorders, and 0.94 for alcohol dependency. High rates of psychiatric disorders with grandchildren when both generations suffered from MDD. By 12 years old, 54.2% showed signs of a psychiatric disorder. No increased risk of MDD if only one generation had it.

Limitations of twin studies:

- Twins are very rarely raised apart, so it is difficult to isolate environmental influence as a variable
- Twins are not highly generalizable to the general public, so the findings may not be applicable to the public
- Epigenetics. The idea that the environment affects gene expression. The idea that genes and the environment affect each other goes against most studies treating them both as separate factors.

(for kinship studies, just use your brain and make stuff up)

# Cognitive Approach to Behavior

## Cognitive processes :

### **Explain one study of intuitive/rational thinking.**

- Thinking is the process of modifying the information retrieved from the process of memory, its function being to analyze, synthesize, and categorize this information
- Decision making is a cognitive process that involves selecting one of the possible beliefs or actions, as in, making a choice between some alternatives. Thinking is therefore integral to decision making.
- Before making a decision, one must process that information through the cognitive process of thinking. One model that attempts to explain thinking and decision making is the "Dual Processing Model" proposed by Tversky & Kahneman
- The dual processing model explains two systems people use when processing information: systems 1 and 2 which are used in different scenarios to affect our decision making
- System 1 is intuitive, fast, unconscious, and based on emotions. It is therefore subject to biases and the use of heuristics
- Heuristics are the use of shortcuts or incomplete and simplified strategies used to understand information (when there is no time to analyze the situation thoroughly)
- This intuitive and fast mode of thinking allows for efficiency but may be subject to errors and wrong assumptions. Using heuristics may or may not lead to cognitive biases
- System 2 is rational, slow, conscious, and based on all information available.
- Almost works sequentially, first system 1 response then this is corrected by our system 2 response

Alter et al (2007)

A - To investigate the effect of cognitive disfluency on fonts on the use of system 1 or system 2 to answer questions

S - 40 Princeton students

M - Participants were given cognitive reflection tests, which had 3 questions used to measure whether participants were fast thinking or slow thinking in answering questions. Half were given easy to read fonts, half were given the opposite

R - 90% of students with easy to read fonts answered at least 1 question wrong (used system 1 thinking). 35% of students given hard to read fonts answered at least 1 question wrong. (used system 2 thinking)

### **Explain schema theory with reference to one study.**

- This essay will discuss a topic under the cognitive approach to understanding behavior. This studies how mental processes carried out by the brain, such as memory, thinking, perception, attention, etc. guide our behavior.

- Cognitive schemas are the mental representations that organize our knowledge, beliefs, and expectations. Schemas are derived from prior experiences and knowledge, they simplify reality by creating unrealistic expectations about what is probable in social and textual contexts.
  - Schemas are culturally specific: they vary socio-culturally even within a single country
  - Help us to make sense of our current experiences
  - Schema theory was proposed by J. Piaget in 1920
  - Types of schemas : (don't have to mention all, just a few)
- Role Schemas - Expectations about people in particular roles and social categories  
 Person Schemas - Expectations based on personality traits  
 Event Schemas (or Scripts) - Expectations about sequences of events in social situations  
 Cultural schema/

- First Investigated in 1932 by Bartlett. Bartlett used British subjects and gave them a short Native American legend called "The War of the Ghosts". They were told to read the story two times, and then after a short interval they were told to recall the story that they had just read. They were then to visit the laboratory several times over the course of weeks, months and years. As a result, Bartlett found that the subjects were all prone to similar errors in their recall abilities. These are: Assimilation (the subjects contorted the story so that it would fit their cultural standards.) Leveling: when the subjects recalled the story, it was much shorter than the original. This is because the subjects unconsciously discarded information from the legend that did not fit their cultural schemata or standards. Sharpening: the subjects tended to change the order of the story in order to make it more coherent to themselves. The subjects still recalled the general theme of the story but changed small details in order to make the stories more coherent to their expectations. The subjects distorted the story in this way because it is easier to remember things that follow a certain cognitive rule - in this case, it is cultural schemata.

Anderson and Pichert (1978) (influencing memory in retrieval)

A - To investigate the influence of schemas on the stage of retrieval from the LTM (Long term memory)

M - Participants given a series of tasks to perform. Assigned homebuyer or burglar perspective and then read a passage about 2 boys skipping school. Filler verbal task performed for 12 minutes. Then participants asked to recall as much as possible. Then a five minute filler task. Participants were then allowed to keep or change their perspectives. Then a second recall task. R - 1<sup>st</sup> recall, a group with burglar perspective recalled more information relevant to burglars while the homebuyer perspective retained more relevant to their perspective. The people who changed their perspective recalled more important info for their new perspective but more unimportant for their first (recalled 7.1% more of the important information related to their new perspectives). Those who did not change perspectives recalled 2.9% less of the still unimportant information.

CE - Information actively perceived through the lens of existing schemas.

Schemas influence memory at all stages: encoding, storage, and retrieval

Evaluation of Schema Theory :

- Support for influence of schemas on cognitive processes is widespread
- Helps explain other cognitive processes (like perception, memory, reasoning)
- Helps explain the reconstructive nature of memory (connected to eye-witness testimony)
- Very difficult to define what a schema is. According to Cohen (1993). The idea of schemas is too vague to be useful
- Almost untestable
- Processing of schemas not fully understood

### **Explain one model of memory with reference to one study. / Explain the Multi-Store Model with reference to one study.**

- Memory is the cognitive process of encoding, storing, and retrieving information
- One model of memory to explain its process is the multi-store memory model which was proposed by Atkinson and Shiffrin in 1968

Model of 3 components all containing a specific duration, capacity, and certain conditions to move to the next memory store:

Sensory memory store - Does not process information. Detects information and holds it until it is transferred to STM or lost. Many sub-components, including iconic memory (visual inputs) and echoic memory (auditory inputs).

- Its duration is short, iconic memory decays after 1 second while echoic memory decays after 2-5 seconds.
- Its capacity is limited by perception (anything we see or hear presently for iconic and echoic memory for example).
- The condition of attention must be met for information to transfer to STM.

Short-term memory store - Information entering this system can change between modalities (for example, pronouncing a word one sees visually allows the info to enter STM acoustically)

- Its duration depends on modality, but it is usually no more than 30 seconds
- Its capacity is  $7 \pm 2$  chunks of information

Its condition is rehearsal of information

Long-term memory store - Storage of large amounts of information for indefinite periods of time

- Duration, capacity unlimited. However retrieval can be difficult

Glanzer and Cunitz (1966)

A - To research about serial position effect (tendency to recall the first and last items on a list better than the middle items)

S - 240 army men

M - 1st condition, presented with readings of 20 word lists of common one-syllable nouns. Then immediately they did a free-recall task for 2 minutes. 2nd condition, delay between end of list and start of recall with a 30 second filler task of counting backwards in order to prevent rehearsal.

R - 1st condition, participants were better at remembering words at the start of the list (primacy effect) and at the end (recency effect). 2nd condition, participants were still better at recalling the start of list but not the end anymore.

CE - When people hear a list of words, they repeat that to themselves and that becomes rehearsed. The first words get repeated more often and enter the LTM, being unaffected by the filler-task. Opposite for the words at the end.

Supports the idea of STM and LTM being separated.

Evaluation :

- Model is oversimplified, acts as if STM and LTM act as unitary stores
- Rehearsal is not the only factor that allows STM to go to LTM (not everything rehearsed is remembered)
- There is a bidirectional flow of information between the memory stores (one performs chunking based on prior knowledge, i.e. LTM needed for STM)

### **Explain the Working Memory Model with reference to one study.**

- Memory is the cognitive process of encoding, storing, and retrieving information
- There are two memory models proposed that attempt to describe memory.

The working memory model proposed by Baddeley and Hitch in 1974 which focuses and expands specifically on the short-term structure.

The three-store STM stemmed from research using a 'dual-task technique' (or 'interference tasks'), whereby performance is measured as participants perform two tasks simultaneously.

The following observations provided evidence to suggest different, limited-capacity STM stores process different types of memory:

If one store is utilized for both tasks, then task performance is poorer than when they are completed separately, due to the store's limited capacity. If the tasks require different stores, performance would be unaffected when performing them simultaneously

In it, working memory consists of

Central Executive – this manages attention, and controls information from the two 'slave stores' / subsystems

- Phonological Loop – this temporarily retains language-based information, consisting of:
  - An **articulatory rehearsal component** ('inner voice') of language, including any language presented visually to convert to a phonological state, for storage in the:
  - **Phonological store** ('inner ear'), which holds auditory speech information and the order in which it was heard (or any visually-presented language converted by the articulatory process)

- Visuo-Spatial Sketchpad (inner eye) – this temporarily retains visual and spatial information

- A later addition was the episodic buffer which facilitates communication between the central executive and long term memory basically unifying STM to create an LTM)

Baddeley, Lewis, and Vallar (1984)

A - Investigates effects of articulatory suppression (blocking inner voice) (in the experiment, repeating the-the-the or 1,2,3,1,2,3) on the phonological similarity effect.

M - 4 conditions were set, rhyming words with a spoken or written mode of presentation and non-rhyming words with a spoken or written mode of presentation.

R - Rhyming words were harder to recall than non-rhyming words due to the phonological similarity effect. No phonological similarity effect under written mode of presentation. Under articulatory suppression, spoken information can still enter the phonological store. Written info also gets encoded and enters the visuospatial sketchpad, seen visually so rhyming words are not hard to recall.

Evaluation of Working Memory Model:

Strengths

- The WMM provides an explanation for parallel processing (i.e. where processes involved in a cognitive task occur at once), unlike Atkinson and Shiffrin's MSM.

Weaknesses:

- Despite providing more detail of STM than the multi-store model, the WMM has been criticized for being too simplistic and vague, e.g. it is unclear what the central executive is, or its exact role in attention.

- Results from laboratory experiments researching the WMM will often have low ecological validity (i.e. may not relate to real life), as tasks such as repeating 'the the the' are arguably not representative of our everyday activities.

## **Explain one model of thinking and decision making with reference to one study.**

- This essay will discuss a topic under the cognitive approach to understanding behavior. This studies how mental processes carried out by the brain, such as memory, thinking, perception, attention, etc. guide our behavior.

- Thinking is the process of modifying the information retrieved from the process of memory, its function being to analyze, synthesize, and categorize this information

- Decision making is a cognitive process that involves selecting one of the possible beliefs or actions, as in, making a choice between some alternatives. Thinking is therefore integral to decision making.

- In Order to understand a model of thinking and decision making, first one should know that there are two types of models: normative models and descriptive models. Normative models which describe the way thinking should be (assume unlimited time and resources are available to make a decision), and descriptive models which describe what people actually do when they think and make decisions (accurate descriptions of real life thinking patterns).

- A descriptive model : The theory of reasoned action is the idea that an individual's choice of a behavior is based on its expected outcomes.

- If we believe that a desired outcome will occur, a predisposition called behavioral intention is created and the stronger it is, the more effort we put into making that outcome happen
- 2 factors that determine behavioral intention, attitude (individual perception) and subjective norms (perceived social pressure). Depending on the situation, attitudes and subjective norms may have varying degrees of importance in determining the intention
- This theory was proposed by Martin Fishbein in 1967 and was later extended in 1985 into the theory of planned behavior in order to introduce a third factor, perceived behavioral control (whether you think you can do that action)

Albarracin et al (2001)

A - To identify the important attitudinal or behavioral predictors of the frequency of condom use

S - 42 articles and a total of 96 data sets

M - Meta-analysis

R - TRA and TPB are successful predictors of condom use, correlation between intention and behavior is 0.51. If behavior is assessed retrospectively, assessment of intentions and behaviors are carried out at the same time (correlation is 0.57). If behavior is assessed prospectively, assessment of the two is carried out at different periods (correlation is 0.45).

People more likely to use condoms if they have previously formed the corresponding intentions, the intentions derive from attitudes, subjective norms, and perceived behavioral control (TPB)

IE - Study relies on assumption that self-reported condom use is accurate and reflects their everyday behavior

Evaluation of TRA/TPB :

- Model is useful for making predictions, by considering the variables as inputs for the model \
- Can be applied to how people's behavior can change and what the barriers are to it (business and other real life things)
- Model can fail in some situations (positive behavioral intention does not necessarily lead to the behavior occurring), thus implementation intentions could be added
- Does not include other behavioral factors like emotions
- Does not address how to determine actions that result in changing behavior (cannot find relationship between attitudes and behavioral intentions)

**Reliability of cognitive processes :**

**Explain reconstructive memory with reference to one study.**

- This essay will discuss a topic under the cognitive approach to understanding behavior. This studies how mental processes carried out by the brain, such as memory, thinking, perception, attention, etc. guide our behavior.
- Memory is the cognitive process of encoding, storing, and retrieving information

- One theory of memory is the theory of reconstructive memory, which is the idea that memory is an active process that involves the reconstruction of information, i.e. the idea that memory can be distorted

- Some factors that affect reconstructive memory:

Schemas (mental representations that organize our knowledge, belief, and expectations) which can influence the encoding and retrieval of memory. (shown in Bransford and Johnson (1972) and Anderson and Pichert (1978))

Time (over time one's memory gets weaker, one tries to fill in gaps)

Preconceived notions (change perceptions and fills in gaps with wrong information)

Leading questions and Misleading information can influence one's belief about an event

Loftus and Palmer (1974)

A - To investigate the reconstructability of memory in eyewitness testimony

Experiment 1

S - 45 students

M - Students split up into five equal groups, all students shown 7 films in varying order of a recording of a traffic accident. A questionnaire was given to the participants asking about the accident, most being filler except for a question asking the participants the speed of the cars when they "verbed" each other. Depending on the group, the verb was "hit", "smashed", "collided", "bumped", or "contacted".

R - Depending on the verb, the mean estimate of speed changed (smashed had the highest, contacted the lowest) even though the film was the same. Two explanations for this, response bias (subject cannot remember and uses the verb to guess the speed) and memory change (reconstruction of memory).

Experiment 2

A - Another experiment done to investigate if memory change actually occurs

S - 150 students

M - Participants split up into 3 groups and all showed the same film of a car accident.

Participants were then given a questionnaire with mostly filler questions, except the speed question now only having "hit", "smashed" and a control group with no crucial question.

A week later another questionnaire with mostly filler questions except one which asked if the participant saw any broken glass (there was no broken glass in film).

R - 32% of the smashed group said yes, 14% of hit group, and 12% of control group said yes

Conclusion that memory change occurred, not just response bias

Yuille and Cutshall (1986) - Refuting study

A - To investigate the reliability of eyewitness testimonies.

S - 13 participants

M - Eyewitnesses of a real crime in Vancouver, where a thief was shot and a store owner was injured. Interviews used to collect data 4 months after the event. Leading questions asked to half the participants.

R - Little effect on recall without leading question and a generally high level of recall for both groups.

CE - Refutes the theory of reconstructive memory as memory was not distorted at all. However this study could display something else called flashbulb memory formed due to high emotional arousal (a crime counts) and are very vivid. Other studies are mostly valid, so how can this study disprove them all?

Evaluation of Theory of Reconstructive Memory :

- Credible with a lot of support
- Has real life application as shown in the studies with eyewitness testimony (judicial system, journalism, etc.)
- However many studies have low EV and chance of demand characteristics (mostly lab experiments)
- Doesn't explain the process of how memory is reconstructed

### **Explain one cognitive bias**

- Cognitive biases are subconscious errors in thinking about what occurs when people are processing and interpreting information in the world around them due to faults in memory, attention, etc.
- Heuristics, which are cognitive shortcuts or simplified strategies, lead to cognitive biases
- There are many types of cognitive biases: cognitive dissonance, confirmation bias, congruence bias, framing effect, etc.
- The theory of cognitive dissonance was proposed by Leon Festinger.
- Cognitive dissonance is the mental stress caused by the inconsistency between contradictory beliefs, one's action and one's belief, and new information and existing beliefs.
- According to the theory, an individual experiencing cognitive dissonance would have the desire to reduce dissonance by either changing their belief or changing their behavior

Festinger (1956)

A - The aim of the observation was to see how the members of the religious cult behave and what their beliefs are.

S - A small UFO cult in Chicago called the Seekers who believed in an imminent apocalypse

M - belief disconfirmation paradigm (people with strong beliefs come across new contradictory evidence). Leon Festinger and his colleagues wanted to observe the cult members, however their beliefs stated that they needed to stay isolated from non-believers. They joined the cult in order to be able to observe them. On December 21, when the world was supposed to end, they observed how the people reacted when it didn't. They monitored the group members doubt, debate, and rationalization of what had taken place

R - The members still remained in their cult's beliefs even when the world did not end, making up a theory that God saved them through their prayers so that they could maintain their self-esteem (Cognitive dissonance). The members blindly followed what they heard

Strengths and Limitations:

- shows that "beliefs drive behavior" but "behavior drives beliefs" as well
- dissonance may not be the most important concept to explain attitude change

- not clear enough
- group membership as an effect has not been studied

## Emotion and Cognition :

### **Explain one theory of how emotion may affect one cognitive process.**

- This essay will discuss a topic under the cognitive approach to understanding behavior. This studies how mental processes carried out by the brain, such as memory, thinking, perception, attention, etc. guide our behavior.
- Cognitive processes are the processes that underlie one's mental representations of the world
- Emotion comes from latin "ex" meaning "out", and "movere" meaning "to move"
- One theory of how emotion affects one cognitive process is known as Flashbulb memory (how emotion affects memory)
- Flashbulb memory was proposed by Roger Brown and James Kulik in 1977
- Flashbulb memories are vivid memories of the circumstances in which one first learned of a surprising and emotionally arousing event.
- The mechanism of formation is a photographic representation of events that are surprising, personally consequential, and therefore emotionally arousing.
- The mechanism of maintenance includes overt rehearsal (rehearsing the event with others) and covert rehearsal (rehearsing the event in one's memory) which both in turn consolidate memory traces keeping the memory of the event vivid.
- There are three unique and distinguishable properties of flashbulb memory: its unique neural mechanism, vividness, and accuracy.

Talarico and Rubin (2003)

A - To study memory of first hearing about the terrorist and an everyday event

S - 54 students

M - Day after 9/11 attack, students tested again 1,6, or 32 weeks later. Self-rated emotional response to the news, vividness, and belief

R - Accuracy for the flashbulb memory and everyday memories did not differ, both declined. Ratings of vividness and belief in accuracy of memory declined exclusively for everyday events. Emotional response to news correlated with belief. Emotional response had no correlation with accuracy. Only difference is that people perceive that their memory is accurate.

Evaluation of Flashbulb Memory:

- Displayed in real life in countless ways, but still being developed
- Special-mechanism hypothesis has been challenged (idea that flashbulb memories have distinct features in their mechanisms), accuracy as well (people believe to have seen princess Diana's car crash although it was never shown to the public)
- Distinctiveness of subjective experiences about flashbulb memories unexplained

- Most studies in this field tend to focus on public events that caused negative emotional experiences. But personal events mostly overlooked due to lack of ability to standardize research conditions

## Sociocultural Approach to Behavior

### The individual and the group :

#### **Discuss Social Identity Theory.**

- This essay will discuss a topic under the sociocultural approach to understanding behavior. This studies how people's thoughts, feelings, and thus behaviors are influenced by actual, implied, or imagined presence of others and environment around them.

- The Social Identity theory, proposed by Tajfel and Turner in 1979, is a theory that attempts to explain inter-group behavior. Our social identity refers to the self in terms of our group membership such as our gender or ethnicity. This is in distinction to our personal identity, which refers to our self on a more individual, private, and interpersonal level.

- The theory operates on the following three assumptions. First, that individuals strive to maintain or enhance their self-esteem. Second, an individual's identity depends on collective values or salience (the property of the group which stands out) of the group to which the person belongs. Finally, an individual will assess the value of his or her ingroup membership and if it is perceived favorably, more value will be placed with the membership to the ingroup.

- According to the theory, a number of cognitive processes are involved in belonging to a group. Some of these cognitive processes are : Social categorization, social identification, social comparison, and positive distinctiveness.

Social categorization - The categorization of people in order to understand and identify them and then categorizing oneself so we can understand ourselves

Social identification - The adoption of the identity of the group we belong to, i.e. traits, behavior, actions, etc.

Social comparison - Comparing our ingroup (the social group that an individual claims to belong to) with an outgroup (the social group that an individual does not identify with).

(Social comparison occurs leading to) Positive distinctiveness - Where one tries to establish superiority of the ingroup over the outgroup which can help to maintain self-esteem. (Social identity is important for self-esteem, we are therefore motivated to make comparisons that are favorable for our own group.)

- Also according to the Social Identity Theory, we display ingroup favoritism, which is showing preference towards members of one's ingroup over an outgroup's members as well as outgroup discrimination, which is developing prejudices towards members of an outgroup.

- All of this comes together and forms an us vs. them mentality.

- This essay will attempt to discuss Social Identity Theory with the help of the studies Tajfel et al and Cialdini et al.

Tajfel et al (1971)

A - To demonstrate that when individuals are allocated to groups based on minimal characteristics, it is possible to create discrimination without existing prejudice

S - 64 boys, ages 14 to 15 years old from a school in the UK

M1 - 2 studies both where they were assigned groups based on minimal characteristics. In the first study, boys were assigned into groups labeled "overestimator" and "underestimator" based on their estimates of number of dots on a screen in a visual judgment task (this being arbitrary). Boys were told that they would be part of a task in which they would give rewards and penalties to others in the form of real money. Identities of the receivers of these rewards or penalties were unknown to the boys, and at the end the boys would receive the amount they had been rewarded. The boys were placed into cubicles and given booklets with columns. Each column was told to equate to rewarding or penalizing another participant. The booklet contained columns enabling ingroup choices, outgroup choices, and intergroup choices.

R2 - Results showed that boys displayed ingroup favoritism when making intergroup choices and allocated more rewards to members of their own group and when two members of the same group were chosen, the boys usually went with the option with maximum fairness.

M2 - In the second study, a different group of boys were categorized into groups based on artistic preference after being shown paintings of Paul Klee and Wassily Kandinsky. The columns were slightly different however, where the study encouraged the boys to make one of three decisions : maximum joint profit, where boys could allocate the largest amount to both boys in the column, maximum ingroup profit, where boys could allocate the largest amount to members of their ingroup, and maximum difference, where boys could maximize the amount given to members of their ingroup and minimize the amount given to members of the outgroup.

R2 - Results showed that boys would rather maximize the difference in scores even when given a chance of obtaining a higher score with more money. Maximum fairness was seen when concerning two members of the ingroup.

CE - Results of first study support the idea that discrimination can be created by merely being allocated to a group. And it highlights that discrimination can take place even without previous prejudice or competition.

Cialdini et al (1976)

A - To investigate the role of social identity in self-esteem

M - Study conducted in the campuses of 7 large American universities which had popular American football teams. The clothing students wore the Monday after a big football match against a rival university was recorded. The students' opinions of the team's performance was also recorded.

R - Students were more likely to wear clothing associated with the university if their football team won the match. If the team won, the first person plural pronoun (we) was more likely to be used, while if the team lost, the third person plural pronoun (they) was more likely to be used.

CE - Social identity plays a role in self-esteem, i.e. to maintain a high level of self-esteem people like to associate themselves with a successful group and distance themselves from a group that failed/fails.

Evaluation of SIT :

- Demonstrates the role of social categorization in intergroup behaviors.
- Explores the basic need to belong and its effects on social interaction.
- Application of SIT restricted by the generally low ecological validity of the studies on it (not shown a lot here though so mention the other ones more), studies with low generalizability, and the adoption of reductionist principles
- SIT generally favors situational factors rather than dispositional factors (inherent characteristics) which are not supported by evidence. For example, competitive participants show higher ingroup favoritism than more cooperative participants.

### **Discuss Social Cognitive Theory.**

- This essay will discuss a topic under the sociocultural approach to understanding behavior. This studies how people's thoughts, feelings, and thus behaviors are influenced by actual, implied, or imagined presence of others and environment around them.
- The Social Cognitive Theory is the idea that learning occurs within a social context with a reciprocal interaction of the person, environment, and behavior. It posits that people are active agents who influence and are influenced by their environment.
- This theory was coined by Albert Bandura in the early 1960s, originally being called "The Social Learning Theory" due to its basis on a behaviorist approach to learning and the idea that learning only happens through observing. However Bandura felt that this idea of trial and error or the necessity of observation for socialization did not suffice and changed the Social Learning Theory to the Social Cognitive theory in 1986 adopting a cognitive approach to studying learning.
- The Social Cognitive theory is built on the ideas of observational learning and triadic reciprocal determinism. Observational learning is the concept that people can learn by watching models and imitating their behavior and triadic reciprocal determinism is a model of the mutual influence of personal factors or cognitive, biological, and affective events, behavioral factors, and environmental factors that affect the way one behaves.
- Another difference between the Social Cognitive theory and its predecessor the Social Learning theory is its agentic approach to studying learning where the complex thought processes that occur between observation and behavior are taken into account. This approach posits people as agents over their functioning. This is displayed in real life, where we learn from the mistakes and the success of others, also known as vicarious learning, and we also learn from the reinforcements experienced by others, also known as vicarious reinforcement.

- Bandura broke down the Social Cognitive theory into four factors: attention, retention, reproduction (affected by self-efficacy - the belief that you are able to do a task), and motivation.

- This essay will attempt to explain Social Cognitive Theory with the help of the study Bandura, Ross and Ross.

Bandura, Ross and Ross (1961)

A - The aim of the study was to investigate if social behaviors can be acquired by observation and imitation.

S - 36 boys and 36 girls all aged 3-6 years obtained from the Stanford University nursery.

M - A lab experiment with three conditions : aggressive model shown to 24 children, non-aggressive model shown to 24 children, and no model shown or control condition shown to 24 children. In both experimental conditions, the children were individually shown into a room containing prints and stickers to play with for 10 minutes. While this occurred, in the aggressive condition a male or female model (12 were shown the male model, the other 12 were shown the female model) behaving aggressively to a "Bobo" doll both verbally and physically hitting the doll in unique ways. In the non-aggressive condition, the children were exposed to either a male or female model playing with a tinker set in a quiet and subdued manner. In the control condition, no model was shown. After the 10 minutes were up, each of the children underwent an "instigation to aggression" stage where the child was introduced to a room with many attractive toys. The moment the child showed interest in any of them, they were separated from that toy. They were then moved to a third room with toys similar to the ones present in the first room for 20 minutes.

R - The results supported the idea that exposure of children to aggressive models would increase aggressiveness among the children. Boys were generally more aggressive in all conditions. Boys were also shown to be more likely to imitate physical aggression while girls were more likely to imitate verbal aggression.

IE - The study has low ecological validity due to it being a lab experiment. Also a small age group taken, it is not generalizable to all. But it has precise control of all variables in the study.

CE - The factors of SCT displayed here : The observer, or in the study the children, has or had to pay attention to the model and recognize a behavior to focus on. They had to retain that information, i.e. retention. They then reproduced this behavior in the third room, i.e. reproduction. They also had to have the motivation to exhibit the behavior, which was given by observing the models in the beginning of the experiment.

Sheridan et al (2011)

A - to investigate the effectiveness of social cognitive theory in teaching children the four prosocial skills

S - 647 kindergarteners with 325 boys and 322 girls.

M - A program called "Skillstream" which uses modeling, role playing, performance feedback, and generalization to encourage prosocial behavior.

R - Results showed significant improvements in all 4 skills, as well as an improvement of sociability.

CE - Learning prosocial skills can be explained through social cognitive theory.

Evaluation of SCT :

- A comprehensive theory that takes human behavior, cognition, and environment into account
- Addresses how reinforcement and self-efficacy affect reproduction and motivation and how an individual works
- Focuses on the importance of self-regulation in learning, i.e. the self is integral to learning
- Does not address the full complexities of humans in regards to their biological differences, traits, etc. when explaining their behaviors
- Somewhat of a loosely organized theory

### **Explain one theory of the formation of stereotypes.**

- This essay will discuss a topic under the sociocultural approach to understanding behavior. This studies how people's thoughts, feelings, and thus behaviors are influenced by actual, implied, or imagined presence of others and environment around them.
- Stereotypes are widely held, yet oversimplified, beliefs about the characteristics of a group.
- Stereotyping happens as a result of schema processing, where social categorization, mentally placing someone into a particular social group, and generalization, forming a belief about a particular social group, occur.
- Gatekeepers perpetuate and maintain certain stereotypes as well, causing those stereotypes to be formed or reinforced. An example could be our parents or the media.
- One theory on the formation of stereotypes is the Grain of truth hypothesis postulated by Campbell. It states that stereotypes must originate from some kind of truth in order for the assumption to be made. For example, you see an Indian drug dealer and therefore assume all Indians are drug dealers.
- Another factor in the formation of stereotypes is Illusory Correlation, which is when people see 2 variables as related when they are not. This correlation is then maintained by confirmation bias, i.e. we pay attention only to evidence that confirms our illusory

correlation and ignore evidence that contradicts it. For example, you sit next to a brilliant Asian math student so you think all Asians are good at mathematics.

- This essay will attempt to discuss these theories of formation with the help of one study.

Hamilton and Gifford (1967)

A - To investigate how our expectations of events can distort how we process the information

S - Group A contained 26 people, Group B contained 13 people

M - Participants read descriptions of various people from two imaginary groups: group A and B and group A was much larger than group B. The readings contained descriptions of the individual's group membership and a specific behavior the individual exhibits, and the behaviors were either of a helpful or harmful kind. That is, the behavior could be screaming at children or helping a temple. Group A had 18 helpful behaviors and 8 harmful behaviors, group B had 9 helpful behaviors and 4 harmful behaviors.

Participants were then asked to give their impressions of a typical group member.

S - Results showed that the participants considered the behavior of group B members to be less desirable than the behavior of group A members. However there was no actual correlation between group membership and desirability and so participants were making an illusory correlation.

CE - Distinctive information draws attention. Group B's number of harmful behaviors was both fewer and more distinct than group A's negative behavior. As their harmful behavior stood out more, illusory correlations were formed.

Schaller (1991)

A - To investigate illusory correlation

S - 141 US university students

M - Participants again read sentences about members of two distinct groups : A and B, group B containing fewer members. Participants were then randomly assigned group membership to either group A or group B. There was also a control condition with no group membership assigned. They were presented with a series of statements about both groups with both desirable and undesirable behaviors. Given a questionnaire to assess how much they thought there was a relationship between group membership and behavior.

R - Results showed ingroup bias when asked about their ingroup and negative stereotyping about the outgroup.

CE - Another example of illusory correlation.

Snyder and Swann (1978)

A - To investigate whether people are prone to confirmation bias based on stereotypes

M - Female college students were told that they would either meet an introvert or an extrovert and were asked to prepare a set of questions for that specific introvert or extrovert.

R - Results showed that the women came up with questions that generally conformed to the stereotypes around extroverts and introverts. For example, the women asked, "What do you dislike about parties?" for introverts, while for extroverts, they asked, 'What do you do to liven up parties?'

CE - People naturally try to confirm their pre-existing expectations about group members.

### **Discuss one or more effects of stereotyping on behavior.**

- Stereotypes are widely held, yet oversimplified, beliefs about the characteristics of a group.

- Stereotypes affect behavior

- Stereotyping happens as a result of schema processing, where social categorization, mentally placing someone into a particular social group, and generalization, forming a belief about a particular social group, occur.

- Two effects of stereotypes are stereotype threat and self-fulfilling prophecy.

- One effect of stereotypes is stereotype threat, which refers to the anxiety and apprehension experienced by an individual or members of a particular group when they believe that their behavior in a specific situation may confirm and reinforce an existing negative group stereotype. For example, a woman knows the stereotype that women are worse than men in mathematics and this causes her anxiety making her underperform in a math test. The opposite of stereotype threat is known as stereotype boost, which refers to the confidence experienced by an individual or individuals due to a positive group stereotype.

- Another effect is the self-fulfilling prophecy is when people have a perception about how others will behave and therefore treat them differently. So, the way in which they treat individuals causes those individuals to change their behavior so as to fit the original expectation.

- This essay will attempt to discuss two effects of stereotyping on behavior with the use of the studies Rosenthal and Jacobson, Steele and Aronson.

Steele and Aronson (1995)

A - To investigate the effect of stereotype threat on the intellectual test performance of African-American students.

H - African-Americans will experience stereotype threat.

M - A 30 minute test with items taken from the GRE with sufficient enough difficulty to cause stress in the participants. Three experimental conditions : the stereotype condition where the test was described as being a measure of intellectual ability to

cause the stereotype of black americans being unintellectual to be relevant, the non-stereotype threat condition where the test was described as a problem solving task unrelated to intellectual ability, and the challenge condition which was a second non-diagnostic condition where the test was described as a challenge to try and raise motivation for the task.

R - Results showed black students performed worse in the diagnostic condition compared to the two non-diagnostic conditions as well as much worse than white participants in the diagnostic condition.

Rosenthal and Jacobson (1968)

A - To investigate the self-fulfilling prophecy

M - Elementary school teachers were told by researchers that certain students were likely to be academic “bloomers” in the academic year based upon results of an academic test that actually did not exist. The “bloomers” were chosen by random. The researchers observed the classroom dynamics throughout the year and at the end of the year the students were given an IQ test.

R - Students labeled as “bloomers” had an increase in IQ. The teacher’s perceptions of the students’ ability affected the way the teacher interacted with the students, making the predictions of the students’ ability become true.

CE - Displays the Pygmalion effect, a phenomenon in which high expectations lead to improved performance. And the opposite, golem effect, a phenomenon in which low expectations lead to poor performance. Both of these can be caused either by supervisors, i.e. teachers, onto subordinates, i.e. students, or they can be caused by the individuals themselves.

## Cultural origins of behavior and cognition :

**Discuss one or more cultural dimensions. (Describe one study of cultural groups. / Discuss one or more effects of culture on behavior and/or cognition.)**

- This essay will discuss a topic under the sociocultural approach to understanding behavior. This studies how people’s thoughts, feelings, and thus behaviors are influenced by actual, implied, or imagined presence of others and environment around them.

- Culture, as defined by Hofstede and Matsumoto, is a unique meaning and information system shared by a group that differentiates the members of one group from other

groups. Culture also guides and influences the group in how they act, live, behave, and in what they believe in.

- In an effort to study this concept, Geert Hofstede researched 40 of the largest countries of which IBM Europe has subsidiaries, distributing questionnaires to employees about their values, beliefs, and behaviors. Hofstede found trends in the data leading to his identification of four cultural dimensions.

- Basically, under the term culture, there exist cultural dimensions which are components or subsets of culture that are directly affected and changed by it. Some cultural dimensions include the Individualism vs. Collectivism, Power Distance Index (PDI), and Masculinity vs. Femininity.

- Individualism versus Collectivism measures the degree to which people's identities are defined by social groups

- In individualistic cultures, identity is defined by personal characteristics, their success, and unique features, and the strongest values are autonomy, competitiveness, and self-reliance. People are expected to look after themselves.

- In collectivist cultures, identity is linked to the social group, and values associated with belonging to a group take priority over personal values such as social harmony, modesty, and interdependence.

Berry & Katz (1967)

A - To investigate whether cultural differences in individualism versus collectivism would affect conformity

S - 3 distinct cultures. the Temne of Sierra Leone which is a rice farming collectivist society, the Inuit people of Baffin Island which is a hunting and fishing highly individualistic society, and the Scots as a reference group.

M - Asch paradigm used to measure conformity, with a series of lines of varying length presented to participants. A target line is given on top and participants are made to guess which of the eight lines below matches its length. Participants are then given a hint on identifying a line by saying most of their culture chose it.

R - Temne people had a high tendency to accept the suggestion of the cultural norm while the Inuit people seemed to ignore it entirely, more than the Scots did. The different results were due to the different degree of conformity required by the contrasting social and environmental conditions of their culture. Hence, degree of individualism of a culture will affect conformity.

Kemmelmeier, Jambor, and Letner (2006)

A - To investigate the relationship between individualism and voluntary, prosocial behavior.

S - 2,553 participants from 40 US states

M - Telephone interviews

R - Individualistic cultures were active in voluntary prosocial behavior for causes they deemed to be in line with individualistic values (self-determination, self-promotion, or self-actualization). Individualism positively related to charitable giving and volunteerism, both are more likely in individualist states.

Finkelstein (2010)

A - To examine the effect of culture on volunteer behaviour.

S - 194 undergraduates at a US university who participated in exchange for extra course credit.

M - Online self-report questionnaires that measured a variety of possible reasons for volunteering including:

- altruistic motivation to help
- the desire to strengthen social ties
- role identity (volunteering for the sake of consistency with one's self-image)
- career-related reasons.

R - Collectivism was more strongly related than individualism to altruistic motivation and the desire to strengthen social ties. Collectivism, but not individualism, correlated with helping in order to sustain role identity. On the other hand, individualism was most closely associated with engaging in volunteering for career related reasons.

Conclusion - The researchers concluded that individualists and collectivists differ in why they choose to volunteer, but not in the willingness to volunteer itself.

## Cultural influences on behavior and cognition :

### **Discuss enculturation with regard to one behavior.**

- This essay will discuss a topic under the sociocultural approach to understanding behavior. This studies how people's thoughts, feelings, and thus behaviors are influenced by actual, implied, or imagined presence of others and environment around them.

- Enculturation is the process of learning behaviors, characteristics, and norms of the culture one belongs to

- This process of enculturation is achieved through cultural transmission. This is the process of passing cultural norms, the unique set of attitudes, beliefs, and behaviors specific to a particular culture, from one generation to the next. This transmission can occur through observational learning, i.e. by observing members of the culture or by direct personal experience (and/or participatory learning).

- Participatory learning is learning that occurs as a result of a child's active involvement in a learning activity. Observational learning is learning that occurs when the child observes everyday activities without directly participating in them (key idea of SCT).

Traditionally in theories of enculturation, participatory learning was believed to be the

leading mechanism; observational learning was acknowledged as a starting point, but never the core process of cultural learning

- Cultural transmission is also accomplished through the process of social cognition as well, with the idea that cultures and their norms grow out of the behavior of individuals but individuals' behavior is shaped by culture and norms.

- This essay will explain one study of enculturation, Odden and Rochat and Cohen et al

Odden and Rochat (2004)

A - To investigate the role of observational learning as a mechanism of children's enculturation in non-western cultural contexts.

S - 28 children aged 4–12 and their parents from a rural village in Samoa. Samoan society is hierarchical.

M - observation of children in key contexts of village life; semi-structured interviews with caretakers, teachers, pastors and chiefs; parental belief questionnaires. One of the researchers lived in the village for 20 months.

R -

- Observations and interviews showed high specificity of Samoan attitudes towards education and enculturation. As there was a high distance to authority (power distance), questioning in class was discouraged as it was viewed as a sign of disrespect to the adult. Children were largely left to learn things on their own, and adults did not try to engage them or motivate them. Caretakers believed that children learn via observing and listening to their elders.

By age 15, adolescents spend a significant amount of time doing chores (such as washing clothes, feeding domesticated animals, child care, cooking). However, parents were never seen explaining the chore to the child or explicitly teaching the child in any other way. The same was true for fishing. By the age of 12, children were quite skilled fishermen, but never in their lives had they been fishing under the supervision of an adult who would correct their mistakes. For example, if spear fishing was used, a boy would accompany his father, but there would only be one spear available and the child would never use it. Then after a certain age children would simply borrow the fishing equipment and start fishing by themselves.

- Knowledge of the intricate societal hierarchy, ritual practice and cultural concepts such as power and authority was also acquired in the same way.

Conclusion - Each culture may emphasize a different blend of mechanisms of enculturation. In the Samoan context observational learning plays a central role in children's enculturation.

Cohen et al (1996)

A - To investigate if southern white males in the USA responded differently to threats and insults than northern white males

S - male University of Michigan students who either grew up in the south or the north of the USA

M - Where a confederate bumped into the participants and insulted them with derogatory names.

R - Northerners were relatively unaffected by the insult but southerners were found to think that their masculine reputation was threatened, be more upset. be more physically and cognitively primed for aggression, and be more likely to engage in aggressive/dominant behavior. Northerners were only half as likely to be angry by the insult, 35%, while southerners had an 85% chance of being angry.

IE - less generalizability as it was only done in the USA

CE - Results of the study highlight the southern culture of honor where insults diminish a man's reputation, resulting in an attempt to restore the lost reputation through dominance and aggression. The men who grew up in the south learned these behaviors and responses growing up there and hence repeat them in this study. While the northerners did not grow up to worry about their reputation as men to the extent the southerners had to.

### **Discuss acculturation with regard to behavior and/or cognition.**

- This essay will discuss a topic under the sociocultural approach to understanding behavior. This studies how people's thoughts, feelings, and thus behaviors are influenced by actual, implied, or imagined presence of others and environment around them.

- Acculturation, as defined by Berry in 2005, is a process of psychological and cultural change as a result of contact and interaction between cultures. This can result in changes to all (or both) cultures, not only the non-dominant culture.

- According to Berry in 2008, individuals adopt four strategies for cultural change :

Assimilation : individuals are open to change and unconcerned about the loss of their own culture, results in a melting pot

Integration : individuals want to hold onto traditional values and beliefs and also desire interaction with other cultures, results in multiculturalism

Separation : individuals value their original culture and are averse to losing it so they avoid contact with other cultures, results in segregation

Marginalization : individuals have little interest in maintaining their own culture and have little interest in opening relations with other cultures, results in exclusion

Acculturation can be stressful and can happen to people who are coping with conflicting cultural norms. Acculturative stress can be defined as biopsychosocial difficulties when adapting to a new cultural context. Acculturative stress happens the least under integration, separation and assimilation lead to intermediate levels of stress, and marginalization has the highest levels of stress.

How does acculturation affect the health behavior of migrants? Research in this area has identified two interesting effects.

The healthy migrant effect—people who recently migrated have a tendency to be healthier than their counterparts who stayed in the country of origin. One potential explanation is that host countries are selective and they prefer to select healthy immigrants.

The negative acculturation effect—the healthy migrant effect diminishes over time: migrants are becoming less healthy and more similar to their counterparts who stayed in the country of origin. One potential explanation is that the food environments in the migrant origin cultures tend to be healthier than food environments in the more “developed” host societies.

- This essay will attempt to explain the study, Shah et al, a study of acculturation

Shah et al (2015)

A - To investigate acculturation in migrant workers

S - 1375 male migrant workers in the UAE mainly from South India (India, Pakistan, and Bangladesh). Half of them had been living in the UAE for 6 years.

M - Participants completed a questionnaire between January and June 2012

R - Migrant workers had a significantly higher body mass (BMI) than men of the same age in their cultures of origin. The longer the migrant workers spent in the UAE, the greater the difference between their BMI and the BMI of the men of their culture of origin. The mean BMIs for men aged 20-59 for Indians and Indian migrant workers had a difference of 8.4 (Indian migrant workers being higher), for Bangladeshis and their migrant workers, a difference of 6.5, and for Pakistanis it was almost double. Also, positive association between obesity and acculturation.

IE - Generalizability less as only male migrant workers were studied and only the direction of people from South India migrating to the UAE was studied

CE - The migrant workers moving to the UAE adopted the strategy of integration/assimilation and were open to the culture of the country they moved to. This influenced them psychologically, as they enjoyed UAE's culture, their food, and everything under it. As they were previously much poorer, they now had the ability to eat more and as they were not averse to the culture they ate a lot more. Thus affecting them physically. Because acculturation occurred in them, their BMIs increased.

Ishizawa and Jones (2016)

A - To compare obesity rates among second- and third generation Asian migrants in the USA and identify potential moderating factors of developing obesity.

S - Asian migrants in the USA.

M - Correlational Study

R - Second- and third-generation migrants had a higher likelihood of obesity than first-generation migrants or people from their country of origin. However, there were moderating factors that protected against developing obesity, which were:

- living in a neighbourhood with a high migrant density
- living in a household that retained the original language.

Conclusion - Retaining some ties with the original culture may serve as a protective factor against developing obesity in migrants.

Da Costa, Dias and Martins (2017)

A - To compare the prevalence of being overweight between immigrants and natives in Portugal; to study the correlation between length of residence and being overweight among immigrants.

S - 31,000 people from Portugal, of whom 4.6% were migrants.

M - Correlational study

R - Prevalence of excessive weight was higher in the sample of native Portuguese than in new migrants, but the length of residence was positively correlated with the prevalence of being overweight in migrants (those who stayed longer had a tendency to be more overweight).

Conclusion - The process of acculturation causes gradual changes in diet or lifestyle; these changes cause migrants to become more similar to the native Portuguese in terms of eating behaviours.

Evaluation:

As pointed out by Schwartz et al (2013), most studies of acculturation and health outcomes rely on a unidimensional understanding of acculturation—accultured versus non-accultured to the receiving culture, ignoring the second dimension proposed by Berry (1997), the ties with the original culture.

- As a result of this, it is not clear whether the observed effects of immigration on health are due to immigrants' adaptation to the receiving culture, loss of connection with the heritage culture, or both.
- Another criticism is that it is not the process of acculturation that seems to matter, but the culture to which one is acculturating. There were other studies that did not show a significant correlation between the risk of being overweight and the duration of residence.

### **Explain one study of assimilation.**

- This essay will discuss a topic under the sociocultural approach to understanding behavior.

This studies how people's thoughts, feelings, and thus behaviors are influenced by actual, implied, or imagined presence of others and environment around them.

- Acculturation, as defined by Berry in 2005, is a process of psychological and cultural change as a result of contact and interaction between cultures. This can result in changes to all (or both) cultures, not only the non-dominant culture.

- According to Berry in 2008, individuals adopt four strategies for cultural change :

Assimilation : individuals are open to change and unconcerned about the loss of their own culture, results in a melting pot.

AND Individuals openly seek interaction with cultures other than their own and are willing to adjust their behavior, attitudes, and beliefs.

Integration : individuals want to hold onto traditional values and beliefs and also desire interaction with other cultures, results in multiculturalism

Separation : individuals value their original culture and are averse to losing it so they avoid contact with other cultures, results in segregation

Marginalization : individuals have little interest in maintaining their own culture and have little interest in opening relations with other cultures, results in exclusion

Acculturation, and therefore Assimilation, can be stressful and can happen to people who are coping with conflicting cultural norms. Acculturative stress can be defined as biopsychosocial difficulties when adapting to a new cultural context. Assimilation lead to intermediate levels of stress.

- This essay will focus on one study of assimilation, Shah et al.

Shah et al (2015)

A - To investigate acculturation in migrant workers

S - 1375 male migrant workers in the UAE mainly from South India (India, Pakistan, and Bangladesh). Half of them had been living in the UAE for 6 years.

M - Participants completed a questionnaire between January and June 2012

R - Migrant workers had a significantly higher body mass (BMI) than men of the same age in their cultures of origin. The longer the migrant workers spent in the UAE, the greater the difference between their BMI and the BMI of the men of their culture of origin. The mean BMIs for men aged 20-59 for Indians and Indian migrant workers had difference of 8.4 (Indian migrant workers being higher), for Bangladeshis and their migrant workers, a difference of 6.5, and for Pakistanis it was almost double. Also, positive association between obesity and acculturation.

IE - Generalizability less as only male migrant workers were studied and only the direction of people from South India migrating to the UAE was studied

CE - The migrant workers moving to the UAE adopted the strategy of integration/assimilation and were open to the culture of the country they moved to. This influenced them psychologically, as they enjoyed UAE's culture, their food, and everything under it. As they were previously much poorer, they now had the ability to eat more and as they were not averse to the culture they ate a lot more. Thus affecting them physically. Because assimilation occurred in them, their BMIs increased. And explain even more.

## Globalization :

### **Discuss how globalization may influence behavior and/or cognition.**

Arnett (2002) - A process by which cultures influence one another and become more alike through trade, immigration, and the exchange of information and ideas

The rapid increase in communication and interdependence in today's world may change people's behavior, making it more cosmopolitan. Humankind becomes "we" and there are no "others". Are we heading towards global social identity (GSI)? Research shows that it can foster global cooperation for an all inclusive ingroup encompassing humanity as a whole.

- However, there is an opposing hypothesis which suggests that globalization will trigger reactionary movements and people will more rigorously protect their local interests.
- This has been tested in empirical research. It was demonstrated that globalization influences people's cosmopolitan attitudes by weakening their identification with their group of origin, and this influences cooperation strategies that people choose, making them more global and less local (as seen in Buchan et al (2009) where it was seen that higher levels of globalization linked with stronger cosmopolitan cooperation strategies (i.e. global interests over local interests. Reduces perceived social distance from geographically remote others.). Also supports idea that higher levels of globalization linked to more cosmopolitan attitude (and therefore less parochial attitudes).

Globalization influences behaviour. The more individuals or a whole society are included in the global network of interactions, the more likely they are to choose cooperation strategies that prioritize the global over the local.

Buchan et al (2009)

Aim To investigate the effects of globalization on cooperation strategies. In this, two alternative hypotheses were investigated.

- (a) Globalization prompts reactionary movements, and large-scale cooperation takes the form of defending the interests of one's ethnic, racial or language group.
- (b) Globalization strengthens people's cosmopolitan attitudes by weakening their identification with their group of origin.

Method and procedure

- To measure cooperation strategies the researchers used multilevel sequential cooperation experiments. In a typical trial subjects would be given 10 tokens and required to distribute the tokens among three accounts—personal, local and world.
- Each token placed in the personal account was saved.
- Each token placed in the local account was added to local contributions of three other individuals from the same country, the sum was multiplied by two and each of the four participants received 1/4 of that amount. For example, if Mike placed one token in the local account, and so did three other people from his country, the total would become  $4 \times 2 = 8$ , and each of the four participants would get two tokens.
- Each token placed in the world account was added to the contributions from the same three local people plus two other groups of four people from different countries. The sum was tripled by the experimenter, and the participant received 1/12 of the resulting amount. Placing tokens in

the world account is potentially the most profitable decision, but only if it is shared by other players— so it is the riskiest.

- In these experiments the amount of an individual's contributions to the world account was taken as an operationalization of cosmopolitan interests (cosmopolitan cooperation strategy). Contributions to the local account were taken as an operationalization of parochial interests (parochial cooperation strategy).

- Globalization was measured by a standardized questionnaire (Globalization Index) which asks a variety of questions tapping into the degree to which an individual takes part in the network of global economic, social and cultural relations. An example of a question is "How often do you watch a television programme or a movie from a different country?"

Participants - Samples from six countries were used: the USA, Italy, Russia, Argentina, South Africa and Iran. There were approximately 190 participants per country.

Results • The study lent support to the hypothesis that globalization strengthens people's cosmopolitan attitudes. People who had higher scores on the Globalization Index were also more likely to cooperate on the global level—that is, contribute more to the world account in the cooperation experiment. • In order of increasingly cosmopolitan (and decreasingly parochial) cooperation the countries ranked as follows: Iran, South Africa, Argentina, Russia, Italy, the USA. Conclusion Higher levels of globalization are associated with stronger cosmopolitan cooperation strategies—a preference of global interests to the local interests. Globalization probably influences an individual to reduce perceived social distance with geographically remote others

(Becker et al. 2002)

**Aim:** To investigate how TV can affect eating disorders in a "media naive population."

**Methods:**

- Participants were native Fijian teenage girls, average aged of 17 years. Living on the isolated island of Vanua Levu in Fiji.
- Researchers gathered data 3 months after TV was introduced and 3 years later (1995 and 1998).
- Eating Attitudes Test (EAT) was used to gather data (see example here). This is common questionnaire used to measure risks for eating disorders. Any score >20 is considered high and at risk for an eating disorder.
- Qualitative semi-structured interviews were also conducted.

**Results:**

- EAT scores increased – went from 13% having a score >20 to 29% with a score >20
- Girls with TV in homes were 3 x more likely to have an EAT score >20
- Vomiting after eating went from 0% to 11%
- Dieting went from being rare to 69% of girls saying they had tried dieting and 75% saying they felt too big or fat.
- Girls admired characters on TV and wanted to be like them.

**Conclusions:**

- The introduction of TV caused a sharp rise in eating behaviours and attitudes that are risk factors for eating disorders.

- Globalization could be influencing behaviour through the spread of Western ideas (including the thin ideal) to other populations. This could cause changes in behaviour, such as a rise in eating disorders in young girls.

Ogihara and Uchida, (2014)

**Aim:** To investigate how a change in values might be influencing the subjective well-being of young Japanese students.

**Methods:**

- Participants were 114 students from two universities – one in Kyoto, Japan and the other in Wisconsin, USA.
- The researchers used questionnaires to measure:
  - Individualism,
  - How many close friends they had,
  - Subjective well-being (Happiness),
  - Life satisfaction,
  - Physical and psychological emotional states.
- These factors were correlated with one another.

**Results:**

- A negative correlation was found between individualism in Japanese students and their overall subjective well-being (higher individualism, less happiness and satisfaction).
- The number of close friends a Japanese student had was a mediating variable – the inability to make friends is why the individualistic values led to being less happy and less content with life.
- This correlation was not found in the American students.

**Conclusions:**

- The spread of Western values through globalization could have negative effects on people in collectivist cultures. This might be because they become more competitive and individualistic but lack the skills to establish strong friendships because they were not taught this from a young age.

But the spread of ideas is often one directional, often coming from the West. Western cultures (e.g. European countries, North America, Australia, NZ etc.) are highly individualistic, so as globalization (i.e. Westernization) has occurred over the recent decades, other cultures have become increasingly individualistic as well. This Westernization primarily occurs through the influence of media (TV, films, the internet) and the effect of this change in values is an important topic to study. Not everyone is pleased with this idea of a global cultural ingroup, as pointed out by Rosenmann, Reese and Cameron (2015).

**Discuss one or more effects of globalization on cultural origins of behaviour and/or cognition.**

Can use same studies, just connect more to individualism vs. collectivism and other cultural dimensions as well then you already would have.

## **Discuss one or more effects of the interaction of local and global influences on behavior.**

Arnett (2002) - A process by which cultures influence one another and become more alike through trade, immigration, and the exchange of information and ideas

Arnett (2002) argues that the primary psychological influence of globalization is on individuals' identity—how individuals think about themselves in relation to social groups.

He also claims that the most affected group is adolescents: they are still discovering their identity, and they are usually more interested in global media (such as music and television), which is the driving force of globalization. He distinguishes four main influences of globalization on adolescents' identity.

- Many people in the world develop a bicultural identity: part of their identity stems from the local culture, and another part from the global culture. This is similar to the kind of identity developed by immigrants and members of ethnic minority groups. (Identity Hybridisation)
- Identity confusion may be increasing, especially among adolescents in non-western societies. This happens if the development of a bicultural identity has not been successful. For these individuals, the norms of the global culture undermine their belief in the local culture. At the same time, the global culture for them is too alien and out of reach. Identity confusion may lead to further problems such as substance use, depression and suicide.
- In response to globalization some people choose to form self-selected cultures with like-minded individuals and develop an identity that is not dependent on the global culture. Self-selected cultures may be diverse, ranging from religious fundamentalism to musical subcultures. What unites them is an attempt to find an identity that is different from the mainstream global culture.
- The age period for identity formation increases, and identity explorations, which used to end typically by age 18, are being extended to a later life period (18–25).

In conclusion, Arnett (2002) points out that identity in today's world is based less on prescribed social roles and more on individual choices. Some people react to this with identity confusion, but others succeed in embracing the diversity and assimilating both the global and the local culture.

Berry (2008) argues that it is essential to distinguish globalization as a process and outcomes of this process. The outcomes of globalization, according to him, depend on the predominant acculturation strategy (integration, assimilation, separation or marginalization). In its turn, the acculturation strategy is formed by an interaction of local and global influences.

🌐 Globalization is closely connected to acculturation. In its turn, choosing one of the four acculturation strategies (integration, assimilation, separation or marginalization) is the result of the interaction between the influences of the local culture and the global culture. The choice of acculturation strategies is fateful for the outcomes of globalization.

Berry (2008) describes how the concepts of acculturation and globalization are related to each other. Both acculturation and globalization are initiated by intercultural contact and lead to change both on the individual and on the cultural level.

Two assumptions used to be predominant in research and popular thinking.

- Acculturation and globalization induce more change in non-dominant peoples.

- The ultimate result of these processes is the loss of uniqueness of non-dominant group members and establishing a homogeneous society.

Both of these assumptions have been challenged. Berry's two-dimensional model of acculturation strategies (1) desire to preserve their ethnic culture and (2) wish to interact with the members of the majority group), for example, incorporates the opportunity for multicultural societies to be established on the basis of integration as the acculturation strategy that embraces both the original culture and the new culture. Globalization as a process refers to societies engaging in international contact, establishing an interconnected network of relations. Globalization is the contact that provides the starting point for acculturation. This process, according to Berry, can have four possible outcomes, each outcome being the ultimate result of the adopted acculturation strategy.

- Globalization will lead to a homogeneous world culture, most likely based on the values and norms of the dominant cultures, with non-dominant societies adopting (assimilating) these norms

Mutual change will occur where societies share some common qualities but at the same time retain unique distinctive features (integration).

- Non-dominant groups will end up rejecting the growing influence of the dominant societies (separation).

- Globalization can lead to the destruction of nondominant cultures, leaving these groups essentially with no culture (marginalization)

Berry (1997) proposed the term 'acculturative stress' to describe the conflict between one's original culture and a new culture, and the effect they have on a person's identity. The stress is greatest when the values of the indigenous culture are incompatible with those of the global culture. This acculturative stress contributes to identity confusion, so the greater the acculturative stress the greater the identity confusion.

Chen et al (2008)

A - to investigate Bicultural Identity Integration (BII)

S - researchers sampled participants from 3 different bicultural populations all found in Hong Kong

1. Mainland Chinese immigrants to Hong Kong
2. Filipino temporary residents employed as domestic workers in Hong Kong
3. Bilingual college students in both Hong Kong and mainland China

Although the cultural context is constant, each of these groups faces different acculturation pressures, and the groups have different statuses and sociocultural backgrounds.

M - The researchers administered questionnaires to each group of participants, assessing cultural identity and psychological well-being along several dimensions included:

- cultural identification
- a bicultural identity integration scale
- an acculturation stress inventory

- depression and anxiety checklists

Conclusion: researchers found that bicultural identity integration was correlated with higher psychological adjustment. Those participants who scored higher on BII also scored higher on the psychological indices.

BII essentially enables an individual to adapt to multiple cultural influences, and because of this it is linked to better psychological adjustment to acculturation over the long-term

-that integration of bicultural identities is important for positive psychological outcomes. a bicultural identity may vary depending on the sociocultural situation. In ones local culture they may choose to speak their first language and adhere to their local culture, while their global identity may be prominent at school or work.

“ psychological adjustment will result in behavioral adjustme

Lyons-Padilla et al. (2015)

Aim: To investigate the experience and attitudes of first and second generation Pakistani immigrants living in the USA

Participants: 198 Muslims, originally from Pakistan, who were living in the USA (107 female; 78 male; 13 gender not specified; mean age=27 years). 92 of the sample were first-generation immigrants; 105 were second-generation Americans.

Procedure: The participants were given questionnaires which measured their responses using a rating scale. The questions were on aspects of acculturation such as assimilation, separation, integration, marginalisation, discrimination and what their feelings were about radical Islamic groups.

Results:

The most negative aspect of acculturation was expressed by participants who experienced marginalisation, the state of feeling ‘adrift’ in a foreign country and of having lost something culturally significant. Marginalised participants also reported experiencing more discrimination from non-Muslims

Feelings of marginalisation were exacerbated by living in a country which increasingly has global dominance in terms of culture (known as Coca Colonisation: the globalisation of American culture). These findings predicted more support for radical Islamic fundamentalism and support for extremist groups. High levels of reported separation were also linked to support for radical groups. Integration was identified as a predictable indicator of a more settled and content attitude towards living in the USA

Conclusion: Marginalisation may result in dissatisfaction and discontent with the new culture, which could result in people turning against their adopted country if they feel that it has no cultural relevance to them. Globalisation may be a negative factor in the experience of immigrants.

## Evaluate one or more methods used to study the influence of globalization on behaviour.

### METHODS USED TO STUDY THE INFLUENCE OF GLOBALIZATION ON BEHAVIOUR

Essential understanding

☛ Mainly correlational methods are used, and they involve cross-cultural comparisons. This implies a number of limitations.

- As we have seen, multiple methods can be used to measure the variables involved in research.

For example, Buchan et al (2009) measured cooperation through an experiment where participants allocated tokens to bank accounts.

- However, the methods used to establish the influence of globalization on behaviour are correlational. It is impossible to conduct a true experiment in this area. As a result, cause–effect inferences should be made with caution.

- Research into globalization involves the idea of multiple cultures interacting with each other, so a common choice is the method of cross-cultural studies. Success of cross cultural studies depends on the existence of common metrics that can be applied equally to each culture in the research sample. An example of such a metric is Hofstede’s cultural dimensions. Surveys have been developed to operationalize these constructs, and results of the surveys may be used to compare cultures with each other against a set of common dimensions. Also, Schwartz theory of basic values (containing openness to change, self-enhancement, conservation, self-transcendence) Another use of these surveys is to look at how scores of a particular culture change over the course of time as the society gets involved in more and more globalization processes.

- There are two major weaknesses in using these survey scores. First, they rely on self-report data which is not always reliable as it is open to such biases as social desirability or acquiescence. Second, a generalization is made from the scores of a group of people (a sample taking part in the research) to the whole nation, which is a long leap. It is not easy to select a sample that will be representative of a whole culture. Nation scores are therefore only crude estimates.

- A major challenge in studying the influence of globalization on behaviour is the fact that cultures are fluid and changeable. They are in a constant state of dynamic interaction, so any changes to individual behaviour occurring within a culture may be a result of globalization as well as some other factors (for example, a natural development within a culture that would have occurred even in the absence of globalization). To isolate the effects of globalization is not an easy matter, especially since experimentation in this area of research is not possible.

Use the studies above (Becker, Uchigaha (something lol) and Chen) all work. Talk about the use of constructs like Hofstede;s cultural dimensions to perform cross cultural studies and see influences of globalization.

# Psychology of Human Relationships

## Interpersonal Relationships :

### **Discuss a biological approach to understanding personal relationships.**

- The Psychology of Human Relationships looks at the nature and causes of relationships between people. This includes the origins of attraction and friendship, the nature of romantic relationships, and how these relationships change and end.
- Personal relationships refer to close connections between people, formed by emotional bonds and interactions.
- How personal relationships form can be explained biologically.
- [Evolutionary theories](#) (specifically mate selection) can explain how relationships are formed. Behaviors that are beneficial in passing on our genes will be carried on down generations with mate selection. Traits that are considered physically attractive tend to signal health, youth, and reproductive capacity. (eg, smooth skin, good muscle tone, lustrous hair, etc.). Gender also plays a role in the determination of desirable characteristics in a mate.
- There is also the argument that intensely passionate romantic love and its formation/existence is a neurobiological process similar to drug addiction.
- Hormones such as oxytocin have also been shown to play a role in the primary stages of bonding in interpersonal relationships.
- Lastly, our major histocompatibility complex (MHC) which is related to our immune system. Research has been done into the idea that one's MHCs affects mate selection.
- All of these are biological factors that play a role in the the formation of personal relationships and the strength of them.

Fisher et al (2016)

A - To investigate the idea that intensely passionate love is a neurobiological process similar to drug addiction

S - 10 women and 7 men

M - Questionnaire about feelings for each other toward their loved one, placed in an MRI.

Participants were shown a photograph of their loved one, performed a distraction task, then a photo of an acquaintance. Repeated 6 times.

R - Results of study show the same brain mechanism active in substance abuse, the mesolimbic dopamine reward pathway, is also active when individuals think about a romantic partner. (especially the early stage of love with shares many symptoms with substance abuse, but soon gives way for longer-term calm attachment)

Schneiderman et al (2012)

A - Investigates oxytocin's role in bonding

S - 60 couples in new relationships and control group of 43 individuals

M - interviewed individually and then as a couple, blood samples taken to measure blood plasma oxytocin levels in both cases.

R - High levels of plasma oxytocin levels correlated with affectionate touching, preoccupation with partner, etc.

Wedekind et al (1995)

A - Whether or not our body odor has an effect on attraction

M- A clean t-shirt was given to 44 male participants to wear for 2 nights.

-49 female participants were then asked to sniff three different types of shirts: MHC similar, MHC different, and a shirt that wasn't worn. Then they were asked to rate them dependent on the pleasantness of odor

-All of the women participants were midway through their menstrual cycle, which is when smell is strongest

R - The shirts from men with dissimilar immune systems were preferred by the women, so long as they weren't using any oral contraception. This shows that women prefer the smells of men that are more likely to boost the immune systems of any potential offspring

### **Discuss a cognitive approach to understanding personal relationships.**

- The Psychology of Human Relationships looks at the nature and causes of relationships between people. This includes the origins of attraction and friendship, the nature of romantic relationships, and how these relationships change and end.

- Personal relationships refer to close connections between people, formed by emotional bonds and interactions.

- How personal relationships form can be explained cognitively.

- Many cognitive determinants of attraction have been studied. Reciprocity theory is one, which argues that we like those who like us. This is related to one's self-esteem, self-enhancement, and self-verification.

- Another is Familiarity hypothesis which states that we like things that we see repetitively. This is a result of the mere-exposure affect, being exposed to something increasing our likingness of it.

- The attraction similarity model states that we are attracted to those we perceive to be similar to ourselves. Perception is important here, not exactly actual similarity.

- Lastly, there is the matching hypothesis which states that individuals will assess their own attractiveness or social desirability and select partners who match their levels in these areas.

Byrne (1961)

Attraction similarity model

Aim - To investigate the relationship between interpersonal attraction and attitude similarity.

Method - Researchers asked participants to rank a number of issues on their importance (from most important to least important). Examples included a range of issues from God and premarital sex to Western movies. Two weeks later they were shown an anonymous questionnaire from another student. In fact, the questionnaire was faked so that responses were one of the following: – identical to that of the participant on all issues – opposite to that of the participant on all issues – similar on important issues and dissimilar on unimportant ones –

similar on unimportant issues and dissimilar on important ones. Participants were asked to indicate their feelings towards the stranger and rate this person on such characteristics as intelligence and morality.

Results – Participants provided more positive ratings towards the stranger when their attitudes were similar. – Similarity in important attitudes was more closely associated with positive ratings than similarity in less important attitudes.

Conclusion: Perceived similarity of attitudes indeed increases interpersonal attraction.

Berscheid et al (1971)

A - to investigate the matching hypothesis

M- Participants were randomly split into two groups: high probability of rejection (POR) and low POR. The high POR participants were told that there would be a preliminary meeting with their tentative date prior to the dance where their date would be given a chance to either accept or reject them as a partner. The low POR participants were told that their dates had agreed to attend the dance with whoever was chosen by the computer algorithm. After this, participants were requested to specify characteristics that they desired in a date—how intelligent, outgoing, attractive and popular they wished their date to be.

Results – Attractive participants chose more physically attractive and popular dates than unattractive participants did. This supports the matching hypothesis. – It was not different in high and low POR groups. In other words, increasing fear of rejection had no effect on the choosing strategy.

### **Discuss a sociocultural approach to understanding personal relationships.**

- The Psychology of Human Relationships looks at the nature and causes of relationships between people. This includes the origins of attraction and friendship, the nature of romantic relationships, and how these relationships change and end.
- Personal relationships refer to close connections between people, formed by emotional bonds and interactions.
- How personal relationships form can be explained socioculturally.
- Proximity is an important social determinant (although social media has somewhat changed this) as it leads to frequency of meeting (mere-exposure effect) and familiarity. In this way what starts as a social factor becomes cognitive
- Social proof: we may be more attracted to people who perceive to be more well accepted in society
- Cultural factors play a strong role in interpersonal relationships and whether the culture follows an individualistic or collectivist society. Although acculturation can change this.
- Love is almost undebateably a universal emotion, however, it manifests differently and perceptions on it change based on the culture. Verbalization of love is different. Cultural practices can have a direct effect on relationships, as well as social norms. Therefore, culture is a key determinant of marriage and interpersonal relationships today.

Dion and Dion (1993)

A - The aim of this study was to investigate the influence of individualistic culture or collectivistic culture on love and intimacy in marriage.

M - Meta-analysis. The researchers performed a meta analysis of research done in 2 individualistic countries (US and Canada) and 3 collectivistic cultures (China, India, Japan)

R - The findings of the meta analysis suggest that romantic love is more likely the basis for marriages in individualistic cultures than in collectivistic ones. Intimacy in marriage is more about satisfaction with marriage and personal wellness in individualistic cultures → could seem contradictory to individualism values (romantic love and intimacy) but a psychologically individual mindset tends to value their wellbeing and independence than connection to others.

(familiarity/proximity)

Moreland and Beach (1992) conducted a similar study in a more natural setting. Four female confederates of similar appearance attended a large lecture class in college. One of them attended 5 sessions, another 10 sessions, another 15 sessions, and the fourth one actually did not attend any classes. At the end of the term students were shown photographs of these four women and asked to rate them on a number of dimensions (such as interesting, attractive, intelligent, honest). As predicted, the more frequently the confederate appeared in class, the higher the ratings.

Jones et al (2007)

A- to investigate social proof

Procedure - Female participants in the study were shown pairs of male faces and asked to rate their attractiveness. Later they were shown the same pairs of faces again, but this time one picture in each pair had a female face at the side. The female face was shown staring at the man's face with either a smile or a neutral expression. Participants were then asked to rate the attractiveness of the faces again.

Results – The second round of ratings did not change for the faces that were not accompanied by a female face staring at it. – Ratings in the second round were higher for the pictures that had a smiling woman staring at the male face. – Ratings were lower for pictures where the woman was staring at the man's face with a neutral expression.

Conclusion - Researchers conclude that when forming attraction women may use social clues and mimic the attitude of other women to men

## **Discuss the formation of personal relationships.**

- The Psychology of Human Relationships looks at the nature and causes of relationships between people. This includes the origins of attraction and friendship, the nature of romantic relationships, and how these relationships change and end.

- Personal relationships refer to close connections between people, formed by emotional bonds and interactions.

- How personal relationships form can be explained biologically, cognitively, and socioculturally.

- Biological: Just provide a summary of this specifically related to the study,

- Cognitive: Just provide a summary of this specifically related to the study,

- Sociocultural: Just provide a summary of this specifically related to the study,

Wedekind et al (1995)

Dion and Dion (1993)

### **Discuss the role of communication in relationships.**

- The Psychology of Human Relationships looks at the nature and causes of relationships between people.
- Personal relationships refer to close connections between people, formed by emotional bonds and interactions.
- Communication is said to be the basis of every interpersonal relationship. A relationship loses its strength if individuals do not express and reciprocate their feelings through various modes of communication.
- This is shown with the social penetration theory, put forward by Altman and Taylor (1973). The theory states that as relationships develop over time, exchanges between individuals move from a more shallow level to a more intimate level. Intimacy here involves more than just physical intimacy, intellectual and emotional are equally as important. There is a known trajectory here, AKA the pathway to closeness.
- The attribution theory is another, which was proposed by Fritz Heider (1958), states that we understand the behaviors of ourselves by attributing behaviors to causes. These are usually either situational or dispositional. Healthy relationships are characterized by an attributional style that has a positive bias toward one's partner. Positive or helpful behaviors are attributed to personal disposition (one's traits) while negative or unhelpful behaviors are attributed to situational factors.
- We are active agents in the maintenance of relationships (by communication mainly), and this activeness decides whether something like therapy would be useful. Positive constructive strategies used to maintain a relationship are called accommodation. Rusbult and Zembrodt (1983) identified 4 conflict strategies or patterns of accommodation. These were either passive or active, and constructive or destructive.
  - Active constructive - Voice (acknowledge dissatisfaction and work to improve it)
  - Active destructive - Exit (acknowledge dissatisfaction and work to end/abuse relationship)
  - Passive constructive - Loyalty (not acknowledge dissatisfaction and wait for situation to improve)
  - Passive destructive - Neglect (not acknowledge dissatisfaction and allow relationship to deteriorate)
- Brief on Gottman if you want

Utz (2015) - social penetration theory

Online study of facebook found that feelings of closeness and connection were enhanced on the site through intimate communication in private conversations and entertaining and positive updates. The responsiveness of the communication partner had no significant impact on feelings of closeness.

Karney and Bradbury (2000)

S - 60 couples offered cash

M - longitudinal analysis of attribution patterns in relationships to measure difference attribution style and satisfaction. 8 years, every 6 months.

R - Attributional style changes as satisfaction changes.

Rusbult et al (1982)

402 undergraduate students studied and found that prior satisfaction and an individual's investment in the relationship predicted constructive strategies. Perception of more attractive relationship options promoted exit and limited loyalty.

### **Discuss why relationships change or end.**

- The Psychology of Human Relationships looks at the nature and causes of relationships between people. This includes the origins of attraction and friendship, the nature of romantic relationships, and how these relationships change and end.

- Personal relationships refer to close connections between people, formed by emotional bonds and interactions.

- Relationships change or end due to a variety of factors and reasons.

- Communication is important for healthy and stable relationships. John Gottman and Julie Gottman came up with predictions centered around communication style and what is known as the "Four Horsemen of relationship apocalypse" / Gottman's Four Horsemen in the 1980s. These can apparently help in predicting divorce (relationship change).

1. Criticism - A statement that attacks the character of a person; a negative attributional bias

2. Contempt - Treating someone with disrespect or mocking sarcasm (thought of as the worst of the four, causes long-term negative thoughts)

3. Defensiveness - A self defense mechanism in the form of claimed innocent victimization (target of criticism claims to be under attack)

4. Stonewalling - Listener shuts down and refuses to communicate with or acknowledge the partner

- Knapp and Vangelisti (1996) created a model of change in relationships that shows the stages of growth and breakdown of relationships. Each stage is characterized by a different type of communication.

Relationship Escalation:

Initiation - First impressions are made. Here physical appearance is important and judgments happen.

Experimenting - Individuals begin to explore the characteristics of the other.

Intensifying - Friendship begins and personal disclosure increases. Intimacy begins to grow.

Integrating - Intimacy continues to increase and close relationships begin.

Bonding - Significant commitments are made that are mutually recognized. Termination of relationship now requires a formal dissolution.

Relationship Deterioration:

Differentiating - Individuals begin to grow apart and increasingly identify as individuals instead of as a couple. (can be due to external pressures)

Circumscribing - Communication becomes problematic (Gottman's Four Horsemen comes into play)

Stagnating - Communication becomes limited and relationships in danger of dissolution. At this point, only external pressures keep the couple together.

Avoiding - Avoiding contact and intimacy physically, emotionally, and communicatively in order to avoid conflict.

Terminating - End of relationship formally, mutually, or one-sidedly.

- Rollie and Duck (2006) proposed a more specific model dealing with relationship breakdown.

Intrapsychic - Internal unhappiness with the relationship. Dissatisfaction not communicated but the partner may start withdrawal, resentment, and try to find alternatives to the relationship.

Nothing is shared.

Dyadic - Dissatisfaction is expressed and discussed. They either actively or passively construct or deconstruct the relationship

Social - Public phase and problems shared with others for support. Normative social influence plays a role here (trying to fit in)

Grave dressing - Recovering from the relationship ending. Defending the decision and saying it was justified to cope.

Resurrection - Complete recovery of the relationship and a "new person" emerges by redefining themselves.

LeFebvre et al (2014)

A - To apply Rollie and Duck (2006) relationship dissolution model to investigate how Facebook users behave online both during and after a break-up

S - 226 college students, purposive sample

M - Semi-structure interview with an online survey. Complete online survey asking open-ended questions about romantic relationship that had ended within the past two years. participants rated the seriousness of the relationship, the frequency of face-to-face and online communication with the partner and behaviors that occurred during and after the break-up.

R - During relationship dissolution, deleting facebook relationship status, removing posts, removing any evidence of the relationship

after relationship dissolution, continuing removing evidence. making posts that paint the person in a positive light, with the goal to evoke jealousy or regret. Lefebvre supports Rollie and Duck's relationship dissolution model.

Flora and Segrin (2003)

Examined how perceptions of relational history predicted relational well-being in dating and married couples.

S - 65 married couples and 66 dating couples, at least 20 years old and native speakers of English.

M - Measurements of relationship well-being (satisfaction and stability) were taken twice with a six-month interval. A semi-structured interview (oral history) was used where participants answered a set of open-ended questions in a story-like fashion while their partner was present in the same room. A coding scheme was used later to assess the interview transcripts against a

set of scales such as fondness, affection and negativity toward the spouse, among others. In addition, relationship development was assessed through relationship development breadth—a questionnaire completed by the participants alone. Relationship development breadth is the extent to which partners have experienced specific behaviours (such as becoming sexually intimate), cognitions (such as thinking that the partner was the right person for them) and affect (such as feeling a deep emotional connection) in the course of the relationship. The more behaviours, cognitions and emotional reactions you experienced in the course of a relationship, the “broader” your relationship development has been.

R - Break-up and lower satisfaction at time 2 (six months after the start of the study) were related to little relational development breadth and negative oral history appraisals.

## Abnormal Psychology

diagnosing mental disorders is extremely challenging and the line between normality and abnormality is unclear.

### Research Methods and Ethics in Factors Influencing Diagnosis:

#### Factors influencing diagnosis:

##### **Discuss the concepts of normality and abnormality.**

Abnormal psychology—a study of patterns of behaviour that deviate from the accepted norms; however, abnormal psychology does not study all deviations, only those severe enough to be classified as mental disorders

Normality and Abnormality—not easy to define; this section describes various existing approaches

The history of abnormal psychology has witnessed many approaches to answering this question. The most influential approaches are as follows.

- Abnormality as a deviation from social norms.

This approach does not belong to any particular author; rather it is a common-sense approach of defining abnormality as something that is not “acceptable” in the society.

Evaluation:

Strength - It suggests a simple and intuitively appealing definition of abnormality based on common sense.

## Limitations

- Abnormality is defined relative to social norms, but social norms themselves are changeable (both cross-culturally and in time).
- This approach to defining abnormality may be convenient for societies to impose control over citizens. If an individual behaves in a way that does not meet the interests of the society, this individual may be easily labelled as abnormal and even isolated. Since such a possibility exists even in theory, this approach may be ethically dangerous.
- There are cases when a behaviour is socially acceptable and yet harmful to the individual. Not including such behaviours is a drawback of the definition.
- Social norms differ depending on the context (for example, the same behaviour will be perceived differently at a rock concert and at a business meeting).

- Abnormality as inadequate functioning.

Rosenhan and Seligman (1989) proposed seven criteria of abnormality and suggested that degrees of abnormality can be established based on combinations of these criteria.

- suffering, maladaptiveness, unconventional behaviour (that is, not like that of most people), unpredictability of actions or loss of control over actions, irrationality (others cannot understand why the person behaves in this way), observer discomfort (it makes others uncomfortable to witness the behaviour), violation of moral standards.

Evaluation:

### Strengths

- It embraces more dimensions of abnormality, for example, socially acceptable behaviour that causes individual suffering.
- It operationalizes abnormal behaviour in a way that can be established by observation.

### Limitations

- The definition seems to be over-inclusive. For example, public displays of affection may cause observer discomfort (especially in some cultures), but is this enough to classify it as abnormal behaviour?
- Very few behaviours meet all seven criteria.
- Sometimes criteria may contradict each other. For example, unconventional behaviour may sometimes help an individual achieve major life goals. To account for these limitations, Rosenhan and Seligman (1989) suggested that abnormality is a continuum rather than a black-and-white phenomenon; there exist degrees of abnormality based on how many criteria are met

- Abnormality as a deviation from ideal mental health.

Jahoda (1958) defined six characteristics of mental health, thus focusing on the positive side of human existence. Jahoda (1958) used the idea of mental health as the starting point. She believed it was much more important to define healthy behavior than disorders. The six characteristics of ideal mental health that Jahoda (1958) proposed were:

efficient self-perception, realistic self-esteem, voluntary control of behaviour, accurate perception of the world, positive relationships, productivity.

Evaluation:

### Strengths

- It is more humanistic—it focuses on health rather than disorders.
- It provides a balanced description of what it means to be healthy.

#### Limitations

- It seems impossible for a person to achieve all six criteria, so most people would be classified as “not entirely healthy” in this framework.
- Some parameters are difficult to measure. For example, it may require a subjective opinion of the clinician to establish that the client’s perception of the world is “accurate”.

#### - Abnormality as statistical infrequency.

This approach equals abnormal to statistically unusual. It provides a rigorous way to quantify abnormality based on conventions of social sciences. However, statistical norms themselves may change with the course of time. This approach looks at separate traits and behaviours rather than deciding if “the whole person” is normal or abnormal. Traits and behaviours are considered abnormal if they are defined as statistically unusual. The definition requires thresholds after which we would consider behaviour to become “unusual”. These thresholds have been defined somewhat arbitrarily in statistics for social sciences, and they link to the following thresholds of statistical significance:

- $p < 0.05$  (rarer than 5 cases out of 100)
- $p < 0.01$  (rarer than 1 case out of 100)
- $p < 0.001$  (rarer than 1 case out of 1,000).

#### Evaluation:

##### Strengths

- It is very quantifiable: traits and behaviours are compared to those of a large representative population.
- It labels behaviours and traits, not people.
- It links to statistical criteria used elsewhere in social research.

##### Limitations

- Statistical norms themselves are changeable because they are defined relative to the population, and the population does not remain the same. For example, overt homosexuality is more prevalent today than it was several decades ago; the average IQ in the world gradually increases (the Flynn effect).
- Statistically infrequent behaviours are not always undesirable—one example is unusually high IQ.

#### - The medical model of abnormality

It avoids a single definition of abnormality altogether and instead defines each individual disorder by the system of symptoms. Classification systems are used in the medical model to provide clinicians with guidance in diagnosing disorders and delineating between them. The medical model of abnormality assumes that abnormal behaviour, much like a physical disease, has a set of symptoms and a set of causes behind those symptoms (symptomatology and etiology). Symptoms may be observed, causes may be inferred and treatment should target these inferred causes. This model avoids the need for a general definition for abnormal behavior altogether. Instead it focuses on mental disorders one by one, defining them descriptively by a system of symptoms. All these descriptions are then brought together in a classification system.

Such classification systems assume that each disorder is characterized by a defined set of symptoms that can be differentiated from other sets of symptoms (disorders).

Evaluation:

Strengths

- It makes diagnosis independent of clinicians' beliefs regarding what causes the disorder. Psychiatrists may disagree on the origin of a disorder, but they should be able to use the common language of observable symptoms to agree on the presence of a disorder.
- It is flexible and testable. Like any model, it can be tested against empirical observations and refined if the fit is not perfect (this takes the form of new editions of classification systems being published).

Limitations

- Many symptoms of mental illness are not as easily observed as symptoms of physical disease.
- One symptom may be an indicator of multiple disorders, and any single disorder manifests itself in a variety of symptoms. This is a difficulty that classification systems must tackle.
- The problem of threshold is relevant for this approach as well. For example, if some symptoms are present and others are not, do we still diagnose a disorder?

briefly mention Rosenhan et al (1973) and Luhrmann et al (2014)

(Luhrmann et al (2014)

- Hearing voices and having conversations with those voices
- Cultural differences: schizophrenia in Western cultures, believed in Ghana culture that the dead and spirits are able to converse with us)

## **Discuss one classification system of abnormal psychology.**

Abnormal psychology is a study of patterns of behavior that deviate from the accepted norm.

Classification system—a diagnostic manual providing a system of diagnostic categories, a set of symptoms for each diagnostic category, and rules for making a diagnosis based on these sets of symptoms

Examples:

The Diagnostic and Statistical Manual (DSM) is published by the American Psychiatric Association (APA). It is currently in its fifth edition (DSM-5) and is widely used in the USA.

The International Classification of Diseases (ICD-10) is published by the World Health Organization and is widely used in European countries.

Views on mental illness have gradually changed as a result of scientific advances and social movements, and these changes are reflected in the history of classification systems (for example, the DSM). In the DSM, there was a major shift from establishing causes of disorders based on the clinician's interpretation of the client's behaviour to describing a set of observable symptoms and trying to create classification categories that would not overlap. In this way, the role of theory in diagnosis was gradually reduced. This might have made diagnosis more

superficial, but it also allowed clinicians with diverse theoretical backgrounds to use a common language and arrive at similar diagnoses.

Someone designing a classification system faces a variety of challenges, some of which are:

- explanation versus description
- validity versus reliability—when explanation is eliminated from the process of diagnosis, it makes diagnosis more consistent across clinicians (more reliable), but leaves less room for consideration of unique individual circumstances (which may reduce validity)
- discrete diagnostic categories hard with the idea of **degrees of abnormality** (i.e. some more severe than others)
- delineation between categories (deciding if a particular pattern of behavior belongs to one category or another is not an easy task sometimes)
- cross-cultural applicability (needs to be equally applicable to people of different cultural backgrounds)
- medicalization of the population (percentage of the population that can be categorized as mentally ill. Don't want a situation where too many people can potentially be diagnosed with a mental disorder).
- changing social norms (i.e. homosexuality)

Empirical research of classification systems takes the form of establishing their validity and reliability. A good classification system should:

- allow different clinicians using it to arrive at the same diagnoses, even if their theoretical orientations are not the same
- allow a diagnosis that corresponds to the real problem experienced by the patient
- take into account cultural differences regarding reporting, demonstrating and interpreting symptoms of abnormal behaviour
- minimize potential biases in the diagnostic process.

#### DSM-I: 1952

This edition was heavily based on psychoanalytic traditions (an approach to diagnosing mental illness, based on the works of Sigmund Freud and his followers, focused on identifying unconscious drives and theorizing about childhood experiences): clinicians looked for origins of abnormal behavior in childhood traumas. The focus was on establishing causes, which involved a lot of interpretation on the part of the psychiatrist.

#### DSM-II: 1968

The publication itself was triggered by attacks from scientists (for example, behaviourists criticized using unobservable constructs such as “trauma” or “unconscious drives”) and social activists (for example, the antipsychiatry movement viewed psychiatry as a form of social manipulation). However, DSM-II still retained a lot of psychoanalytic features; it was focused more on explaining and interpreting disorders than describing them.

#### DSM-III: 1980

The publication was the result of doubts raised in the scientific community regarding the ability of psychiatrists to reliably differentiate between normality and abnormality. Studies such as Rosenhan (1973) questioned the validity of diagnosis. Diagnostic categories had to be made

more “scientific”, and this was done by a change of focus from explaining and interpreting disorders to describing them. With a focus on describing sets of observable symptoms, DSM-III included 265 disorders organized in 5 groups (the multi-axial system).

DSM-IV: 1994

DSM-III was criticized for overdiagnosis (too many people could be diagnosed with a mental disorder). In response, the diagnostic categories were revised and DSM-IV included the clinical significance criterion: symptoms were considered clinically significant if they created major distress or interfered with daily functioning.

Described each diagnosis in terms of five dimensions or axes highlighting different aspects...

- Clinical disorders (patterns of behavior that impair functioning, eg. depression)
- Personality disorders (rigid patterns of maladaptive (not adjusting to situation) behavior that have become a part of a person’s personality, eg. narcissistic disorders)
- General medical conditions
- Psychosocial and environmental problems contributing to the disorder (eg. divorce, death)
- Global assessment of functioning of GAF on a scale of 1 to 100 to evaluate current need for treatment.

DSM-5: 2013

The multi-axial system was criticized for being artificial and not reflecting the reality of things. Ultimately, it was eliminated. Cultural variability of symptoms was emphasized and tools such as the “Cultural formulation interview” were included to help clinicians avoid cultural bias in diagnosis

Beck et al (1962) found that for DSM-I agreement on a specific diagnosis between two psychiatrists was only 54% on average. Reliability of DSM-II was shown to be similarly low

Williams et al (1992) showed that test-retest reliability for different diagnostic categories in DSM-III varied from “almost perfect” to “moderate” and “weak”. This seemed to depend mostly on whether or not a disorder has clear behavioral manifestations. For example, substance abuse has more obvious behavioral manifestations than a social phobia. Research studies confirmed that there was a visible improvement to reliability of diagnosis using DSM-III. This was also enhanced by the addition of the Structured Clinical Interview for DSM (SCID)—a standardized interview that allowed all clinicians to follow the same protocol.

Regier et al (2013) summarized data from old trials for the DSM-5 and reported mixed results. On the one hand, out of 23 diagnostic categories that were studied, more than half demonstrated moderate to strong reliability. On the other hand, six categories were in the weak range and three categories were in the unacceptable range. Major depressive disorder (MDD) was among the categories that had “weak” reliability of diagnosis, which is surprising because this category did not change much from the earlier editions of the DSM

Could be explained by observing that modern studies of reliability of diagnosis use more rigorous methods and research procedures, as compared to earlier studies. Most importantly, old trials for DSM-5 almost exclusively used the test-retest method of establishing reliability, while earlier studies often used audio-/videorecordings. As we know, estimates of reliability in

the test-retest method are more conservative, but probably closer to the reality of clinical diagnosis.

### **Discuss the validity and/or reliability of diagnosis.**

Abnormal psychology is a study of patterns of behavior that deviate from the accepted norm.

- Diagnosis (“dia” = differentiating, “gnosis” = knowledge)—relating a pattern of abnormal behavior (symptoms) to a certain category in the classification system
  - Validity of diagnosis—the accuracy of diagnosis; that is, the extent to which the diagnosis reflects the real nature of the patient’s problem. (the degree to which a diagnostic system measures the behaviors that it purports to measure)
  - Reliability of diagnosis—the extent to which different clinicians using the same classification system arrive at the same diagnosis for the same patient; also known as “inter-rater reliability”
  - Validity and reliability are two essential characteristics that define the quality of diagnosis.
  - There are two ways to assess inter-rater reliability of diagnosis.
    - The audio-/video-recording method—one clinician conducts a clinical interview with the patient; this interview is recorded and the recording is given to a different clinician who then makes a diagnosis independently. The two diagnoses are compared.
    - The test-retest method—two clinicians conduct interviews with the same patient independently
- The limitation of the first method is its artificiality. The diagnosis may depend, for example, on the nature of questions asked during the clinical interview or how the patient responds to non-verbal reactions of the clinician. In a natural situation two clinicians conducting the same interview will conduct it differently, which will contribute to variance in diagnosis. However, in the audio-/videorecording method the clinicians observe exactly the same behavior—a scenario that is very unlikely in real life. As a result, estimates of reliability of diagnosis may be somewhat inflated. The second method is much less artificial. However, the limitation is the necessity to keep the time interval between the two interviews short. If the interval is too long, the patient’s symptoms may change naturally. Inconsistencies in diagnosis will partially reflect the real changes in the patient’s behaviour, and reliability of diagnosis in this case will be underestimated.
- Validity and reliability of classification systems tend to be inversely related: as reliability increases, validity has a tendency to decrease, and vice versa. To increase reliability of a classification system we need to ensure that all clinicians, irrespective of their theoretical backgrounds and personal biases, notice the same symptoms and attribute them to the same categories. For this to be possible, the symptoms need to be very observable and “objective” (independent of the clinician’s interpretation). In an attempt to achieve this, classification systems focus on more obvious symptoms and ignore subtle individual differences. However, ignoring individual circumstances may mean that the diagnosis does not fit the patient perfectly. In this sense, when subjective interpretation is eliminated from the process of diagnosis, validity may (or may not) be compromised.

Validity cannot be directly quantified. There are two approaches commonly used to assess validity of diagnosis.

- Assessment of systematic biases in the diagnostic process. (ex: we can compare two sets of diagnoses that should not differ if diagnosis is valid)
- Assessment of psychiatrists' ability to detect the mental disorder when the disorder is objectively known. A classic study by Rosenhan (1973) brought into question the ability of psychiatrists to tell mentally healthy people from the mentally ill (at the time when DSM-II was in use).

Mention this - (The classification used...

DSM (Diagnostic and Statistical Manual) created by the American Psychiatric Association, which is used by clinicians to arrive at a diagnosis by matching the individual's behavior with the symptoms that define particular disorders. )

Rosenhan et al (1973) [this can be used for reliability as well]

S - Eight mentally healthy subjects tried to gain admission to psychiatric hospitals

A- To investigate whether psychiatrists in a naturalistic setting could tell the difference between sane and insane people.

M- Field study with elements of participant observation. Procedure. In the interview with the psychiatrist the pseudo-patients followed a standard script where they complained of hearing voices that said "empty", "hollow" and "thud". This was the only symptom they made up; they were instructed to answer all the other questions about themselves honestly. Upon admission, the pseudo-patients stopped simulating symptoms and behaved normally. They told the staff they did not experience any symptoms any longer and sought to be discharged from the hospital. At the same time, they secretly wrote down their observations.

R-

- Seven out of eight patients were admitted to hospital with a diagnosis of schizophrenia.
- When discharged, they were all diagnosed with "schizophrenia in remission".
- It took the patients on average 19 days to get out of the hospital by their own means (range from 7 to 52 days).
- None of the hospital staff ever suspected that the pseudo-patients were in fact healthy.
- The normal behaviour of the pseudo-patients was often misinterpreted as symptoms of a disorder.
- The patients were largely ignored by the staff. The average amount of time spent by members of the staff with each patient was under seven minutes a day.

Follow-up study

Since the professional community was highly skeptical of Rosenhan's results, he conducted another study with a hospital that was informed beforehand that pseudo-patients would be sent to seek admission there. In fact, Rosenhan did not send anyone. Staff members used a 10-point scale with each new patient to rate how likely they were to be a pseudo-patient. Results showed that psychiatrists and staff members often rated the real patients as pseudo-patients quite confidently.

Conclusion: Rosenhan concluded that psychiatrists lacked the ability to distinguish mental disorders from sanity, which questions the validity of psychiatric diagnoses. He suggested that this alarming situation could be explained by the effect of labelling: once someone is labelled with a disorder, everything he or she does is interpreted through the lens of that disorder

And for validity add one study from clinical biases as well

Reliability:

Beck et al (1962) found that for DSM-I agreement on a specific diagnosis between two psychiatrists was only 54% on average. Reliability of DSM-II was shown to be similarly low

Regier et al (2013) summarized data from old trials for the DSM-5 and reported mixed results. On the one hand, out of 23 diagnostic categories that were studied, more than half demonstrated moderate to strong reliability. On the other hand, six categories were in the weak range and three categories were in the unacceptable range. Major depressive disorder (MDD) was among the categories that had “weak” reliability of diagnosis, which is surprising because this category did not change much from the earlier editions of the DSM. Modern studies of reliability of diagnosis use more rigorous methods and research procedures, as compared to earlier studies. Most importantly, trials for DSM-5 almost exclusively used the test-retest method of establishing reliability, while earlier studies often used audio-/videorecordings. As we know, estimates of reliability in the test-retest method are more conservative, but probably closer to the reality of clinical diagnosis.

Key problems related to validity of diagnosis

Heterogeneity of clinical presentation—one and the same disorder can manifest itself differently in different patients, so the diagnostic manual should allow for some flexibility.

- Classification is based on symptomatology rather than etiology. This means that diagnostic categories will overlap, because two disorders that have distinct causes may manifest themselves in similar symptoms.
- Comorbidity (co-occurrence of two or more diagnoses)—this is an issue because if disorders A and B frequently occur together, it raises the question: can they be just symptoms of a more general disorder C? In other words, the problem is where to draw the line between symptoms of the same disorder versus two different disorders.
- Stability of symptoms—some symptoms are not stable, and making a diagnosis on their basis would be incorrect, so clinicians have to ensure that the symptoms they observe are stable in time.
- Selecting treatment—diagnosis determines the type of treatment that will be prescribed, and it is important that this treatment targets the real cause of a disorder. In a sense, effectiveness of treatment is a test for validity of diagnosis. Validity of diagnosis cannot be directly quantified, but it can be assessed through research of clinical biases. To achieve this, two ways are commonly used.

### **Discuss the role of one or more clinical biases in diagnosis.**

Abnormal psychology is a study of patterns of behavior that deviate from the accepted norm.

- Diagnosis (“dia” = differentiating, “gnosis” = knowledge)—relating a pattern of abnormal behavior (symptoms) to a certain category in the classification system

Clinical bias in diagnosis—a systematic deviation from accuracy in diagnosis caused by misinterpretation of the patient’s behavior; clinical bias may be associated with clinician variables and patient variables

All clinical biases in diagnosis may be broadly divided into three groups:

- Clinician variables—professional background, beliefs, attitudes and other characteristics of the clinician that may cause systematic deviation in diagnosis

- the clinician’s theoretical orientation (attitudes and beliefs about certain groups of individuals or disorders)

- the clinician’s abilities (such as perspective-taking, tolerance for uncertainty, tolerance for differences)

- the clinician’s cognitive biases (such as confirmation bias or illusory correlation)

- Patient variables—characteristics of the behaviour of certain groups of patients in the clinical situation that may cause misdiagnosis

Patient variables are related to the fact that different groups of people behave differently in a diagnostic process..

- Reporting bias—some groups experience symptoms of a disorder but fail to acknowledge them and report to professionals.

- Somatization—some groups experience symptoms of a mental disorder in a physical form; they will report the symptoms to a physician rather than a psychiatrist. This is especially prevalent in societies where mental disorders are stigmatized.

- Cultural factors in diagnosis (which result from the clinician and the patient having different cultural backgrounds)

### Expression of symptoms

Diagnosed rates of mental illness differ across cultural groups. These differences could be due to many factors: genuine differences, biased judgement of clinician, altered behavior of patient in clinical context. Altered behavior could be related to the idea of stereotype threat (in how certain situations activate certain stereotypical expectations causing one to unintentionally modify one’s own behavior).

The clinician bias hypothesis - Two groups exhibit similar depression symptoms but clinicians mistakenly judge these symptoms based on personal prejudices.

Cultural variance hypothesis - Two groups express their symptoms differently, but clinicians are insensitive to such cultural differences.

— Cultural dimensions started making their way into the DSM in its fourth edition. It included a “cultural formulation interview” in an appendix and a glossary of “cultural syndromes”. More attention was given to cultural variables in DSM-5. “Cultural syndromes” are sets of symptoms that are only recognized as illness in a particular culture. In fact, these symptoms may only exist in a given culture and nowhere else. Some examples of cultural syndromes follow.

- Ataque de nervios (“attack of the nerves”) is a syndrome found mostly among Hispanic people. Symptoms include uncontrollable screaming, trembling and partial loss of consciousness. It may be a culturally acceptable form of reaction to extreme stress.

Langwieler and Linden (1993)

A - To find out if biases associated with clinicians' professional background exist in real-life medical decision-making processes when the clinicians do not suspect they are participating in a study.

M - The study focused on individual differences between clinicians while keeping the patient variables constant. The study used a combination of qualitative methods including covert observation, interviews and content analysis.

Procedure- A pseudo-patient was trained and presented to four clinicians during the regular working hours. The pseudo-patient was a 30-year-old female physician who pretended to work as a clerk; the story she presented was designed according to DSM-III symptoms of major depressive disorder (MDD). Four clinicians were selected, each with a different professional background (for example, psychoanalytic training versus behaviorist). All of them gave informed consent to participate in a study on medical decision making where a pseudo-patient would come to their office unannounced and record the whole session on a concealed tape recorder. After the study clinicians listened to the session recording with the researchers and recalled their thoughts during the interview. Their comments while listening to the recordings were transcribed and submitted to a content analysis.

R - All clinicians arrived at slightly different diagnostic conclusions. For example, medication was prescribed in some cases and not prescribed in others. Suicidal thoughts were investigated by some clinicians but not others. The initial diagnosis was formed very early (in less than three minutes) in the process of the interview. In theory, assessment should come first and conclusions second, but analysis of transcripts revealed that these processes actually appeared to be interdependent: an initial conclusion was made early in the process and influenced the subsequent assessment procedures. In all cases the early diagnosis was identical to the final diagnostic conclusion.

Conclusion - There are marked individual variations in the diagnostic process carried out by clinicians of varying professional and theoretical backgrounds. This therapist individuality contradicts the idea of a standardized diagnostic process and can be regarded as a bias.

Furnham and Malik (1994)

A - To investigate cross-cultural beliefs about depression.

Background Statistically British Asians (immigrants from Bangladesh, India and Pakistan) are rarely diagnosed with depression. One possible explanation is that British Asians have depression but fail to report it (reporting bias).

P - 152 female subjects in two age groups: young (aged 17–28) and middle-aged (35–62). Half of the participants were Native British, the other half were of Asian origin (born and educated in India, Pakistan or Bangladesh).

Method and procedure - This was a quasi-experiment. Participants filled out questionnaires about their symptoms of mental illness and their beliefs about depression. Responses were compared across groups (the two IVs were culture and age).

R - Perception of depression differed among Asian and British participants. For example, Asian participants (but not British participants) believed depression is temporary and can be fixed by having a job outside the home. These differences were less pronounced in the group of younger

women. Asian middle-aged women reported being depressed significantly less than the younger group.

Conclusion - Cultural differences exist in the way depression is perceived. These differences may be attributed to underlying cultural dimensions (such as individualism versus collectivism). These cultural differences influence the rates at which disorders are reported: people from traditional collectivistic societies tend to report depression more to relatives and less to professionals. Globalization gradually erases these cultural differences, with younger generations having less reporting bias.

Lin, Carter, and Kleinman (1985)

A - To determine the presence of somatization in certain cultural groups.

Method - Analysis of clinical record; quasi-experiment (comparison of pre-existing groups).

P - Chinese, Filipino, Vietnamese and Laotian patients that were undergoing treatment in US hospitals. Half of the patients were refugees (they had been forced to move due to the war in Vietnam). The other half were immigrants (it was their conscious decision to emigrate).

Procedure - The researchers analyzed clinical records of patients in US primary care. They were looking for signs of somatization, which was defined as vague somatic symptoms in the absence of a clear etiology. Rates of somatization were compared across groups.

Results - Somatization was diagnosed in 35% of patients. Refugees were more likely to have somatization than immigrants. Patients with somatization were more likely to come from a "traditional" background (with larger household sizes and lower levels of education). Patients with somatization were more likely to be less proficient in English.

Conclusion - Somatization is prevalent among certain social groups, such as Asian refugees and immigrants. People from traditional societies (where mental disorders tend to be stigmatized) are more prone to somatization. Refugee status also contributes to somatization, probably due to the added stress of forced relocation and acculturation.

## Etiology of abnormal behaviors:

### **Discuss a biological approach to explaining the etiology of one disorder.**

Abnormal psychology is a study of patterns of behavior that deviate from the accepted norm.

- Etiology is a set of causes of a disease or condition

- One disorder is MDD (Major Depressive Disorder), which is an affective disorder as its symptoms represent a change in a patient's moods. Its DSM-5 symptoms are currently 9: depressed mood, diminished interest/pleasure in daily activities, significant weight change (loss/gain of 5% of body mass in a month), insomnia or hypersomnia, psychomotor agitation or retardation (movement activity too fast/slow), fatigue, feelings of worthlessness/guilt, diminished ability to think or concentrate, and recurrent suicidal thoughts.

Biological etiology of MDD: Biological explanations for depression include genetic factors and neurochemistry (neurotransmitters and hormones).

- Research into genetic etiology of depression uses the same approaches as genetic research elsewhere in psychology. Genetic heritability of depression cannot be measured directly but it can be estimated from data obtained in such methods as twin studies, family studies, adoption studies and molecular genetics. In twin studies, the Falconer model has been traditionally used to estimate heritability. This model assumes that phenotype (the set of traits that actually manifest in an individual's body) is composed of three types of influences: genetics, shared environment, and individual environment.

$$I = A + C + E$$

A is genetic inheritance, C is shared environment, E is individual environment

- gene-environment interactions ( $G \times E$ ). Genes may create a susceptibility to certain environmental influences. In other words, genes may create a predisposition to depression, but it will depend on environmental factors whether or not this predisposition will be triggered.

- However, genetics can also influence the environment itself. This is known as gene environment correlation (rGE) there are three types.

- Passive rGE—this is when parents pass on to the child both the genes and some corresponding environment, so genes and environment are not entirely independent. For example, parents may give the child genetic predisposition to depression as well as a highly demanding environment that places the child under a lot of stress.
  - Evocative rGE—this is when a person's genotype evokes a particular environmental response. For example, a person with depression may be constantly gloomy, so people at work may stop interacting with him or her. This lack of interpersonal interaction may in turn become the environmental factor that further contributes to the person's depression.
  - Active rGE (also known as niche-picking)—this is when an individual actively selects certain environments that better match his or her genetic predisposition. For example, a child predisposed to depression may seek high-demanding situations where it is hard to succeed
- Genetic explanations for mental disorders are linked to other biological explanations: evolution, neurotransmitters, hormones. One of the most influential theories that currently describes the role of neurotransmitters in depression is the "serotonin hypothesis, and the idea that its imbalance in the brain is a factor that causes depression is known as the "serotonin hypothesis"

Kendler et al (2006) - Falconer Model

S - 42,161 twins located through the national Swedish Twin Registry. Birth cohorts spanned nearly 60 years, which enabled researchers to compare results across generations

A - To compare genetic heritability of major depression in men and women as well as across historical cohorts.

M - To assess lifetime major depression, a personal computer assisted telephone interview was conducted with all participants using modified DSM-IV criteria. Informed verbal consent was obtained prior to the interview. Trained interviewers with adequate medical background collected data. Efforts were made to reach both members of a pair within one month.

R - • Prior studies (meta-analyses) of genetic heritability of depression showed quite similar results, estimating heritability of depression at 37% on average. The estimated heritability of

major depression for the entire sample in Kendler et al (2006) was 38%—very similar to prior results.

- No evidence was found that shared environment was of any importance as a factor of developing major depression (C = 0%).
- Heritability estimates for men were: A = 29%, E (individual environment) = 71%. Heritability estimates for women were: A = 42%, E = 58%.
- These estimates did not differ significantly across age cohorts.

Conclusion - The researchers concluded that major depression was moderately heritable. Men and women have different rates of genetic susceptibility for depression. However, we should remember when interpreting this finding that genes and environment are in constant interaction. For example, as the researchers suggest, genes may exist that increase the risk of depression in response to variations in the hormonal environment. Such genes would increase the risk of depression in women (during menstrual cycles and pregnancy) but not in men.

Silberg et al (1999) - GxE

S - The data used was taken from the Virginia Twin Study of Adolescent Behavioural Development—a longitudinal fourwave study of more than 1,400 male and female juvenile twin pairs who were between 8 and 16 years of age at the time of the first assessment.

A - To investigate what causes the differences in heritability of depression in males and females. With this end, to investigate the development of depressive symptoms among boys and girls from childhood to adolescence.

M - A longitudinal twin study. Depressive symptoms were assessed using the Child and Adolescent Psychiatric Interview. This interview is administered to both twins and at least one of the parents. A list of 39 potentially stressful past-year life events was created. These included such events as failing a grade or losing a close friend through arguments. Ratings for these events were obtained in interviews with the mothers.

R - The life events most associated with depression were similar in boys and girls. Examples included increased quarrelling between parents and failing a grade. Boys and girls have similar levels of depression before the age of 12, but girls' rates of depression increase significantly faster after that age. Analysis showed that stressful life events had a greater impact on depressive symptoms of girls than boys, especially during and after puberty.

Conclusion - The effect of negative life events on depressive symptoms in adolescent girls is stronger than in boys. This suggests a genetic predisposition to experiencing particular stressful life events. In other words, girls have a genetic predisposition that makes them more vulnerable to stressful life events, at least in adolescence

Caspi et al (2003) - GxE and Neurotransmitters

A - To investigate the relationship between stressful life events and depression in individuals with different functional polymorphisms (alleles) of the 5-HTT gene.

S - A representative birth cohort of 1,037 children from New Zealand.

M - A longitudinal study. Quasi-experimental comparisons—the sample was divided into three groups: both short alleles of 5-HTT (s/s)—17%, one short allele and one long allele (s/l)—51%, both long alleles (l/l)—31%.

Participants were followed longitudinally and assessed at ages 3, 5, 7, 9, 11, 13, 15, 18, 21, 25. A “life history calendar” was used to assess stressful life events. It included 14 major events (such as employment, health, relationship stressors) and was administered to participants twice at age 21 and 25 (immediately before the 26th birthday). Participants were assessed for past-year depression with an interview based on DSM-IV criteria. This was combined with informant reports from persons nominated by each participant as “someone who knows you well”.

R - There were no differences between the three groups in the number of stressful life events they experienced. However, it was found that participants with a short allele of 5-HTT (s/l and especially s/s) reacted to stressful life events with more depressive symptoms. For example, participants who had a stressful life event at age 21 demonstrated an increase in their depressive symptoms by age 26, but only if they carried a short allele of 5-HTT (s/l or s/s). Conversely, depressive symptoms of participants in the l/l group stayed on the same level.

Conclusion - The researchers concluded that 5-HTT does not influence exposure to stressful life events, but influences an individual’s reaction to these events. The study demonstrated that genetic predisposition can moderate a person’s reactivity to stressful life events—an instance of gene-environment interaction ( $G \times E$ ).

5-HTT—serotonin transporter gene: a gene involved in the regulation of reuptake of serotonin at brain synapses. Usually excess serotonin in the synapse is reuptaked, inhibiting this would increase levels of serotonin concentration which is shown to be effective against depression.

## **Discuss a cognitive approach to explaining the etiology of one disorder.**

Abnormal psychology is a study of patterns of behavior that deviate from the accepted norm.

- Etiology is a set of causes of a disease or condition

- One disorder is MDD (Major Depressive Disorder), which is an affective disorder as its symptoms represent a change in a patient’s moods. Its DSM-5 symptoms are currently 9: depressed mood, diminished interest/pleasure in daily activities, significant weight change (loss/gain of 5% of body mass in a month), insomnia or hypersomnia, psychomotor agitation or retardation (movement activity too fast/slow), fatigue, feelings of worthlessness/guilt, diminished ability to think or concentrate, and recurrent suicidal thoughts.

Cognitive etiology of MDD: Cognitive explanations for depression suggest that the patterns of information processing (how an individual interprets various life events) influence the development of the disorder.

Aaron Beck (1967) - Cognitive Theory of Depression

This theory suggests that cognitive factors are the major cause of depression. It highlights the importance of automatic thoughts—the semi-conscious sub-vocal narrative that naturally occurs in people’s minds to accompany their daily activities. The central claim of the theory is that a change in automatic thoughts can lead to a change in behaviour. The theory identifies three elements of depression

- The cognitive triad: negative beliefs about the self, the world and the future—these negative beliefs are deeply rooted and they influence automatic thoughts to be irrationally pessimistic.
- Negative self-schemata: when negative beliefs about the self become generalized, individuals start seeing their own fault in everything that happens to them, even if they cannot control it.

- Faulty thinking patterns: these are logical fallacies and irrational conclusions that people make because the way they process information is biased.

Ex: Dichotomous thinking (either i am a success or i am a failure), arbitrary inference (far fetched conclusions), selective abstraction (only noticing one aspect of experience), overgeneralization (making conclusions based on one event), personalization (blaming oneself for everything).

Cognitive theory of depression forms the basis of cognitive behavioural therapy (CBT). The core idea of this approach to treatment is that confronting the client's faulty thinking patterns with the objective reality of the situation will replace the irrational elements with more logical thinking, which will in turn affect behaviour.

Alloy et al (1999)

A - To investigate whether a particular cognitive style (positive or negative) in freshmen is associated with subsequent development of depressive symptoms.

S - Non-depressed college freshmen

M - Quasi-experiment; longitudinal study. At the start of the study, participants were given a questionnaire that determined their cognitive style and split into two groups based on results: low risk versus high risk for depression. Participants with a negative cognitive style (allocated to the high-risk group) typically believed that negative life events were catastrophic and that the occurrence of such events meant that they (the participants) were flawed or worthless. Participants were then followed longitudinally for 5.5 years. Assessments included self-report measures and structured interviews.

R -

- During the first 2.5 years of follow-up, high-risk freshmen were more likely to develop major depressive disorder than low-risk freshmen (17% versus 1%).

- High-risk freshmen were also more likely than low-risk freshmen to develop suicidal thoughts and behaviour (28% versus 13%).

Conclusion - Negative cognitive styles may influence the development of major depression.

Caseras et al (2007)

A - To investigate whether attention to positive versus negative stimuli is different in depressed versus non-depressed participants.

S - 43 participants recruited through a university website.

M - Quasi-experiment; eye-tracking technology was used to measure the variables. Depressive symptoms were assessed using a questionnaire. On the basis of the scores, participants were split into two groups—those with depressive symptoms and nondepressed.

- Participants were shown a series of 32 picture pairs with negative, positive and neutral stimuli. Each pair of pictures was presented for three seconds. The negative pictures presented images of sadness and loss, whereas the positive pictures showed people engaging in enjoyable activities. Using eye-tracking technology, researchers measured two components of visual attention:

- initial orienting (which of the two pictures the participant looks at initially)

- maintenance of attention (the duration of looking at this picture before switching to the other one).

R-

- Participants with depressive symptoms demonstrated a bias in maintenance of attention to negative pictures— but no differences were found in initial orienting.
- In other words, once depressed participants started looking at a negative picture, they found it harder to switch their attention to the other picture.

Conclusion - Negative attention bias potentially is one of the mechanisms of major depression.

Hammen and Krantz (1976)

A - To investigate logical errors in depression

M - Asked depressed and non-depressed female participants to read stories describing situations where women encountered stressful experiences. After reading, they were asked to provide their interpretations of the women's experiences.

R - Depressed participants made significantly more logical errors in their interpretations.

## **Discuss a sociocultural approach to explaining the etiology of one disorder.**

Abnormal psychology is a study of patterns of behavior that deviate from the accepted norm.

- Etiology is a set of causes of a disease or condition

- One disorder is MDD (Major Depressive Disorder), which is an affective disorder as its symptoms represent a change in a patient's moods. Its DSM-5 symptoms are currently 9: depressed mood, diminished interest/pleasure in daily activities, significant weight change (loss/gain of 5% of body mass in a month), insomnia or hypersomnia, psychomotor agitation or retardation (movement activity too fast/slow), fatigue, feelings of worthlessness/guilt, diminished ability to think or concentrate, and recurrent suicidal thoughts.

Sociocultural etiology of MDD: Sociocultural explanations for depression focus on environmental factors that may increase an individual's susceptibility to depression.

- Brown and Harris (1978) outlined a model of vulnerability factors that may increase the risk of developing depression: having three or more children, lack of an intimate relationship, lack of employment and loss of mother. These claims were supported in other independent research studies, with the overall conclusion that social factors are involved in the development of depression along with personal factors.

Apart from identifying social vulnerability factors, researchers also investigate how depression may be affected by the structure of an individual's social network. The major finding in this area is that symptoms of depression may spread from person to person, affecting people up to three degrees of separation away.

Although culture probably cannot cause depression and in this sense is not a factor of depression etiology, cultural variables certainly play an important moderating role both in development and expression of depressive symptoms. For example, depression in certain traditional societies is stigmatized, which may cause people to misinterpret their symptoms and either fail to report them (reporting bias) or report them as symptoms of physical illness (somatization)

Kivela et al (1996)

A - To investigate (in a longitudinal study) the extent to which various social factors predict occurrence of depression in an elderly Finnish population.

S - 1,529 participants aged 61 or older all from Finland

M - Longitudinal study; quasi-experimental comparison of two groups. A clinical study of depression in old age was completed in 1984–85. Those participants who were not depressed in 1984–85 were clinically interviewed and examined again in a follow-up study in 1989–90. Social variables and the occurrence of certain life events in the period 1984–89 were measured through questionnaires. Two groups were compared: depressed versus nondepressed in 1989–90.

R - In 1989–90, 8.2% of the men and 9.3% of the women in the sample were diagnosed with depression. Comparison with non-depressed men revealed the most powerful predictors of depression in men: poor relationship with the spouse; a negative change in the relationship with the spouse and with the neighbours; the loss of mother while under 20 years of age; a grandchild's divorce; moving into institutional care; an alcohol problem of a close person. The most powerful predictors of depression in women were: the loss of father while under 20 years of age; low activity in religious events; worsening of relationships with neighbours; a decline in the social participation rate; an alcohol problem of a close person; living with one's husband but without other people.

Conclusion - Social factors and changes in social ties may predict the onset of depression at old age. There are certain sex differences in the social factors of depression in old age, probably associated with differences in experiencing marital stress.

Rosenquist et al (2011)

A - To investigate if depressive symptoms can spread from person to person

S - 12,067 participants

M - Statistical analysis of social networks, longitudinal data. Data was taken from an earlier Framingham Heart Study, a longitudinal study of risk factors for heart disease initiated in 1948. To keep track of participants, the researchers collected information that would help them locate participants later: names of their friends, neighbours, co-workers and relatives. Since Framingham was a small town, many of these nominated contacts also participated in the study. A questionnaire for measuring depression was administered three times between 1983 and 2001 to one of the cohorts in this longitudinal study. Rosenquist, Fowler and Christakis (2011) computerized all data, with a focus on levels of depression in each individual as well as friends, relatives, neighbours and co-workers. Data was analysed using statistical methods of social network analysis.

R - There was a significant correlation in depressive symptoms between people up to three degrees of separation away. Participants were:

- 93% more likely to be depressed if a person they were directly connected to (such as a friend) was depressed
- 43% more likely to be depressed if a person within two degrees of separation (such as a friend's friend) was depressed
- 37% more likely to be depressed if a person within three degrees of separation (such as a friend's friend's friend) was depressed. Changes in social ties (for example, acquiring new friends) predicted changes in depressive symptoms, but not vice versa.

Conclusion - Depression in one person may cause depression in people the individual is socially connected to (friends, relatives, coworkers). In this sense, symptoms of depression may spread along the network of social connections somewhat like an infectious disease.

## **Discuss one explanation for one disorder.**

Use bio, cog, or sociocultural explanation

## **Discuss prevalence rates of disorders.**

Abnormal psychology is a study of patterns of behavior that deviate from the accepted norm. The parameters used to characterize the spread of disorder are prevalence rates (the percentage of the population that have a specific disorder) and onset age (the average age when individuals in a given population first develop the disorder). Two types of prevalence rates are used:

- Point prevalence of a disorder—the proportion of people in a given population currently diagnosed with the disorder
  - Period prevalence—the proportion of people in a given population who have the disorder within a given time interval; typically used periods are 12-month prevalence, lifetime prevalence
- Major depressive disorder (MDD) has high prevalence rates. The World Health Organization (WHO) forecasts depression to be the second leading cause of disability in the world (currently the fourth)
- This essay will focus on prevalence rates of MDD as an example. Major Depressive Disorder is an affective disorder as its symptoms represent a change in a patient's moods. Its DSM-5 symptoms are currently 9: depressed mood, diminished interest/pleasure in daily activities, significant weight change (loss/gain of 5% of body mass in a month), insomnia or hypersomnia, psychomotor agitation or retardation (movement activity too fast/slow), fatigue, feelings of worthlessness/guilt, diminished ability to think or concentrate, and recurrent suicidal thoughts.
- Bereavement exclusion—a condition that existed in DSM-IV, Diagnostic and Statistical Manual created by the American Psychiatric Association, which is used by clinicians to arrive at a diagnosis by matching the individual's behavior with the symptoms that define particular disorders, and stated that depression cannot be diagnosed if the symptoms occur less than two weeks after a significant loss, such as the death of a close person (this condition was removed in DSM-5). Implication of this in prevalence rates is something to note.

Kessler and Bromet (2013)

A - To compare the prevalence of depression across cultures.

M - Review of publications containing epidemiological data (epidemiological surveys).

R - MDD is a commonly occurring disorder in all countries where epidemiological surveys were carried out. Lifetime prevalence estimates for MDD ranged widely from 1% (Czech Republic) to 16.9% (USA). The 12-month prevalence estimates ranged from 0.3% (Czech Republic) to 10% (USA). The age of onset, on the other hand, does not vary substantially. For example, the median age of onset is similar in high income and low-middle income countries (25.7 versus 24

years, respectively). Sociodemographic correlates of depression are also fairly consistent across cultures. For example, women's risk for developing MDD is typically twice that of men. Conclusion - Prevalence rates of MDD vary considerably across cultures. This may be due to a variety of factors including the classification system in use, the survey used to establish the symptoms, representativeness of samples used in research, as well as true prevalence. The highest prevalence estimates are found in some of the wealthiest countries in the world. The authors suggest that this may be due to income inequality, but this requires further exploration.

Furnham and Malik (1994)

A - To investigate cross-cultural beliefs about depression.

Background Statistically British Asians (immigrants from Bangladesh, India and Pakistan) are rarely diagnosed with depression. One possible explanation is that British Asians have depression but fail to report it (reporting bias).

P - 152 female subjects in two age groups: young (aged 17–28) and middle-aged (35–62). Half of the participants were Native British, the other half were of Asian origin (born and educated in India, Pakistan or Bangladesh).

Method and procedure - This was a quasi-experiment. Participants filled out questionnaires about their symptoms of mental illness and their beliefs about depression. Responses were compared across groups.

R - Perception of depression differed among Asian and British participants. For example, Asian participants (but not British participants) believed depression is temporary and can be fixed by having a job outside the home. These differences were less pronounced in the group of younger women. Asian middle-aged women reported being depressed significantly less than the younger group.

Conclusion - Cultural differences exist in the way depression is perceived. These differences may be attributed to underlying cultural dimensions (such as individualism versus collectivism). These cultural differences influence the rates at which disorders are reported: people from traditional collectivistic societies tend to report depression more to relatives and less to professionals. Globalization gradually erases these cultural differences, with younger generations having less reporting bias.

Cooper (1972)

Asked American and British psychiatrists to diagnose patients by watching a number of videotaped clinical interviews. Found that schizophrenia was diagnosed twice as often in the USA than in Britain, and the reverse was true for depression. Used DSM-II diagnostic criteria. When study was replicated later using DSM-III, differences disappeared. In DSM-II schizophrenia was diagnosed both for acute and chronic manifestations of the disorder, whereas in DSM-III this was narrowed down to chronic symptoms only, more like British approach.

Results of study have nothing to do with cross-cultural differences. Study of diagnostic criteria and how changeable they are.

It is important to understand that true prevalence of depression (and mental disorders in general) may be obscured by a variety of factors. In epidemiological surveys we only arrive at estimates, and these estimates may be affected by the following.

- Classification system—there is no diagnosis independent of the classification system, and any changes in the diagnostic manual will be reflected in estimates of the prevalence of disorders. For example, in DSM-5 the bereavement exclusion for depression was removed, making the diagnosis more inclusive and potentially increasing the frequency of diagnosing people with depression.
- Reporting bias—for example, some populations may fail to report symptoms of depression because mental illness is stigmatized in their society.
- Cultural variations in the expression of symptoms— even if people do report their symptoms, they may present them differently in the clinical situation, which (depending on the training of the psychiatrist) may lead to bias in diagnosis.

- access to subgroups or people who might not otherwise allow themselves to be interviewed.
- Stratified sampling: When you decide the essential characteristics the sample has to reflect and then study the distribution of these characteristics in the target population. You recruit your participants in a way that keeps the same proportions in the sample as is observed