Chapter 3: The Nature and Nurture of Behavior

I) **Introduction (notes only)**

- What makes you, you?
  - Is it nature that determines who we are or is it nurture?
- Nature: genes, genetic, DNA whatever we inherit.
- Nurture: is everything else that is not genetic.
  - Another word for nurture is environment.
- Both nature and nurture determine who we are today. There is an interaction that takes place. Nature can put limits on nurture while nurture can influence nature.
- Example: two identical twin brothers inherited the gene for prostate cancer, one of them develops the cancer and dies while the other one did not even develop cancer. This is because the environment can turn the gene on or off.

II) **Nature**

a) Genes: Our Biological Blueprint (notes)

- Our bodies are made up of trillions of cells and every cell except the egg and sperm we have 46 chromosomes. The chromosomes are the carriers of the genetic information and carry it in the form of DNA molecules.
- DNA is composed of thousands of genes. Therefore genes are a segment of DNA and are the basic unit of heredity. They provide the instruction that give an organism its structure.
- Sometimes one single gene is responsible for one trait or characteristic, usually a number of genes work together to produce a trait when this occurs we talk about the gene complex.
- Genes are made up of nucleotides. They are basic biochemical building blocks. There are 4 different nucleotides. Nucleotides are known as the alphabet of life. They always come in pairs. It is the sequence of nucleotide determines what a gene does, one change in nucleotide can change what a gene does.
- Chromosomes = books ➔ Genes = words ➔ Nucleotides = letters
- The human genome has been mapped and there are around 30,000 genes. Our DNA is 99.99% similar to other human beings.

- Repartition of the 0.01% difference:
  - 5% of the difference among "races"
  - 93% differences within a "race"
- Nature Genetics (2004) biologically race does not exist. Race is a social concept. Standard concepts of race ought to be abandoned.
- We share about 95-98% genetic sequence with them. A mouse 89-92% is similar to our DNA. We share 50% of our DNA with a banana. 44% similar to fruit flies. 30% with daisies.

b) Evolutionary Psychology (notes + Obj. 14 in Learning Outcome)

B1) What is evolutionary psychology?

- It is the newest field in psychology they have been influenced by the theory of evolution by Darwin.
- The main goal is to survive and transmit the genes to the future. Not every organism that is born survives.
  - This is because only the fittest survive.
- Any behavior that helps our ancestor survive will be a behavior, emotion, trait we will see human beings display today.
- Evolutionary psychology explains what is universal and common among human beings.
- Our adaptive ability helped us survive.

B2) Application ➔ Sexuality

- Past surveys indicate that men tend to think more about sex, masturbate more and men tend to make more sacrifices to have sex, they tend to have more sex. They tend to think little gestures mean signs from the women.
- Clark & Hatfield: hired average looking secretary and got them to go to campus and ask random people to have sex. The women said no while the men said yes.
- Men are not more sexual than women. Men and women have different attitudes about sex and that translates into different attitudes.

- Why are men more into recreational sex while women are into relational sex? According to evolution psychology men and women have the same goal which is survival and transmission of their genes in the future. However they follow different strategy in order to ensure this.
- Women wait until they go into relationship to have sex because it will make sure that the partner will help support them. If men want to ensure their transmission of genes into future they sleep around and try to fertilize as many women as they can.

B3) Critique of EP

- Earn a Point
- If men are into recreational sex and women are into relational sex who are they recreating with.
- There is evidence that female ancestors were into recreational sex and had multiple partners.
- There are at least 18 societies out in the world where the female have multiple partners.
- Women with multiple partner is less likely to miscarry than a women with a single partner. 80% of the children of the women with multiple partner survive until 15 while only 64%.

c) <u>Behaviour Genetics</u>

C1) Introduction (notes)

- What is it? Researchers in this field believe that who we are is based on nature and nurture. They do research to find the role of gene in human behavior. Their focus is on individual differences.
- They do research to determine the extent to which differences between individual are due to genetics.
  - Are we same height? Do we have same level of kindness?
- How? They do a number of different studies.

C2) Twin studies (notes)

- Monozygotic vs Dizygotic twins

- Identical twins: one sperm and one egg. The one egg separates into two and a result is two babies who are 100% genetically similar and same sex.
- Fraternal twins: two different eggs and two different egg. The babies are either same sex or opposite sex. They are only 50% genetically similar.
- Rationale: if a trait, behavior or disease has a genetic component to it then identical twins should be more similar on that trait than fraternal twins who are only 50% genetically similar to one another.
- Results: If one identical twin develops Alzheimer's disease there is a 60% chance the other twin will. On the other hand only 30% chance that fraternal twin will. Nurture also plays a role in this disease.
- Odds that if one twin divorces then the odds that the identical twin divorces is 5.5 while fraternal twin divorces is only 1.6. There is no direct link but the genetic component is due to the personality.
- Genetic component to extraversion and neuroticism.
- Criticism: they are always exposed to similar environment therefore they must have similar traits and must be due to the environment.
- Solution: study twins who are reared apart. Done by Bouchard et al. and their result parallel to the earlier results.
    - Criticism: they did share the same womb but they were also in the same level of household and they look the same.
- Conclusion: identical twins reared apart are more similar to each other than fraternal twins reared apart.
- Identical twins reared together are more similar than identical twins reared apart.

C3) Adoption study. (notes)

- Rationale: Adopted children have two sets of parents; they share their genes with one and environment with other.

- If there is a genetic component to the trait they share it with their biological parents. On the other hand if the trait does not have any genetical component to it their trait should be similar to adopted parents.
- Results: for personality adopted children are more similar to their biological parents.

C4) Family Studies (notes)

- Rationale: if there is a genetic component to it then blood relatives should be more similar than strangers.
- Close blood relatives should be more similar than distant blood relatives.
- Regular siblings: 50% DNA
- Parents and children: 50%
- Grandparents and grandchildren: 25%
- Cousins: 12.5%
- 2^{nd} Cousin: 3.215%

C5) Temperament studies (notes)

- Temperament: the typical way we react emotionally to life and its events. And the typical intensity to life and its events.
- Babies come to the world with a temperament.
- Some researchers divide temperament into 4 categories.
    - Easy babies (40%): babies who are in a good mood, cheerful, calm and relaxed. They have predictable patterns to sleeping, eating etc.
    - Slow-to-warm babies (15%): babies who are very shy and are uncomfortable to new situations.
    - Difficult babies (10%): babies who cry, are always upset and unhappy. They have a regular pattern of sleeping, eating etc.
    - Combination babies (35%): babies who have different characteristics at different times.
- There seems to be a genetic component to temperament. Twin studies show that identical twins

are more similar in their temperament than fraternal twins. Physiological studies indicate that difficult babies have a higher level of arousal in their body.

- Temperament seems to endure. Caspi did a study in New Zealand and studied 900 children. When the children were 3 years old they were observed and 18 years later they had the same characteristics.
- Nurture makes a difference too. If you have babies who are shy and difficult but parenting can make a difference.

C6) Heritability (notes + book)

- Central concept. Behavior geneticists study heritability. The degree to which the differences in individuals have a genetic component to them.
- Heritability is quantified. h2 = heritability coefficient

$$h^2 = \frac{Variance_{genes}}{Variance_{genes} + Variance_{environment}}$$

- h2 varies between 0 and 1. If h2 is 0 ➔ no genetic influence. If h2 1 ➔ all variance due to genetic influence. If it is 0.4 then 40% genes and 60% environment.
- When environment is similar h2 will be high.
- When environment is different h2 will be low.
- Heritability is not about individuals, one's own trait, groups. It is about individual differences, differences within a group etc.

C7) Nature and Nurture interaction (notes + book)

- Just because we inherited a gene that gene is not necessarily going to express themselves. Sometimes genes need the environment to turn them on/off.
- Disease causing genes can be turned off if you can follow a certain diet (nurture). Healthy genes can also be turned on.

d) Molecular Genetics (notes)

- What is it?

        - They want to find out if genes play a role in human behavior and which genes do this.
    - How do they do it?
        - They study the genes and the DNA. They study where there is similarity and differences in the genes. This way they can pinpoint which genes are responsible.
    - Relevance to psychology?
        - There are people who have psychological disorders, we need to find out if there is a genetic component to it.
    - Promises and Dangers
        - Promises: When you can identify a gene that is responsible for a disease it can help us develop a gene therapy and help prevent it. We can do prevention and gene therapy.
        - Dangers: When we map individual DNA the parents can start to abort the babies that they don't like. For example baby girls are aborted. It can be used against you.

III) The nurture component

a) Prenatal Development (notes)

- Nurture begins in the womb.
- The baby is not 100% protected in the womb, it is vulnerable. (Radiation, alcohol, diet etc.)
- Even though twins are in the same environment at the same time it may be different for each twin. One might be getting a better blood supply, protection, oxygen.
- Some identical twins might have the same placenta or different placenta. The ones that share the same placenta are more similar to each other on psychological variables than different placental twins.

b) Experience and Brain Development (notes)

B1) Experience facilitates brain development

- Experience is essential, crucial in order for the brain to develop properly, no matter how healthy the brain is at birth.

- Experiences such as vision, touch, hearing etc. We need experience for proper perceptual activity. It would be hard to perceive depth, shapes if eyes aren't used for a long time.

B2) Experience Changes the Brain

- Researchers believed that once the human brain reached maturity it stops growing until old age when it starts to deteriorates or to diseases.
- The brain with proper stimulation will continue to change.
- The old rich and poor rats. The researchers got '70 yr' old rats and divided them randomly in two groups. One group was given toys and other rats, while the old poor rats were isolated and had nothing. By the time they turned '90' they sacrificed them and looked at their brain. The rich rats' brains were heavier and thicker than the poor rats. The cell bodies and dendrites were more prominent. We will have 40% more brain connections by the end of 4 yr of college.
- If you learn something new for a period of time then that area of your brain will be larger.

c) How much credit or blame do parents deserve?

- Read in textbook.

d) Peer influence (notes)

- Individuals who are either of the same age or same level of maturity.
- Peers are super important and it can be traced back to infancy. How infants interact with each other determines how they will interact later on. As we grow older we spent more time with peers.
- Growing interaction = growing influence
- Peers influence how we dress, food, music we like.
- Peers and risk taking behaviors. Is it peers who are influencing us or is it selection effect? It is both
- Does this mean that parents have no effect? Parents are still important.

        - Parents influence us because of the choices they make of where we live, what school we go to.
        - Quality of the parent-child relationship influences and effects the child-peer relationship. Boys who bully come from family that are abusive, dominant etc. Boys who get bullied come from parents who are over protective etc.
    - Influence of parents and peers is distinct and complementary.

e) Culture

- Earn a point (119-123)

IV) The nature and nurture of Gender (notes + book)

- Gender similarities and differences (not in first midterm but its on final exam)
- The sex chromosomes: X, Y; one from mom and one from dad.
    - XX – female
    - XY – male
- X chromosome can sustain life on its own while the Y cannot. Most spontaneous miscarriages occur for male fetus.
- First few weeks of life (6-7 conception)
    - If a women has a miscarriage. You cannot tell if it was a boy or a girl.
- After 7 weeks there is a single gene on the Y chromosome called SRY. This causes the formation of testes and testosterone. It starts the formation of male organs.
- Hormones are important for behaviors.
    - Animal studies: when a female sheep has more testosterone in her body she turns into a boy. She becomes aggressive, dominant and likes to have sex with females.
    - Female embryos were injected with male hormone and that caused them to be male like.
    - It is unethical to do it on humans. There are cases in the world where some fetus has higher level of testosterone. They tend to be tom-boyish and their spacial abilities are like men.

    - In some cases the testosterone responding do not respond so they do not develop the male genitalia and they are more like women.
- The role of culture and society.
    - Boys and girl are treated differently
- Gender Identity
    - A strong psychological sense of being either a male or female.
- Gender roles
    - Behavioral patterns that are appropriate for each gender. Set of expectations of how a man or a women should behave.
    - It not only differs from cultures it even varies within a culture.
- Gender-typed
    - When we adopt a traditional masculine or a traditional feminine role.
    - Example: a man who is a stay home dad is not gender-typed.
- Learning about gender
    - Social learning theory
        - We learn about gender from other role models, imitate other people, observation and reward and punishment.
    - Gender schema theory
        - Accepts the idea of the social learning theory. But they say that kids aren't simply passively learning, they are active learners.
        - The kids are actively forming schemes, a mental model or representation and they become the rules by which they live their lives.

V) Reflections (book briefly)

Chapter 4: The developing person

I) Introduction (notes + book)

- A field in psychology called developmental psychology. Researchers in this field of psychology study how we change over time: psychically, emotionally, cognitively, socially.
- Development: patterns of behavior that being at the moment of conception, and continue throughout the lifespan.
- Development includes growth but also decay, deterioration and death.
- The 4 major issues of developmental psychology:
    - Nature/Nurture
    - Continuity/Stages
    - Stability/Change
        - If you developed certain traits in childhood will you see this trait in adults? Or do the traits change as we get older.
    - The impact of early experience
        - How early experience influences and affects you later on in life.

II) Prenatal development and newborn (notes)

A. Conception

- Conception takes place when a healthy women releases egg and engages in sexual intercourse with a healthy men without any contraceptive method. Due to this the 200million sperm want to get to the egg, the few sperm that arrive and release enzyme only 1 get in while the others die off. Within half a day they fuse together and we get a zygote.
- Only 1/5000 egg matures per month. There are over 200,000,000sperm. Fewer than half of fertilized eggs survive beyond the first two weeks.

B. Prenatal development

B1) The three stages of prenatal development

- Gestation period: moment of conception until the moment of birth
    - The zygote multiplies from one individual cell to multiple cells, in a week it is about 100 cells. At this time the cells begin to differentiate in structure and function. The zygote beings its

journey to attach itself to the uterus wall and almost half die.
        - After the zygote attaches itself to the uterine wall it is no longer called zygote, its called an embryo.
    - Embryonic stage (3-8week)
        - The placenta starts to form at this stage, the organ that provides the baby with oxygen, nutrients and protection against viruses etc. it also cleans up after the baby.
        - The spinal cord begins to develop, the organs begin to form as well as the arms and legs. The heart starts to beat at this time.
    - Fetal stage (9^{th} until birth)
        - Everything begins to develop, bones begin to harden and it begins to move. There is an explosive growth of the brain at this age.
        - There is a point in this stage when brain is making 250,000 neurons per minute.
        - Babies start to 'learn' in the womb.

B2) Environmental influences

- Thousands of baby are born with defects this is because they are not properly protected.
- Teratology: field of research where the researchers study the causes of birth defects.
- Teratogens: any agent that could harm a baby in the womb and cause it to have mental or physical disability.
- Effects depend on:
    - Dose: how much exposure did the baby have to the teratogens.
    - Time of exposure: at what point did it get exposed to the teratogen. Because organs develop at different times. If exposed while developing then the structures might not develop properly, but if after they are developed then not much effect.

        - Genetic susceptibility: some babies are more vulnerable to one teratogen than another due to certain genes.
- Maternal factors
    - Prescription and non-prescription drugs are a major source of birth defects.
    - Psychoactive drugs they even include caffeine.
        - Women who smoke during pregnancy have a higher rate of fetal death.
        - Mothers who drink alcohol during pregnancy can cause FAS and cause mental retardation.
    - Infectious disease (HIV, Herpes)
        - The HIV virus can cross the placenta and the baby might get it. If the mother is breast feeding the babies can get the HIV as well. There is blood when the baby is delivered and this causes the HIV to transfer.
        - 1/3 of the babies delivered vaginally from the women with herpes die and 25% have mental retardation.
    - Nutrition: the better the diet the healthy the baby and vice versa.
    - Emotional states and stress: stress response in the mom can cause the baby to die or give birth to premature baby.
    - Age: mom's age plays an important role, more of teenage moms babies die while women over 40 can give birth to babies with down syndrome.
    - Temperature
    - Environmental hazard: pesticides, chemicals around you etc. Minimata disease in Japan during 1950, there was a river in which industries dumped chemicals and caused babies to have defect.
- Paternal factors:

        - Low vitamin C: high probability of birth defects and diseases for offspring later on such as cancer.
        - Smoking: lower birth date, birth defects and cancer.
        - Exposure to radiation, pesticides etc.
        - Age: the older they get the more defects and the IQ of the child will be lower.

C. Competent Newborn
    - Researchers believed that infants just ate and slept.
    - Methods of study:
        - Brain waves: study how their brain is functioning.
        - Sucking response: researchers got mothers to read Cat in the hat before the babies were born. After they were born they were given pacifiers. One group was only given the story if they sucked fast while others got it if they sucked slow. They figured it out only 4 days after they were born.
        - Orienting reflex: We have the tendency from the moment of birth to pay attention to anything new. We turn out attention to novel stimuli.
        - Habituation: when a stimulus is presented time and time again we tune it out and pay little attention to it.
        - Slater et. al: 7 hours old babies were shown a stimulus. After a while they started paying less attention. But when they were shown a similar stimuli they paid more attention to it.
    - Competencies:
        - Reflexes: we are born with certain reflexes and do not need to learn them. All members of a particular species learn them the same way.
            - Rooting: when you touch a baby they turn towards you and start opening and closing their mouth. Helps them find mom's nipple.
            - Sucking: they already know how to suck.
        - Sights and sounds: anything linked to humans they pay more attention to.

        - Smell: babies recognize their mom's smell and they prefer it to other people's.

III) Infancy and Childhood

A. Physical Development (notes)
    - Maturation: a genetically determined process where the genes determine when and the sequence of development.
    - This occurs to all babies all over the world.
    - Maturation and memory:
        - Childhood amnesia: we are not going to remember much of anything before 3.5-4 yr old. We start to have conscious memory after this age. They do have memory but it doesn't go into long term memory.
        - Evidence of memory during infancy.
        - Evidence of memory following
    - Motor development
        - Study on your own.
    - Brain development: by the time we come to the world we have billions of neurons. It is still immature and has a long way to go before being mature (25). There are period of growth spurts in the brain.
        - As the brain is maturing and developing we go through pruning. It gets rid of synapses that are not useful. The other synapses that are useful the brain strengthens it.

B. Cognitive Development (notes + book)
    - Cognition: higher order mental processes that we use to understand the world, survive and adapt to the world. Example would be thinking, reasoning, problem solving, memory, perception etc.
    - Jean Piaget: he was not a psychologist he was a biologist. By the time he was 10 he published his first paper and got his PhD when he was 21. He took a year off to study how children think he ended up studying that for 50 years.
    - Before Piaget everyone thought that children were little people, their minds worked the same way as adults except had less information. Piaget said that children's minds function differently than the adults. Children have their

own logic, ideas and interpret the world completely differently.

- Before Piaget adults thought that children were like sponges and learnt passively, but he said that children are active learners; they put their own ideas and logic to explain and interpret what is happening.
- As the children are actively learning they are organizing it into schema. A mental model or a mental representation.
    - Assimilation: When a new experience or a new idea fits right into an existing scheme.
        - Mom's breast = food because sucking is food. Mom gives him a bottle he sucks.
    - Accommodation: this is when the child has to revise his schema, change and modify it to fit in the new information.
        - When a cup is given though he sucks but doesn't get anything so he sips instead.
- Cognitive development occurs in four stages, they are universal and you cannot skip a stage. With every stage there is a qualitative change of the child.
    - Sensorimotor Stage (0-2yr)
        - Children use their senses and motor skills in order to get to know the world. They put things in their mouth or pull things, push things to explore.
        - Children are incapable of abstract thoughts. To know what the child is thinking look at what the child is doing. Thoughts and overt physical action are one and the same.
        - Major achievement: object permanence: the ability to understand that an object continues to exist even if it is no longer visible.
        - Was Piaget correct? He was correct that we have period when we have no object permanence but he was not correct about when it happens. He completely underestimated the fact that they have no abstract thoughts. They have a head of

numbers and basic understanding of laws of physics.
        - They know two physical objects do not go through each other and that things can't be suspended in air.
- Preoperational Stage(2-7yrs)
    - Animism: they believe that inanimate objects move and have feelings.
    - Symbolism: symbolic thinking emerges, they use words and images to convey their experiences. They can take a pot and spoon to represent a drum.
    - Their thinking is literal.
    - Egocentrism: the child is incapable of understanding that there is another perspective than their own. They think that everybody else is thinking the same thing and feeling the same thing as they are.
        - A baby in front of tv would not think that he is blocking the view he thinks everyone sees the world with their eyes.
    - Major limitations:
        - Unable to perform mental operations. Operation is an action that you can reverse. (3+1=4 but they do not know what 1+3 is)
        - Centration: you focus on one aspect and disregard other aspects.
        - Conservation: they do not understand that an object remains the same even though its superficial qualities have been changed. (Mom with long hair cuts it and dyes it the child does not realize it is still mom)
    - Theory of Mind, Autism: Earn a point
- Concrete Operational stage(7-12yrs)
    - Can perform concrete mental operations.

        - No long fall prey to centration and they understand conservation.
    - Formal Operational stage(12+ yrs)
        - According to Piaget thinking becomes complex, abstract, hypothetical, logical.
        - Research indicated that we are not sophisticated thinkers
- Reflection of Piaget's Theory: make two columns for Piaget being right and wrong.

C. Social Development

C1) Attachment (notes + book)

- Without water, oxygen we die. As we have physiological needs we also have psychological needs that must be met. The need to be nurtured, valued, loved, accepted etc.
- German King wanted to know what language the child would speak on their own. All of them died to lack of human contact.
- Attachment: strong, powerful and enduring emotional bond between the child and the caregiver or between two individuals. We become distressed and miserable when away from them.
- Infants form attachments to caregivers. They start showing stranger and separation anxiety.
- Attachment has survival value because children form attachments to their parents. If we are not attached to babies they might die.
- Factors that facilitate attachment:
    - Body Contact: researchers believed that babies formed attachment to moms because they fed them. Attachment exists in its own right. Harlow was doing something and put baby monkeys into isolation and gave them blankets. Baby monkeys became attached to the blankets and when they were taken away they became distressed.
        - Babies were taken away from their mom and were given two artificial mothers. One was wired and other was a cloth mother. The wired mother was given the food because they

preferred the cloth one usually. He wanted to see if attachment was because of food, but they did not attach to the wire mother. Attachment has nothing to do with food.

- Attachment serves as a safe haven. Your children should love you not afraid of you.
- Familiarity: there has to be contact and familiarity to happen. As long as there is contact attachment will form even though the parent is abusive, loving or nurturing. The quality is different.
- Responsiveness: Good parents are responsible, there is a good fit between what the child needs and what the parent is giving the child. If parent is loving then the attachment will be secure, but if the parents are abusive and mean the attachment is insecure.
- Secure attachment is associated with positive outcomes while insecure with negative outcomes.
- Secure kids are more confident, get higher grades, better relationship with peers, more imaginative play, more energetic, more happy, less likely to develop emotional problem.
- Is it parenting style or is it temperament?
    - Van Den Boom: recruited 100 difficult babies. Mom who have no attachment to the babies withdraw, he sent half to parenting school while others did what they did. 68% of difficult babies whose mom went to school were securely attached while only 28% from the other group.
- Deprivation of attachment: earn a point

C2) Self-Concept: sense of who we are, sense of self, sense of our value and worth. Self-concept can be positive or negative. (notes)

- Self-concept influences the actions, behaviors, choices. College students with a self-concepts ended up dumping up their room mates who treated them well for ones who treated them poorly.
- How can we build a positive or negative self-concept? Parenting styles are associated with self-concepts.
- The Warmth dimension: how encouraging, nurturing and responsive parent is vs. how abusive, shaming and rejecting.
- The extent to which parents control, supervise their kids.
- Parenting style:
    - Authoritarian: high in control and low in warmth. They have strict rule and regulations that they enforce in dictatorial fashion. My way or the highway. They are low in warmth
    - Permissive: they are low in control but high in warmth. They have no rules to speak of, even if they have one its inconsistent.
    - Authoritative: high in control and high in warmth. These parents are encouraging, supportive, responsive they treat their kids with warmth and respect. They have rules that they enforce by explaining the child instead of abusing them. The children have consequences of breaking the rules but they are inline to the crime. They are open to negotiation of the rules.
    - Uninvolved: these are the parents who are low on both warmth and control. These parents do not give attention, encourage, neglect. They have no relation with their child.
    - The authoritative parenting style is the only one linked and associated with positive outcome. The others are linked to more negative outcome.
    - These are co-relational studies therefore we cannot draw cause and effect relationships. We have experimental research that concludes the relationship between parenting style and outcomes for children.

IV) Adolescence

A. Introduction (notes)
   - It is the period of time between childhood and adulthood. It begins with puberty. It ends with the person achieving adult self.
   - The period of adolescence is longer than ever before. Why?
     - Earlier puberty, puberty for girls before was around 17 while now its 12.5.
     - We spend more time in school these days, its taking us longer to achieve independent adult self.
   - Correlates of earlier puberty
     - We have much better nutrition than before, we also have better health care.
     - We have hormones in our food, these hormones are going into our body and causing earlier puberty. In Mexico where there is no limit to hormones put in food, there are 6 yr girls with breasts.
     - Absence of biological father from home is linked with earlier puberty for both girls and boys.
     - Obese people have earlier puberty, lazy people also have early puberty.
     - We know that there is a connection between problems between family and earlier puberty.
     - Unrelated male also causes earlier puberty.
   - Time of strife or vitality?
     - Vitality, it is a period of good time.

B. Physical Development (notes)
   - Puberty: changes our bodies undergo which lead to reproductive capacity.
     - Development of primary sexual characteristics. Organs that are directly involved in sexual reproduction.
     - Secondary sexual characteristics that signal sexual maturity such as body hair, deep voice, curves in girls.
   - Landmarks of puberty
     - Spermarche: first time ejaculation in boys.
     - Menarche: first menstrual period in girls.

- Early maturation:
  - Boys who enter puberty earlier than their peers are more confident, popular and their parents give them more freedom etc. Boys who enter early puberty are prone to higher risk at substance abuse.
  - In girls it is linked with negative outcomes. Parents start to control them more, their bodies are like women but their mind is of a little girl so they are outcast. These girls have negative ideas about menstrual, more likely to get pregnant. They are paid more attention by older boys.
- The adolescent brain:
  - Right before puberty there is a spurt of growth that takes place in your brain, sometime after adolescence pruning takes place. After the unused connections are gotten rid of the brain strengthens the existing connections.
  - It starts from the back and works its way to the front.
  - The frontal lobe has not finished maturing, they are the centre of higher mental functioning. This is the part we use to solve problems, control impulses, personalities etc.

C. <u>Cognitive Development</u>

C1) Developing Reasoning power (notes)

- Piaget's Formal operational stage.
- Imaginary audience: teenagers tend to go around believing they are the centre of other people's attention. They do not seem to realize that other people are wrapped up in their own problems. This is why the teenagers are more self-conscious.
- Personal fable: there are two components to this. It is believed that somehow their experiences are unique, and no one has experienced that before. They tend to engage in risky activities, they believe they are indestructible, immortal and nothing can hurt them.

- Idealism: they become very idealistic. It is not based on what human beings are doing on everyday life. It is based on what is logically possible.

C2) Developing Morality (notes + book)

- Importance: we need morality for the society to be civilized.
- Three aspects of morality:
    1. Moral thinking
        - The type of thinking we engage in when we are pondering of issues of right and wrong.
        - Kohlberg is to moral reasoning what Piaget was to cognitive development.
        - Kohlberg developed short stories and they had moral delima in them. They gave them to children and adult and asked them if the person made the right decision. He did not care if people said right or wrong but how their answered was justified.
        - Kohlberg's model: 3 levels
            - Preconventional level: what guides moral thinking and reasoning is pure beneficial. If there is punishment its bad, but if its not then its good. Exchange favors.
            - Conventional: the law becomes very important. We follow it because it keeps the society in line. Anything that the law states is good is good, and vice versa. We abide with the values of family and culture.
            - Postconventional: what guides morals are personal values that are based on universal ethical principal. Compassion for humanity, you identify with all human beings.

        - Only a small percent of people reach the last stage.
    - Research shows that we start at the first stage and go to the second. According to Kohlberg we climb it as a ladder.
    - Kohlberg was criticized because he only used white males for his research.
2. Moral feeling
    - There is a powerful connection between feelings and morality.
    - J. Haidt: Social Intuitionist: according to him moral feelings come first and they are required for moral reasoning. Moral reasoning is there to give voice to our feelings.
    - Research shows that when emotions are triggered we feel connected and guilty.
3. Moral action
    - There is a gap between moral attitudes and moral action.
    - Holocaust: average Germans were involved.
    - How can we promote moral actions? We have to cover the feeling, thinking and action. We need to bring moral issues to the table and get rid of prejudice. You need to trigger the emotional feeling to get people to work.
    - We need to change our prejudice before blaming others.

D. Social Development (notes + book)

D1) Forming an Identity: according to Erikson the major task is the formation of identity. Table 4.2 in final

- Definition: we refer to beliefs, values, ideal that guides you.
- There are different paths to identity. For some people it is very easy, they adopt the ideals, values of their families and cultures. They adopt their parents expectations.

- For some people it includes soul searching, sometimes they are allude, sometimes socialable, leaders. Ultimately they blend all the identities into one.
- Some people develop negative identity, they reject the values of their families and main stream society. They comply and conform to the values of a group they want to be a part of.
- Some people's identities are confused, it can become a way of being.
- Identity becomes more personalized and more positive.

D2) Separating from parents

- Teenagers do not hate their parents. They do not reject their parents.
- The real "rebellion": they are on disagreement on control issues with their parents.
- Most teenagers admire and respect their parents, 97% reported that they got along fairly or very well with their parents.
- When parents-teenager relations are good, those adolescents have better relationship with their peers, healthy and happy and they do well in school.
- Even though parents are still important, peers become more important over time.

II. V) Adulthood

A. Physical development (notes)

- We physically peak when we are 25 years old, then we decline. But with physical exercise we can stay healthier.
- Two stages:

A1) Middle adulthood

- Women → Menopause: menstruation stops and marks the end of reproductive capacity for women.
- The myth is that menopause is traumatic, depression. The truth is that majority of women report feeling better than before and report renewed vigor and energy. Most of them are happy that they do not have to worry

about periods. 2% are the only one who feel depressed.
- Clinical depression is rare during menopause.
- Men → no "man"-opause
- Gradual decline in production of testosterone, loss of erection, ejaculation.
- In some men there is a sharp decline, this might cause depression but they can get testosterone replacement therapy.
- There is no midlife crisis for man.
- Sex: both men and women will continue to enjoy sex and show interest in it until the end of the day. The only reason they might not is because of the loss of partner, culture etc.
- Over 60, 39% said they were satisfied with their sexual activity, 39% wished they got more. They said that they were having the same amount of enjoyment or even more enjoyment.

A2) Old age

- Fastest growing segment of the population in the west.
- In 1950, life expectancy was 49. Today men is 75, 80 for women. By age 100 female:male ratio is 5:1.
- Sensory ability: there is a decline with age. We need 3 times less light than old people to see something, this is because with age pupils shrink and require more light.
- Smelling, 17 year old can smell really well while the old ones can't.
- Men tend to lose their hearing earlier than women.
- Health: the immune system is experienced because they have been exposed to a variety of viruses throughout.
    - 65 year olds are ½ as likely to get cold compared to 20 year olds.

        - Their immune system is weaker however and therefore strong diseases might kill them.
    - Brain: shrinks with age and the speed of neuro-processing decreases. The brains of men will shrink faster than the brains of women. The frontal lobe starts to decline rapidly even though it develops first.
    - Dementia and Alzheimer's disease
        - Dementia: a group of symptoms that are linked and associated with changes in the brain. These changes lead to changes in personality, behaviors, emotions, intellectual capacity. These changes significantly interfere with the person's ability to carry out their everyday activity.
        - Alzheimer's disease: a form of dementia, it is the most common one. It is not a normal part of aging. It relentlessly and progressively destroys the brain. By the end they lose the sense of self and do not know anything, they are an empty shell. The first neurons to be affected are the acetylcholine producing neurons. It is important with learning and memory.
        - Only 3-5% of the 64-75 olds have it. 50% for over 85 years old.
        - We do not know the causes for Alzheimer disease.
        - We have tangles and plaques in our brain, people with Alzheimer's have an abundant of these than normal old person.
        - There is a genetic component to Alzheimer's. There are people between 30-60 who also develop it, but it is very rate. There is an abnormality on

chromosome 21,14 and 1. Late onset the genes related are 19, 20.

- Other factors are cardiovascular disease, inflammation, free radicals (anti-oxidants help fight it). We age due to free radical damage. Estrogen is very protective of the brain. Some researchers call Alzheimer's disease diabetes 3. People who eat fish, vitamin C and E you reduce your risk by 60%.

B. Cognitive Development (notes + book)

B1) Memory

- The memory declination depends on if it is recall or recognition.
- Recall: we are not given any cues, we have to come up with the definition on our own.
- Recognition: we are given a question and given choices to pick from.
- For recall there is a decline but for recognition there is none or very insignificant. For meaningless information young people do better than the elderly. For meaningful information either the decline is insignificant or the elderly might do better.
- Elderly have problems remember time based task, they will have less of a problem remembering non-time tasks.

B2) Intelligence

- Yes: cross-sectional studies
- Cross-sectional: they give IQ tests to different ages and they compare the results. They found out that intelligence declines, but is it due to intelligence or due to the difference in era.
- No: longitudinal studies
- Longitudinal: they chose a group of people and gave them IQ tests throughout their life. The problem might be that only the healthy ones survive by the time they are old and the weak ones might have died.

- Now: it all depends.
- Crystallized intelligence: it is our store of knowledge. It increases with age well into old age. It does not begin to decline until we are very old.
- Fluid intelligence: type of intelligence that does not have a content, the type of intelligence we use to process information, solve novel problems. We use it to recognize patterns, trends etc.
- Fluid intelligence peaks in young adulthood, it levels off and then starts decreasing.

C. Social development

- Earn a point. 2 questions

III.

Chapter 11: Intelligence

I. What is Intelligence?

A. Definition of Intelligence (notes)

- There are 100's of definition out there and there is no consensus between researchers about them.
- There are certain elements that are considered a part of intelligence by researchers, they are:
  - To act purposefully
  - To think rationally and solve problems
  - To think, cope and adapt to the environment
  - To learn from experience

B. What is the nature of intelligence? Is intelligence 1 single and general ability or do we have multiple intelligence that are independent of each other?

B1) The Factor-Analysis approach (notes + book)

- This is also known as the psychometric approach.
- Factor analysis

A sophisticated statistical procedure = statistical procedure used in order to identify common factors among clusters of test items.

- Spearman: co-creator of factor analysis. Based on research he found that we have two factors.
  - S factor- reasoning ability, mathematical ability. These are not independent of each other, not independent intelligences.
  - G factor- intelligence ability has 1 underlying common factor.
  - According to him people who score high on one ability tend to score high on another ability and vice versa.

Thurstone: refused the notion of G factor. According to him we have multiple intelligences that are independent of each other. When his experiments were revisited it was found that G factor still exists.

B2) Contemporary approaches (note)

1. Gardner: Multiple Intelligences

a. Refuses that intelligence is one general ability, he believes that intelligence are independent of each other.
b. Logic: Different abilities we have as human beings are neurologically separate. For example, when we have a brain damage it only damages certain abilities not all of them. If they were not independent then all abilities would be affected.
c. Savants and prodigies: Savant is a person who is extraordinally brilliant in certain areas but way below average in others. Prodigies is someone who is extraordinally brilliant in some areas but average in others.
d. Different developmental courses: different abilities develop at different times.
e. He proposed we have 9 distinct intelligences:
    i. Linguistics: great with languages
    ii. Logical-mathematical:
    iii. Musical: people who write and sing.
    iv. Bodily-Kinesthetic: people who are great with their body.
    v. Spatial: good at understanding 3-d aspects.
    vi. Interpersonal: people who are smart and leaders.
    vii. Intrapersonal: understanding your self well, motivate yourself.
    viii. Naturalists: good at understanding nature.
    ix. Existential: people who think about life/question it.

2. Sternberg's approach
    a. Analytical intelligence: where we take a problem, break it down analyze it and then find the solution aka book smart.
    b. Creative intelligence: the ability to think outside the box. We see things that other people miss.

c. Practical intelligence: the type that we use when a problem has multiple solutions, the type we use to deal with life and its problems aka Street smart.

3. Emotional Intelligence
    a. Mayer, Salovey and Caruso: first researchers who came up with this idea.
    b. High IQ does not necessarily mean more successful in life.
    c. Knowing your emotions.
    d. Understanding your emotions.
    e. Managing your feelings: does not mean suppressing the emotion. Feeling your feelings however you are not hijacked by them.
    f. Self-motivation: ability to motivate yourself and do something.
    g. Delay of gratification: the ability to say no to a short term goal in favor for a long term goal.
    h. Recognizing other's emotions: empathy and compassion are an important component.
    i. Managing other's emotions

C. <u>Intelligence and Creativity</u>

C1) Creativity and IQ

- A certain level of intelligence is necessary for creativity to take place, however it is not sufficient.
- Up to IQ of 120 there is a positive correlation between IQ and creativity. After 120 the relationship fizzles.

C2) Components of Creativity

- Expertise: those who are creative in their fields are people who know their fields in depth. They know almost everything there is to know.
- Non-conformity: creative people are not afraid of what others think of them.
- Curiosity: creative people are highly curious. They are open to new experiences, they notice when something is off and want to know why.

        - Persistence: creative people are not daunted by challenges. They know when to stop and when to continue.
        - Divergent thinking: you start with one thing and then you come up with multiple ideas.
        - Intrinsic motivation: they do things for the pleasure for doing it.
        - A creative environment: they are surrounded by a creative environment.

II. Assessing Intelligence

A. Origins of intelligence testing: 442-444
B. Modern Tests: 444-445
C. Principles of test construction (notes + book)
    - In order for a test to be scientifically viable, certain rules must be followed.
    - Standardization: before you officially give a test, you must standardize it. You must give it to a representative sample, a population that has same characteristics as the same population you are interested in. You use the results of this sample to develop standards, norms, that you are going you use to interpret future results. Everyone takes the test under uniform conditions, same time, same order etc.
    - Reliable: a test is reliable when it produces consistent results from time to time. It is reliable if you give the test to the same person/group and you get consistent similar results.
        - Test-retest: you give the test at point 1 and then regive the same test at point 2 to same people.
        - Split-half: you give one half at time 1 and then second half at time 2.
    - Validity: is it measuring what it is supposed to be measuring.
        - Content validity: we look at the content of the test and see if the content of the test reflects the domain of the content covered.
        - Predictive validity: a test will have predictive validity when the scores on the test will allow one to predict

how well you are going to perform on another variable in the future.

D. Is intelligence neurologically measurable? (notes + book)

D1) Brain Size

- Gall: German physician, did not have access to brain after access. He noticed that the human brain was more developed than the animal brain. He wondered if differences in intelligence are due to the differences in brain.
- Phrenology: the bumps on our head reflect intellectual capacity and abilities. This theory died out, but the theory that correlation between IQ and brain size still existed.
- There is a weak correlation between size of the brain and the IQ (+0.13). There was a positive correlation between brain volume and IQ (+0.44). They found out that the larger the frontal lobe the higher the IQ. The larger the corpus callusom the higher the IQ.
- They found that highly educated people have higher number of synapses.
- We are born with a lot of neurons at birth but that does not mean that babies are way smarter than us.
- Cole Erodes has half a brain but he is a genius mathematician. He was extremely compassionate and generous.

D2) Brain Function

- Is there a relationship between the speed of information processing and IQ?
- Reaction time: the time it takes you to react to a stimulus.
- People with higher IQ have a faster reaction time than people with lower IQ.
- Perceptual speed: how long do you have to be exposed to a stimulus before you can recognize it. People with higher IQ have faster speed than lower IQ.
- Brain waves: observe to see how a brain responds to a stimulus. People with higher IQ their brains

produce faster brain waves than people with lower IQ.
        - Frontal lobes: there is a higher level of activity in frontal lobe related to fluid intelligence.
        - Glucose consumption: brain consumes 25% of the glucose in our body. The more active the area the more glucose is consumed. People with higher IQ need lower glucose consumption than people with lower IQ. This shows that their brain is more competent.
        - Medical drugs that increase the levels of glutamate or dopamine increases cognitive function.

III. The dynamics of Intelligence
    A. Stability and Change
    B. Extremes of Intelligence
        - Objectives 13 and 14 not included on first midterm but are on final exam.

IV. Genetic and Environmental Influences
    A. Genetic Influences (notes)
        - There is a genetic component to IQ. Identical twins are more similar in IQ than fraternal twins. Also in adoption studies it shows that IQs of the kids are similar to their biological parents.
        - There must be multiple genes related to intelligence.
        - There is a gene on chromosome 6, 1/3 people with high IQ have this gene vs. 1/6 of people with lower IQ.
        - Based on research the heritability of IQ is between 50-75%.
    B. Environmental Influences (notes + book)
        - Breast fed babies have higher IQ than non-breast fed babies.
        - Athletes that do not train at a particular season have higher IQ than when they train.
        - There is a positive correlation between schooling effect, the more school you attend the higher your IQ. During summer vacation our IQ drops and then goes up during school year.
    C. Group differences in intelligence test scores

- Ethnic differences: research does indicate there is a difference between "races". Whites have outscored blacks in the US. (notes + book)
    - Babies: if there is a difference between whites and blacks then the white babies should have a higher IQ but there is no difference in black babies and white babies.
    - Ancestry: There is no difference if you are 100% black vs. 25% black and 75% white.
    - Poor black children do worse on IQ than rich black children. This shows that poor children score less on IQ than richer children.
    - Discrimination: in any culture if you have a dominant group and they discriminate against a minority group, the minority group tends to have a lower IQ.
    - Attitudes: if we believe we can then we can (self-fulfilling prophesy).
    - Since race doesn't exist biologically, therefore it is not due to genetic, its actually environmental factor.
- Gender differences: there are no differences in IQ between men and women. (notes)
    - When we look at subtests we see differences.
    - For Verbal abilities women tend to do better than men. Women do no use more words than men.
    - Men tend to do better in spatial ability than women. We know that there is a correlation between testosterone and spatial ability. Female babies exposed to more testosterone have spatial ability similar to men. Men whose testosterone cells do not function well are poor spatial ability.
    - During menstruation women's verbal ability goes up and spatial ability goes down.
    - When given training in spatial ability women's spatial block goes away.
    - Women are better at emotion-detection ability than men. This is because men's emotions are suppressed from childhood. There is no difference between the type of emotion we feel between men and women.

- Bottom line: differences between groups are always smaller than differences within a group.

D. The question of bias (notes)

- Are IQ tests biased?
  - Yes/No
- Yes because:
  - They reflect the culture, values, knowledge, background, communication pattern of the people who create them. Therefore if you are from a different culture from the person who created the test your IQ will be lower.
- No because:
  - In a statistical sense they are not biased. IQ tests are used to predict future performance. Their predictive validity is about the same.
- Stereotype threat
  - A number of variables can affect performance. If a stereotype is activated and it is positive it could enhance performance. If a stereotype is negative and it is activated it does not enhance performance.

Chapter 14

I. Stress and Illness

A. Introduction (notes)

- Health is important. However ½ of all death causes are linked and associated with people's behaviors. We are digging our way into early grave: smoking, unprotected sex, alcohol abuse, junk food.
- In old days the major cause of death were major diseases
  - TB, Pneumonia, Diarrhea
- Today we are dying from
  - Heart disease, cancer, stroke
- Our choices and behaviors matter when it comes to health and illness.
- Behavioral medicine: a field where we combine medical knowledge and psychological knowledge in order to handle issues related to health and illness.
- Health psychology: it is the fastest growing field in psychology. A field in which the researchers study and investigate any factor that is linked with health and illness. They study any factors that help us prevent the disease, social, cultural and biological factors.

B. Stress and Stressors (notes)

B1) Stress: a bio-psychological process. A negative emotion perceived to be taxing, threatening or to be beyond our ability to cope with it. Stress is not in the situation, event, it is in how we access and interpret the event.

B2) The Stress Response System

- Cannon studied stress. Based on his observations it was concluded that when humans and animals are faced with a threatening situation they undergo many changes in our bodies. When we are stressed body releases stress hormones. Fight or Flight response. Our bodies are biologically prepared to handle the stress, it is good when it is short term. When it is chronic it is bad for our body.
- Selye: he confirmed that when stress is chronic body will suffer. When stress is chronic there are 3 stages

of physical reactions that we go through (General Adaptation Syndrome: GAS)
    - Alarm reaction: our reaction to stress, our body gets ready to handle the situation. If this continues our body goes into resistance phase.
    - Resistance phase: body continues to fight stress.
    - Body is depleted of resources and at one point the body cannot sustain us any longer, will end up killing us.
- The body reacts physically to stress along two pathways.
- Adrenal glands: located above our kidneys and they release stress hormones in our body.
    - Brain→Spinal Cord→SNS→Fight or Flight
    - Energizes the body to react.
    - Adrenal medulla releases epinephrine and norepinephrine.
- Cortex→Hypothalamus→Pituitary Gland→Adrenal Cortex→Cortisol
- High levels of Cortisol are toxic to our body, it can kill brain cells. Hippocampus is most affected by it. Children who are abused have smaller hippocampus due to this.

B3) What causes stress?

- Stressful life events:
    - Catastrophes, these can be nature made or man made.
    - Significant life chances, having babies or being married can cause stress.
    - Daily hassle, little problems in everyday life like stuck in traffic. They are significant predictors of future health.
    - Social and cultural stressors, people who have no human rights, poverty, racism.
    - Conflict, what goes on inside of you when you are making decisions.

- Approach-Approach: when you have to make choices and they are equally pleasant.
- Approach-avoidance: when there are good and bad qualities in an event while making decisions.
- Avoidance-avoidance: when we have to make decision when both choices are unpleasant.

- Perceived control: when we think we have control our stress goes down. It is when you feel that you can handle or cope with something. When we feel we are capable of handling something we are much less stressed. When we lose this sense we are stressed out.

C. <u>Stress and the Heart</u> (notes)

- ½ women die of heart disease. It is a modern affliction it was not one of the leading causes in olden days.

C1) Friedman and Rosenman

- 1936: wanted to see why people are dying of heart disease.
- 1st study: They did studies on couples, they found out that men have high cholesterol while women didn't.
- 2nd study: recruited accountants, they have different periods of stress during the year. During the time of stress they had really dangerous levels of stress and cholesterol while during the normal time it was fine.
- Now we know that psychological variables contribute a lot to heart diseases.
- 3rd study: recruited 3000 men between 35-59 yr old and interviewed them for 15 minutes. They were monitored during the interview and divided in two personalities.
  - Type A: much more reactive, highly competitive, exaggerated sense of time, super motivated.
  - Type B: mellow, easy going, very slow to react.

- 9 years later 257 of them had heart attack and 69% of them were from type A. Pure type B's had 0 heart attacks.

C2) What is it about Type A?

- They do not take time to breath, eat they are always rushed for everything. They are engaged in unhealthy behaviors.
- Temperament makes a difference. When type A and B are relaxed there is no difference between them in their body. As soon as something challenging is introduced type A's bodies react with much more arousal than type B.
- They have more negative emotions such as anger and hostility.

C3) Other toxic emotions

- Pessimism: is linked and associated with illness and early death.
- Depression: is not good for you.
- People who have heart attacks and are depressed they are more likely to have more heart attack and tend to die.

D. Stress and susceptibility to disease: psychophysiological illness (notes + book)

D1) Stress and the immune system

- Immune system: a complex surveillance system. Their job is to monitor for pathogens and then mount a defense against them and eliminate them.
- Macrophage: WHC that are our first line of defense, they are major killers of bacteria and viruses. They either injest them or they attach themselves and deliver them to other cells to kill them.
- B lymphocytes: WHC that form in the bone marrow. These work outside the cell and kill viruses, bacteria and pathogens. The only antibody producing cells in the body.
- T lymphocytes: produced in the lymph nodes (thymus). They go after pathogens but also cells in our body that are infected or cancerous.

- Healthier the immune system the healthier we are. It can go wrong, by becoming overzealous by becoming autoimmune disease or it under reacts and does not detect foreign invaders or properly kill it.
- Don’t get attached to the outcome.

D2) Stress and AIDS

- We get AIDS from HIV virus, we get it by exchanging bodily fluids.
- HIV destroys the immune system.
- People who have HIV/AIDS and are less stressed are prone to less infections and live longer.

D3) Stress and Cancer

- Human Studies
  - The results are mixed. There were links in some studies while there were no links in other studies.
  - There are recent studies that indicate there are links between stress and cancer. They found out that women who had high levels of stress hormones and had ovarian cancer it was more invasive and dangerous.
- Animal Studies
  - Indicate a clear link between stress and cancer.
  - Subjects were rats that were genetically vulnerable to cancer. They were split in two groups, one was exposed to noise while the other wasn’t. Those who were exposed to the noise 92% developed cancer compared to 7% who were not exposed to stressful noises.
  - Another study all rats were injected were cancer. Based on research 50% would get the cancer and die. They were divided in 3 groups. The control group had nothing done to them. The other two groups were zapped with electric shock. One group had no control over the shock. Second group could stop the shock when they wanted to but they still ended up with same amount in the end. In control group

50% developed cancer. The group with no control 70% developed cancer. Only 30% of the ones that could control it got cancer.

D4) Conditioning the Immune system

- Ader and Cohen conditioned the immune system. What Pavlov did with the dogs is what these people did to the immune system.
- There are drugs out there that can suppress the immune system.
- Sweetened water = neutral
- Inject + sweetened water = decrease immune system
- Sweetened water = decrease immune system
- Injection (US) → Suppress (UR)
- Sweetened water (CS) → Suppress (CR)

II. Promoting Health

A. Coping with Stress (notes)

- The effort we exert in order to control, deal, manage a stressful situation.
- Problem-focused coping: you face the problem heads on. You identify the problem, identify the solutions available and pick the best one and implement it.
- Emotion-focused coping: instead of dealing with the problem you deal with the emotion associated with the problem.
- There are healthy and maladaptive ways while coping with stress.
- When you can control a situation you should deal with problem focused coping.
- If there is no control over a situation then deal with emotion-focused coping.
- Reappraising the problem: instead of seeing your failure as a negative thing you see it as a challenge and see it from a different angle.
- Learning from the experience: people who learn from their experience is good. There is something you can always learn from your experiences.

- Making social comparisons: If you are stressed then look around you and pay attention to see how other people with same problem deal with it.
- Cultivate a sense of humor: you should learn to laugh at yourself. Learn to laugh and it helps you relax and you are not physiologically aroused.
- Perceived control: Victor Franco was taken to concentration camp because he was a Jew. They killed everyone in his family except his sister. He had no control about the situation, he made a decision that the only place they cannot touch him is in his mind.
- Learned optimism: optimists outlive pessimists.

B. Managing Stress

B1. Aerobic Exercise (notes)

- Definition: exercise that you can do over a long period of time. You are exercising your cardiovascular system.
- Immune system: when we exercise our immune system is definitely stronger. In a study they followed old people for 5 years and the people who exercised had a 44% less chance of dying. Risk for stroke goes down by 400%, risk of colon cancer by 2/3, breast cancer by 200%. Increases life span.
- Brain: when we exercise our body produces nerve growth factors. These are proteins that are essential for the functioning, survival of neurons. They stimulate neurons to develop more dendrites, they rescue damaged neurons from death. They slow down degeneration of neuron and promote regeneration of nerves. They are great protectors in brain against free radicals. It increases neuronal metabolism, since more oxygen, nutrients are going to the brain and the waste will be removed more effectively. Animals who exercise have more new neurons in their brain compared to animals who do not exercise.
- Stress: it is a big stress buster. When we exercise it burns stress hormones. Exercise increases norepinephrine, serotonin, dopamine and endorphins in our body. Lowers depression.
- Have higher levels of self-esteem and personal power.

B2. Biofeedback and relaxation (notes + book)

- Earn a point
  Meditation: a group of techniques that are used in order to focus attention and block out all distractions. It lowers physiological arousal, blood pressure, heart rate, stress hormones, blood lactate. It shuts down the fight or flight response, it increases the level of melatonin. It increases attention and focus and changes the brain (frontal lobes thicker). Meditation decreases biological age. 5 yr or less are 5 years younger.
- Insurance companies hired meditators and studied them. They did better on 17 health variables compared to other people. 80% less likely to die and 50% to get cancer.
- In the 60s 78% were smoking marijuana and after the meditation study only 37% continued. 28% smokers but only 0.001% continued.

B3. Social support (notes)

- Definition: it is not enough to have friends and family. It is do we feel supported, loved, nurturing etc. Do they accept you for who you are?
- If we have good social support it acts as a buffer to enhance our health. People with good social support are more likely to live longer. When we have toxic relationships that could be detrimental to us. It enhances the effects of disease and aging.
- Those who smoke are 2.5x times to get cold, 3x to get it if deficiency in Vitamin C, 4.2x likely to get it if someone is alone.
- Being judged: Students got a math question and had a stranger looking at them, the levels of stress hormones in the students bodies were 3x higher than any other stressor. If we imagine someone judging us it has the same effect.
- DNA: Telomers are pieces of DNA at end of chromosomes, which get snapped off by the end of DNA replication. They studied two groups of mothers, one had good social support while the others didn't. The mothers were the same age, the mothers who did not have good social

support were biologically 10 years older than their chronological age.
    - Genetic alteration.
    - Humans: they looked at women with husbands with Alzheimer's disease.
    - Rats: they observed how nurturing mother rats were. One group took care while the others were neglectful. How the rats were nurtured changed how their brain would deal with stress for the rest of their life. The nurtured ones were very smart and confident. The un-nurtured ones were neurotic and afraid of the world and anxious. The one who weren't nurtured = worst.
    - Baby monkeys were separated from their moms for 10 days, when they were returned their brains had changed. 3 years later their brains continued to show the change that had initially occurred.
    - Nurture: people who were warm and nurtured found their ways to partners who were warm and nurtured they had higher level of activity in left frontal lobe. Other ones didn't find warm nurturing partners and had high levels of activity in their right frontal lobe.

B4. Spirituality (notes)

- People who attend church tend to live 8 years longer than people who do not go to church. Research indicates that people who attend religious services are healthier.
- Israel people were followed, people who lived in religious communities were half as likely to have died than people in non-religious group.
- You do not need to believe in a specific religion to reap the benefits of it. People who feel connected to something bigger than themselves tend to be happier.
- Usually you tend to meditate while praying which helps you.
- You have social support while you visit religious services.
- People find comfort in praying.
- There is perceived control,

C. Modifying Illness-Related behaviors

C1) Smoking (notes + book)

- 30% of all cancer deaths are directly linked to smoking.
- 85% of those who die from lung cancer are smokers.
- Women who smoke are twice as likely to develop lung cancer than men who smokes.
- Number of smokers in 3rd world countries are increasing. By the end of this century 1 billion human beings will have been dead due to smoking.
- Every year 50 billion dollars are spend in USA to treat people who smoke. While it only takes 3 billion dollars to feed poor children in world.
- Second hand smoking is third leading cause of death.
- 50% of people who smoke develop mental illness later on compared to only 11% of people who don't smoke.
- 90% of people who have schizophrenia started smoking prior to getting it.
- 1 cigarette = -12 minute of life
- People who smoke cut down their lifespan by about 13-15 years.
- People who don't smoke increase life expectancy more than any other preventive measure.
- Nicotine interferes with the bodies ability to get rid of damaged cells before they become cancerous.
- Smoking is considered to be a pediatric disease.
- People start smoking because of: peer pressure, stress, media associations, weight loss, availability, tradition.
- Why don't people stop? Addiction, easier not to stop, becomes part of the identity, they become physically dependent on it.
- It is rewarding, nicotine is psychoactive drug and it mimics acetylcholine. It is linked with learning, memory, motor control etc. It leads to release of dopamine and norepinephrine as well. It has a dual effect on the brain, it calms the body down when its agitated, it perks them up when sluggish.
- How can we prevent? Education, raise the cost, teach kids/teenagers how to stand up to peer pressure.

C2) Nutrition (notes + book)

- 35% of all cancer deaths can be linked with nutrition.

- Healthy nutrition is an absolute must, a high fat diet creates millions of free radicals that attacks the brain, they impair the brain from oxygen, high fat and sugar increase the inflammation in the body.
- Our body uses nutrients to make neurotransmitters.
- Omega 3's are healthy fat found in walnut, salmon, tuna etc. Babies with mom who had omega 3 rich food have higher IQ.

C3) Weight control (notes + book)

- 65% of Americans are obese.
- Storing fat is adaptive because it cushions our organs and provides insulation. Storing excessive fat is maladaptive, it increases risk for dementia, heart disease etc.
- Location of fat makes a difference, apple vs. pear shaped.
- Apple shaped: carry fat in abdomen, pear shaped carry it in their hips, thigh etc.
- Excess fat in abdomen is more dangerous. This is because the fat in abdomen sits on top of organs. It can cause arteries to clot etc. Waist for men has to be under 35, men under 40. Waist to Hip ratio for women should be less than 0.8 and men under 1.
- Social and psychological consequences: weight discrimination is greater than gender and race discrimination.
- White women trash their body and hate it, black women have a much better attitude, if they are overweight they don't trash it, they enjoy their body and are comfortable in their own skin.

C4) The physiology of Fat (notes + book)

1. Fat Cells
    - How fat we are depends on the size and number of fat cells. Are they over stuffed or are they lean.
    - The average slim person has 30-40 billion fat cells, obese person has 2-3x that amount.
    - Once you have a fat cell it is forever yours. Even if we exercise we are not losing the fat cells we are just losing the fat inside it.

- Once we gain fat cells, we need less food to keep it on than we needed to gain it.
- Muscle cells are metabolically more active than fat cells by 17.5%.
- Dumb cells of lard: believed that fat cells did nothing they were passive. But now we know that fat cells are dynamic and complex, they are very active in the sense that they signal hormones to different body parts.

  Fat cells can shut down an immune system, they can unleash the immune system, they tell our body when it is ready to reproduce or not.
- Fat stem cells: researchers liposuctioned fat cells, harvested stem cells and produced different type of cells.
- Extra 100 calories a day, our body only uses 2-3 calories and stores 98 calories.

2. Set Point and Metabolism
   - Some obese people have a hard time losing weight because their set point weight is higher than average. It is the idea that the brain prefers a certain weight. The brain basically controls your body so that the weight stays around the same time.
   - Metabolism
     - 1 pound of fat = 3500 calories.
     - In some people 450 calories intake only lost 6% this is because their metabolism went down 13%.
3. The Genetic Factor
   - Heritability for weight gain is 30-70%.
   - 2000 genes are involved in regulation of weight.
   - Leptin: constantly monitors weight in the body. When levels of leptin are too high the brain knows that the fat of the body is going to increase. Their metabolism goes up, appetite goes down. When leptin does not work properly then it can lead to excessive fat deposition.
4. Losing Weight

- Not on first midterm Objective 23 in Learning Outcome

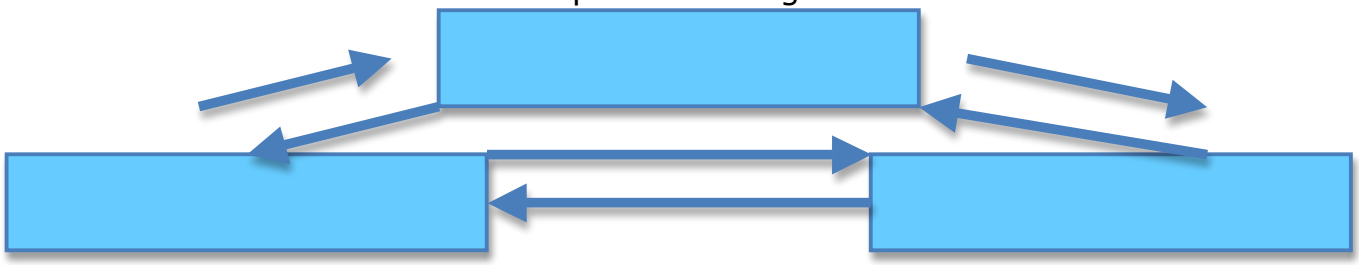
Chapter 15: Personality

I. Historic Perspectives on Personality
   A. Earn a point: 596-622
   B. Everything from text except Objective: 9,13,14,15,17,19 and Table 15.2

II. Contemporary Research on Personality
   A. The trait perspective
   B. The behavioral perspective (notes)
      - What is personality? It is the typical way we think, feel, behave.
      - Behaviorism is a school in psychology, at one point in time it dominated psychology for several decades. One of their main ideas was that you only study what you can observe. And only thing that you can observe is behavior, you can't study feelings etc.
      - Today it no longer dominates psychology, it is still a very important school in psychology.
      - Personality is nothing more than a set of learned responses. Personality is nothing more than a set of learned behaviors. Learning is key, we develop our personality because of learning.
      - The environment is going to shape personality through rewards, punishments, through different events develop the typical way we behave.
   C. The social-cognitive perspective (notes)
      C1) Reciprocal Determinism
      - Personality is a result of complex interaction between different factors such as:
      - Learning: plays an important role. We learn through observation, modeling, reward and punishment.
      - Conscious cognitive processes: according to this perspective we are not passive learners, when we encounter situations we access it, interpret it, develop beliefs, attitudes, assumptions and expectations. It all influences what we learn and what we see out there.
      - Self-efficacy beliefs: our beliefs about whether we can perform effectively, competently. If you can then you have strong-efficacy belief. They are important because they motivate your behavior, actions, etc. We are more likely to

choose more challenging situations, persist in face of struggle. If we have weak-efficacy belief we play it safe, and tend to give up easily.

- Situation-Environment: the situation and environment we are in makes a difference. Someone could be a fearless public speaker, but very afraid in other situation.
- Reciprocal influence/determinism
  - A→B
  - B←A
  - The two variables are going to mutually affect one another.
  - Good mood→positive thoughts
  - Good mood←positive thoughts



- 3 ways in which individuals and their environment interact
  - Different people choose different environment. Who you are and what your goals are will determine where you will go.
  - Our personality shapes how we interpret and react to the environment.
  - Our personality helps create situation to which we react.

C2) Personal control

- Locus of control: who or what do we believe is in control of the results in our life.
  - Some people have internal while others have external locus of control.
  - Internal: when you believe your actions, your choices produce the result in your life.
  - External: when people believe they are not in control but outside forces control the result in their lives.
  - If you have internal control then you will achieve more in your life.

- Learned helplessness: both human beings and animals are likely to go into learned helplessness when they are put in an environment that is unpredictable and uncontrollable. They surrender and stop trying to get out of it.
- Optimism: optimism has to be tampered with some realism. But it is good to be optimistic.

C3) Assessing behaviors in situations

- What is the best way to predict future behaviors? The best predictor is pat behavior.

C4) Evaluating the social cognitive perspective

- They use research, they rely heavily on research. They don't throw ideas out there, they test their hypothesis.
- They brought the attention of psychology, the situation and person interaction.
- They do not consider personality traits, unconscious emotions etc.

D. The biology of personality (notes)

- According to biology, biological and physiological factors shape personality.
- Everything psychological is physiological.
- Genes: there is a genetic factor to personality. We know this from twin studies, adoption studies. Heritability for personality is between 25-50.
- Brain: personality is the typical way we feel, behave etc. much of it is controlled by the brain.
    - There is link between the structure and function of the brain and personality. There is an association between the frontal lobe and personality. When shy people are shown strangers their amygdale shows higher level of activity.
    - Neurotransmitters: we know that people who are taking anti-depressants change their neurotransmitter activity. Some people may show change in their personality. Sensation seekers tend to have low level of MAO. It is an enzyme that regulates the levels of some neurotransmitters in the brain. Sensation seekers need high level of arousal in their body.

E. Exploring the self (notes + book)
    - The self is huge in psychology. The research is creative.
    - Possible selves
        - Are selves that you haven't developed yet. One kind is the type of self that you want to have, you yearn for. We also have another self that we don't want to become, the feared possible selves. They affect our motivation, choices we make.
        - Spotlight effect: when we overestimate the extent to which others are paying attention to us. We walk into the room and people are looking at you etc. In reality they pay less attention than you think.
        - Self-focus and memory: we have an easier time getting something when we relate something to ourselves.
        - Self-esteem: your sense of self, sense of worth, sense of being loved, nurtured etc. Major source of self-esteem is intrapersonal relationship, if you have people who love you, accept you then you have a positive self-esteem. When we are good at what we value that is a good source of high-self esteem. We should value what are good at and not take your strength for granted.
    - Self-serving bias: our tendency to take ownership of our strength. But when we fail then we distance ourselves from them. You blame other things rather than your own weakness. We tend to think we are better than average but then where do the average people come from. A certain level of self-serving bias is good, as long as it is within limits we cannot push it too far.

I. Reflection (notes)
    A. None of the perspectives are sufficient to explain personality on its own. They are useful in the following sense: they are a piece of puzzle and when we put them all together we get understanding of personality. You need to adopt bio-psycho-social perspective.

Psychological Disorders

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I. Perspectives on Psychological Disorders
   A. Introduction (notes)
      - Abnormal psychology: a scientific study of the origins of psychological disorders and the scientific study on how to treat and prevent them.
      - Prevalence: In any given year ¼ of us suffer from psychological disorder. During a lifetime ½ will suffer from psychological disorder.
      - Comorbility: if a person is diagnosed with one psychological disorder there is a good probability that they will be diagnosed with another one. A person with depression is likely to be diagnosed with anxiety.
      - Majority of people do not seek help.
      - Why? Embracement, denial, stigma, lack of money.
   B. Defining Psychological Disorder (notes)
      - At what point does it become a disorder.
      - Statistical infrequency: you look at a population and see which characteristic are frequent and infrequent. Usually the infrequent characteristics are disorders, but this it not always the case.
      - Deviant: how much does it deviate from social norms, cultural norms. Usually a behavior that deviates from a cultural norm could be psychological disorder.
      - Distressing: how personally distressing it is. But some psychological disorders aren't distressing. Ex. Serial killers.
      - Dysfunctional: how harmful, disabling, life-threatening it is to others.
   C. Understanding Psychological Disorder (notes)
      - How we explain the psychological disorder will determine how we treat people with psychological disorders. In the past people believed people with psychological disorders were possessed by demons/witches etc.
      - Medical Perspective
        - Pineal: in the late 1700s, he was French physician and became head of an asylum. He was horrified when he saw how people were tortured, he said that these people are not possessed, they have in illness and they have physiological disorder. He talked

about the sickness of the mind. Basis of the medical perspective/medical model. Mental illness is no different than physical illness.
        - Today psychopathology. Diagnose→symptoms. Cure→ therapy.
        - This perspective had limitations since it only focused on physiological perspective.
    - Bio-Psycho-Social perspective
        - With this perspective we are not simply looking at the physiology of something we are looking at Nature and Nurture (genetics, physiological, psychological, social & cultural factors).
        - Anorexia
        - Koro: men who end up with koro, these are men who are afraid that their penis is going to go into their abdomen and kill them.

D. Classifying Disorders (notes)
    - There are different psychological disorders.
    - It is important for us to have a uniform and reliable system to classify psychological disorders. DSM-IV-TR: it lists everything about the psychological disorders. It is constantly revised, it is written and revised by over 1000 psychologists and more than 60 organizations were involved.
    - There are people who criticize it, they say that it heavily relies on one model. Some people say it is culturally biased because it is based on western culture. They keeping adding categories, based on it 30% of adult population would qualify having mental disorders.
    - Myth Busting:
        - Bizarre: they behave in a bizarre way and just by looking at them we can tell they have psychological disorder. This is not true, some behave in a different way but majority of them you cant tell by just looking at them. There has to be an extensive interview.
        - Personal weakness: some people believe that going for therapy is a sign of personal weakness. There is

nothing wrong with going to therapy, on the other hand it is the smart thing to do.
        - Often dangerous: people with mental disorders not often dangerous. 9/10 are not dangerous only a small percent are.
        - Never fully recover: some people believe that people with mental disorders never recover, they can recover.
        - No work…Low paying jobs: the myth that people with psychological disorder have no jobs or work at low paying jobs.

E. Labeling Psychological Disorders (notes + book)
    - It can be a good thing so that people can facilitate communication etc.
    - It is disadvantageous because we look at them through the filter of the label, it creates stereotypes. Even medical health professionals fall prey to labels.
    - Biasing Power: David Rosenham a psychologist got people to go to hospital and say they heard voices in their head. They were labeled as schizophrenic and kept in hospital even though they were action normal later on, but people thought whatever they did was sinister and due to the disorder.
    - Self-fulfilling prophesies: some people may start acting like they are labeled and you turn your own fears into reality.

II. Anxiety Disorder

A. Generalized Anxiety Disorder (GAD) (notes)
- People who suffer from this disorder have persistence, chronic anxiety. It does not have a specific issue. They cannot say anything specific they are anxious about, they are anxious about anything and everything.
- Women are more likely to suffer from this than men. This is because women are more likely to be below poverty line, more likely to be raped, abused, they also might be the ones to report it more.

B. Phobias (notes)
- Very strong irrational fear of something very specific.

- A phobia could be harmless or maladaptive. It can be maladaptive when it interferes with a person's ability to perform every day activities.
- Agoraphobia: some of these people are so afraid of being in public that they have panic attacks. Some of these people stay at home and don't do anything outside, some stay home for about 10-15 years.
- Social phobia: where the person is being judged by others, criticized by others. They become so afraid that they stay at home and avoid people.
- Triskaidekaphobia: fear of number 13
- Uxoriphobia: fear of one's wife.
- Santa Claustrophobia: fear of chimneys.
- Phobophobia: fear of fear.

C. Obsessive-Compulsive Disorder (notes)
- They are plagued with obsessions and compulsions. They have constant fears. They cause serious distress.
- These are behaviors people feel driven to do and they repeat the behavior time and time again. Some people want things to be done a certain way.

D. Post-Traumatic Disorder (notes)
- Some people end up with this after they have experienced something that is extremely traumatic. It can be physical or emotional trauma. You don't need to be the victim to have PTD, you can develop it even if you only witnessed it.
- Without treatments it can last for a long time. The person is flooded with memories of that event. They are not simply remembering it they are reliving it.

E. Explaining Anxiety Disorder (notes + book)
1. Psychological factors
    - Faulty thinking: people who suffer from anxiety disorder their ways of thinking tend to make them more vulnerable to fear, phobias and anxiety. They tend to be hyperviligiant. They ignore signs of safety, positivity. They tend to magnify everything, they make a situation more important, relevant than it is. They overgenerelize a situation to everything else in their life.

- Maladaptive learning: according to learning theorists we learn much about phobias and fears.
    - Fear Conditioning: when you are in elevator and there is fire and the elevator is locked. When someone saves you still associate it with elevator. A harmless stimulus becomes something you fear.
    - Stimulus Generalization: a women is raped by one man and is afraid of all men in the world. It is maladaptive because most men are good, decent and kind.
    - Reinforcement: Since you are afraid of elevator you tend to take stairs, your anxiety goes away but you are enforcing your behavior and the fear of elevator increases or still stays there.
    - Observational learning: according to this we learn our fear through observation and modeling. When we see our mom be scared of something and yell, we end up learning that fear.

2. Biological Factors
    - Natural Selection: it is based on evolutionary perspective. We are biologically prepared to fear anything that threatened the survival of our ancestors.
    - Genes: there is a genetic component to anxiety disorders. We know this from twin study, adoption study etc.
    - Brain
        - Amygdala: their amygdala has higher level of activity than normal. People who have OCD have higher than normal activity in frontal lobes, caudate nucleus and anterior cingulated nucleus. OCD people have lower than normal levels of serotonin in their brain.
        - GAD people have lower level of serotonin and GABA.
3. Socio-Cultural factors: in Japan social manners are important. As a result some men develop Taijin Kyofusho and are terrified of doing something that would embarrass others.

III. Mood Disorders

A. Major Depressive Disorder (notes)

- When it is an extreme case of sadness or blues. People who never have had this disorder think that they can get over it but they don't know that they need help.
- Symptoms include: sad mood that just swallows you, tend to lose interest in things they used to like, change in appetite, sleep difficulty, problems sleeping, they are lethargic or agitated. They feel worthless, recurring thoughts of death and suicide. They cannot think, focus or think rationally. If a person has 5 or more of these symptoms for 2 weeks we consider this person to be clinically depressed.

B. Dysthymic Disorder (notes)

- A chronic low grade depression, not as severe as major depressive disorder. It is chronic so it lasts for a long time. People feel sad for a long time.
- If a person is sad for two years, display two of the symptoms then they are suffering from dysthymic disorder.
- They might end up having double-depression. They have a chronic low grade depression but at some time they go into major depressive disorder.

C. Bipolar disorder (manic-depression) (notes)

- a person who moves from a major depression to a state of mania. They experience both sides of behavior. Mania is an extreme state of euphoria.
- Symptoms include: abnormal amount of energy, they become irritable, they are over talkative because their thoughts keep racing and they try to keep up. They cannot concentrate very well, they have unrealistic beliefs about what they can do, they end up doing stupid things. They have an increased sexual drive, they become promiscuous and inappropriate. They may abuse drugs, engage in provocative behaviors. They are in total and complete denial that something is wrong with them.
- Cyclothymic disorder
    - It is a low grade manic depression. People bounce between depression and mania. Their moods are less severe, another characteristic is it is chronic. These people are extremely moody, unreliable and impulsive.

D. Explaining Mood Disorders (notes + book)

D1. Biological Factors

- Genes: there is a genetic component, if one identical twin has a major depression there is a 50% chance other twin will get it. The risk when it comes to bipolar disorder it is more similar to identical twins. Researchers believe that when it comes to psychological disorders it isn't only 1 gene that controls it but multiple genes.
- Brain
    - Loss of gray matter: people who suffer from depression their frontal lobes are 7% less than normal.
    - Low activity in left frontal lobe and higher activity in right frontal lobe.
    - Their hippocampus is smaller than average, it is linked to memory, learning etc.
- Neurotransmitter:
    - Low levels of dopamine, serotonin, norepinephrine, glutamate.
    - For people with mania they have high levels of serotonin, higher level of glutamate.
- Hormonal system is revved up for people who suffer through depression. In chronic state the fight or flight response could lay the ground work for future depression.
- Evolutionary perspective: a moderate depression could be adaptive. They believe that when we go into moderate depression it is good because it makes us stop and think about things and ponder over the situation. We stop and take action for a change. They believe that a major depression is an adaptive process that has gone wrong.

D2. Social-cognitive perspective

- People who live in areas where there is war, economic down turn tend to be more depressed.
- Aaron Beck: developed one of the best known therapy. He said people are depressed because of the way they think, the way they access, way of their beliefs. They suffer from the "cognitive-triad". He found out that people think negatively and poorly about themselves, the world and their future. He said change the thinking, beliefs and you will lift the depression.

- Explanatory style: it tends to be pessimistic rather than optimistic.
- Reciprocal discrimination.

E. The vicious cycle of depression: (notes)

- Depression is very common, it is the common cold of psychology.
- Women are twice as likely to be depressed than men, ¼ as likely to get depression in their life time.
- Maybe women report it more than men, women tend to have high levels of chronic stress. Women tend to have less sense of personal control in their life.
- A depression can self-terminate on its own, however when people who wait for it to end it lasts much longer than rather if they go get help. People who seek help are more vulnerable for a recurrence for it to take place, when it comes back it is stronger, powerful and longer.
- Sometimes it is triggered by stressful events, sometimes not. Depression all over the world is on the rise.
- Men and women get bipolar disorder at the same rate.

F.

IV. Schizophrenia (notes + book)

A. Introduction

- The most complex, devastating psychological disorder. It is considered to be "cancer" of the psychological disorder.
- The hallmark of schizophrenia is losing touch with reality. Every aspect of who we are is disrupted by schizophrenia.
- It is much more common, 1/100 people suffer from it.
- It is an equal opportunity, in men the symptoms hit earlier and are more severe.

B. Symptoms

- There are numerous symptoms.
- Positive symptoms:
  - It does not mean good, it means in presence of.
  - Normal behavior is excessively distorted.
  - Delusions: false beliefs that person has and will hold on to it in spite of the evidence that it is false.
  - Hallucinations: hallucinations are perceptions without sensations. A person might hear voices when no one

is talking, someone is calling when no one is calling. They might see fire when there is none.
        - Disorganized speech: they speak but make no sense, when the case is very severe speech is there but its is just a word salad.
        - Catatonia: it is where they go into a position and stay in that position for hours or days at a time.
        - Disorganized behavior: it is either bizarre or ineffective at meeting the goal.
        - Disorganized emotions: they have emotions but they are inappropriate. They might talk about someone who committed suicide and they would laugh
    - Negative
        - The absence of.
        - Flat affect: they might have emotions but they cannot express an emotion they have a neutral look.
        - Speech: it is very little or in very severe cases it is alogia. Researchers believed that their thought processes slowed down a lot.
        - Avolition: they lose motivation for everything.
        - Attentional deficits: they cannot focus their attention, they could drift away for hours at a time randomly.

C. Subtypes of Schizophrenia
    - It is a cluster of syndromes. There are different ways to classify the types of schizophrenia.
    - Type 1 Schizophrenia: associated with mostly positive symptoms and the onset of this schizophrenia is acute.
        - It is known as reactive schizophrenia. It is usually triggered by stressful situation, it is not caused by stress it only triggers it.
        - People respond well to medication.
    - Type 2 Schizophrenia: mostly associated with negative symptoms and this type of schizophrenia develops very slowly. It is also known as process schizophrenia.
        - It tends to become chronic, prognosis is poor and people who suffer from this do not suffer well to medication.

        - More men tend to have it than women, about 20-30% of people are mixed type 1 and type 2.
    - For another type of classification please check table 16.3 in text book.

D. Understanding Schizophrenia

D1. Genetic factors

- It seems to run in families, the more closely related to schizophrenia someone is the higher probability that you will be diagnosed with it as well.
- 1/100 chance of developing if no relative has it. If you have a first degree relative with it your risk is 1/10.
- If an identical twin has it then there is a 50% chance that the other twin will develop it.
- Adoption studies also indicate that there is a genetic component, if a biological parent suffers from schizophrenia they are more likely to develop it. If their adopted parent has it there is no difference.
- Some genetic deficiencies and variations on chromosomes 13 and 6. GRM3 gene has SNP4 section which is linked and associated with schizophrenia.
- The older the father the higher the risk for schizophrenia. As fathers age increase so does the risk for schizophrenia. More than 25% of the cases can be linked to father's age.
- There is no evidence that mother's age is linked with schizophrenia.
- If the identical twins share the same placenta the risk is 6/10 and if they have different placenta the risk is 1/10.
- This shows that there is an environmental factor.

D2. Brain Abnormalities

- Neurotransmitters: some cases are linked with dopamine over-activity. If you reduce the dopamine level in some person it decreases but not in all people. It is a positive symptom.
- Low level of glutamate are linked with negative symptoms. GABA abnormalities have been linked with brain abnormalities.
- They have less gray matter, there is loss brain tissue and there is shrinkage. When the loss of brain tissue is faster in

temporal lobe it is linked with positive symptoms. When the loss is faster in the frontal lobes it is linked and associated with negative symptoms.

- Some cases of schizophrenia they have enlarged ventricles.
- Reduced activities in frontal lobe has been linked with symptoms of schizophrenia.
- Inappropriate connections in utero. People believe it could be a developmental disorder and that something happens that changes how neurons connect in the brain.
- They took orientation of neurons in hippocampus while doing autopsy and compared it with normal neurons. In a normal brain the orientation of neurons in hippocampus are parallel, people with schizophrenia had crossing over and random orientation.
- Causes of brain abnormalities
    - Low birth weight has an increased chance of brain abnormality.
    - Brain complication (oxygen)
    - Famine, starvation (2x)
    - Maternal virus during pregnancy, mom with herpes their kids had a 5x chance of getting schizophrenia.
    - If mom is exposed to flu virus in second trimester the risk is 2x and first trimester is 7x.
    - Kids who were diagnosed at age 12, their brain tissue was extremely pruned beyond normal.
    - Their brain develops slower and is not as extensive.

D3. Psychological factors

- There is a single psychological factor that we can pinpoint to causing schizophrenia.
- However if somebody is already vulnerable to it, some psychological factors could affect its outcome.
- Adopted children had 1 biological mom who was schizophrenic, one group didn't. They visited home of every single children to see how healthy their family was. Some had nice healthy family, while some were in unhealthy family. Adopted children who had a biological mom with schizophrenia and were raised in healthy family

their risk was not different than adopted children who did not have a biological mom who suffered from schizophrenia. Being in a healthy family provided a protective effect. Kids who had mom who suffered and in unhealthy family, 60% of them developed a form of mental illness and 30% for mom with no disease and unhealthy family.

- Expressed emotion: it means the type of family when they would interact with each other they used harsh communication and are were intrusive. When you have schizophrenic patients and go to families like this their symptoms worsen and are likely to relapse.
- 25% suffer from 1 episode of schizophrenia, another 25% get recurring episodes but are not severely debilitated. 50% people who suffer from this it becomes chronic and affects their functioning.

V. Personality disorders (notes)
   A. Introduction: the patterns of thinking, feeling, behaving tend to be rigid, inflexible, maladaptive and can cause distress. Either to the person suffering from the disorder or the people around them.
      - There are 10 different ones identified and organized into different clusters.
   B. Anxious/Fearful behavior
      - Withdrawn avoidant personality disorder: people who suffer from this tend to have a pervasive pattern of social inhibition. They feel significantly inadequate. It makes them terrified that they avoid interpersonal relationships. They will not enter an interpersonal relationship unless they know they won't be rejected.
   C. Odd or Eccentric Behavior
      - Schizoid personality disorder: they seem to have no interest in interpersonal relationships. Including sexual relationships, they are cold, loners. Any interaction that requires more than minimal contacts they avoid it including family members. Their affect is flat, they are surprised by emotion.
   D. Dramatic, emotional, erratic or impulsive behavior

D1) Histrionic Personality disorder

- The drama queens, their emotional expression is overly dramatised. They have an excessive emotional expression. They are totally self-centered and will do anything to get attention. They are very shallow, insecure and low tolerance for frustration.

D2) Narcissistic Personality Disorder

- Have an over exaggerated self-esteem. They believe they have unique and outstanding qualities that no one has. They are super self-absorbed, they have difficulty feeling any concern for other people. They disregard other people's feelings and they use other people. They have excessive need to be admired and are boastful.

D3) Borderline Personality Disorder

- They have a pervasive pattern of instability, emotions, relationships, goals.
- One day they love you and the next day they hate you. Their self-image is like that too.
- A pervasive feeling of emptiness, a powerful feeling of abandonment. They are impulsive and self-destructive.
- They constantly seek reassurance.

D4) Antisocial Personality disorder

- Prevalence of this disorder 6% for men and 1% for women.
- Also known as sociopath, psychopath.
- A pervasive pattern of manipulating other people, disregarding and violating rights of other people.
- Their behavior is often criminal.
- They have no conscience, they do not feel guilt, remorse, empathy or compassion.
- To them other human beings are objects, they are there for their own means and they could care less.
- They feel very little and they fear very little. They have little physiological arousal.
- They have smaller frontal lobes and the activities are less as well. Child abuse is linked and connected with this. There is also a genetic component. An alcoholic parent is linked with antisocial personality disorder.

- A researcher found that if you have a genetic deficiency plus maltreatment that increases your risk for antisocial personality disorder.

VI. Rates of Psychological Disorders (book + pg. 641,656,657, 646, 652, 662)

A. Not on the second midterm, it is in the final exam.

Therapy

10-01-06 9:57 AM

Psychological and Biomedical Therapy. They both make different assumptions about the causes of psychological disorders and they offer different techniques.

I. The psychological Therapies

A. Introduction (notes)

- Psychological factors underlie psychological therapies. Therefore we must use psychological techniques to deal with psychological disorders. It is also known as psycho-therapy.
- Psycho-therapy: psychological therapies we use to improve psychological function. We use techniques to correct and change the factors so that the person can function confidently in their life.
- Before going through a therapy you should be careful and research everything and not rely on anecdotes.
- Rebirthing: they wrap you in blankets and you wiggle your way out, it means you are born again and leave the past behind.
- Some therapists might just choose with one therapy, while some might stick with eclectic approach. They mix and match different techniques for therapy.
- Psychotherapy Integration: some mental health professionals take all the techniques that have been proven to work and put it in one integrated system.

B. Psychoanalysis (notes + book)

- Developed by Freud in the early 1900s, he is considered to be the father of psycho-therapy.
- According to Freud people suffer from psychological disorder because of repressed urges, conflicts, childhood complex. It is these unconscious experiences that are causing distress.
- Who you are as an adult is really the result of what happens to you when you grew up.
- Aim: the aim is to do archeological dig and dig into the unconscious things causing the disorder and bring it into consciousness. This way we can examine, understand them and get rid of them.
- Methods:
    - Free association: the patient is encouraged to share whatever thoughts and mental images he has in his mind, without censoring, filtering or thinking. He believed that

what comes out of your mind first is what you are unconsciously trying to repress.
    - Resistance: he pays attention to resistance. While the patient is doing free association, he paid attention to moments when patients hesitates, changes topics etc. When a patient does this it means the patient approaches something so anxiety provoking that they run away from it.
    - Dream analysis: he believed that when we sleep our defenses are down so the unconscious urges come into the dream. There is still anxiety about them so they appear in form of symbols. He uses the symbols to interpret what is happening.
    - Transference: during the therapy what happens is that patient develop feelings for their therapist. They start relating to the therapists the same way they related with the significant others. These feelings are not for the therapists, rather they are replaying their feelings and projecting it onto their therapist.
    - Interpretation: when the therapist feels that the time is right, based on the observation the therapist steps up and offers an explanation of why you feel the way you do.
- It is extremely lengthy and expensive.
- Psychodynamic therapy: it is a shorter version of the psychoanalysis.

C. Humanistic Therapies (notes + book)

- Assumptions: human beings are good and the primary motivation for every single human being is to develop one's full human potential. We are born with the forces that drive us.
- To be happy we need to develop human potential to its fullest, we need to be self-accepting.
- Even though we are born with the forces that drive us towards our potential, the environment is still important. We need to be unconditionally loved and unconditionally accepted. If we are not unconditionally loved or accepted the forces will be stalled.
- As a result we will be unhappy, engage in maladaptive behavior.

- The aim of the therapy is to provide the appropriate environment where the innate forces are hard at work to push us towards full potential.
- Methods:
    - Client-Centred therapy: the focus of the therapy is on the present and future.
    - Explore feelings as they occur, what you feel at the time.
    - The focus is on the conscious experience.
    - The client is encouraged to be fully responsible for the result of their life then and after that point forward.
    - It's the client that controls the therapy, they determine what they will talk about, how much they will talk about, they are the one who decide what they want and how much they want to change.
    - Non-directive: therapists don't offer advice or give them choices. Their main goal is to provide an appropriate environment that will allow healthy forces to kick in and for healing to take place.
    - The appropriate environment should have:
        - Unconditional positive regard: the therapist fully respects and cares about the client no matter what. This way it creates an environment where they could share anything because they feel worthy. This way they develop unconditional regard for themselves.
        - Empathy: the therapist is not sitting in a detached way. They feel compassion and empathy for the client and put themselves in the patient's shoes. When you show them empathy and compassion they feel relaxed and share what they need to.
        - Genuineness: the therapist is very honest and display emotions honestly. This is to build trust and to let them know that any feeling is ok, you need to identify and express it appropriately.
        - Active listening: the therapist tunes in and pays attention to everything. The therapist reflects back by restating the fact back to the patient. They also ask for clarification.

D. Cognitive Therapies (notes + book)

- Beck and Ellis fathers of cognitive therapies. They were both trained as psychoanalysists. At some point they got really tired of it.
- Assumptions: we get depressed and anxious not because of an external situation but rather because of our beliefs, faulty assumptions, illogical ways of thinking, unrealistic rules etc.
- The aim is to change this way of thinking.
- Cognitive restructuring: ABCD model proposed by Ellis.
- Musturbating: you should get rid of the MUST in order to succedd.

E. Behavioral Therapies (notes + book)

- They think that if someone has a problem it is their behavior. They are interested in maladaptive behavior. According to behavioral therapies all behaviors except instincts are learned.
- This is good because what is learned can be unlearned. To idea is to take a maladaptive behavior and unlearn it, then replace it with an adaptive behavior.
- They use learning principles.

  E1) Classical conditioning
    - One of the ways we learn behaviors is through classical conditioning. We learn to associate two events to two stimuli.
    - Watson was the father of behaviorism. He showed that you can condition emotions and fears.
    - Counterconditioning: pair the trigger stimulus with a new response incompatible with fear or anxiety.
    - Peter was 3 year old, he was terrified of rabbits and anything furry. Counter conditioning was used on him, she visited Peter at home. She noticed that Peter got cookies and milk in the afternoon. When she came back the next day she put the rabbit very far away, the next day she put the rabbit closer. Within two months Peter was patting the rabbit and was over his fear of rabbits.
    - Systemic Desensitization: you are terrified of the dentist so you go see a therapist. They make you construct a hierarchy of the dentist from least to most afraid of dentist. Then they teach you progressive relaxation until you are in a calm and relaxed state. When you are in a

relaxed state you imagine that you are in the least feared situation. If you get anxious they ask you to stop, then they keep doing it until you get to the end of your fears.
    - Virtual reality exposure therapy: you do not need to go into a real situation but use virtual techniques.
    - Aversive Conditioning: replace a positive response to harmful stimulus (such as alcohol) with a negative or aversive response. This does not always work because they know the reason of the negative response.

  E2) Operant conditioning
    - Behavior is linked with consequences, if it is linked with positive consequences it is more likely to repeat and vice versa.
    - They use punishment to get rid of the undesirable behavior.
    - Reinforcement: you reward the desirable behavior.
    - Extinction: the absence of reinforcement, you do not reward or punish. They will give up the behavior because they are not getting the attention they want.
    - Token Economy: you want your child to make his bed every morning, and you tell him that everytime he does it he gets a star and for 5 stars he gets $2. You exchange the token (star) and exchange it for a tangible reward (money).
    - Cognitive-Behavioral therapy: you combine cognitive therapy and behavioral therapy together. When one is suffering from a disorder you work on the faulty thinking and the maladaptive behavior.

F. Group and Family Therapies (notes)
    - You can use any therapy within the context of group and family.
    - Group Therapy: individuals who suffer from the same problem and instead of each one seeing a therapist individually. They are put in one group and they all go to therapy at the same time in a group. There are several advantages such as: cost effective, they pay less money to see the therapist. It cuts waiting time because more people come in together to see the therapist. The other members

of the group can become social support. You can have role models and the group could be a place to practice the different skills you need out there. The therapist can see you in an interpersonal environment rather than you reporting how you react. You may not feel alienated because there are other people suffering just like you.

- Family therapy: when a member of the family has a psychological disorder the family should go to therapy. The family is not a collection of individuals, the family is perceived as a dynamic system where each individual has a unique role but their influences effect each other. If a child is becoming aggressive you don't send the kid to therapy but you need to look at the whole family. The goal is to have the family have a pattern of communication that is healthy.

II. Evaluating Psychotherapy (notes + objective 16)

A. Is psychotherapy effective?

- Research outcomes only. Psychotherapy is much better that no treatment.
- Meta-analysis: very powerful statistical procedure that is used in order to summarize the results of a large number of studies. If there are 150 studies you put them together and it summarizes the result.
- Within 8 weeks 50% of people who go through psychotherapy feel much better compares to 4% who didn't go through therapy.
- 6 months later over 75% who went through psychotherapy felt better compared to 22.23% who didn't.
- the more specific the problem is the more clear cut the outcome is.
- Psychotherapy without any drugs produces changes in the brain.

B. The relative effectiveness of different therapies

-

C. Evaluating alternative therapies

- Therapeutic touch: people who practice this think that there is an energy that radiates from the body, practitioners can detect it and feel that they can

manipulate the energy field to get you into a healthier place.

- EMDR (eye movement desensitization and reprocessing): it is a form of psychotherapy. It is the fastest growing field. There is a connection between eye movement and anxious thoughts. For example if you suffered from a trauma, you talk about it over and over again, the therapist would put a finger in front of you while you are talking. People use this to cure depression, schizophrenia. She also introduced psychodynamic techniques and put it in EMDR. Over a million people have undergone this therapy.
- EMDR vs. no treatment: EMDR is better than no treatment. EMDR vs. more established therapy show that there is no difference between the two. Some studies showed that EMDR was worse. Do the eye movements work? Group of people were divided in two and they did same things with them. Except one group was instructed to follow the movements of the finger, the other group was told not to move their eyes. If eye movements work then the first one would be better, but there was no different between the two groups proving that eye movements do nothing. The traditional therapies are at work not the eye movements in the EMDR.
- Light exposure therapy (S.A.D): used to treat season affective disorder. People who have this disorder, their moods change significantly with the change of seasons. In fall and winter seasons they are depressed but in other seasons they are fine. There is a minority who are the opposite way around. They start eating sweets and carbohydrates and lose interest in pleasurable activities. One of the therapies is light therapy, the person suffering sits in front of a light. This therapy works for most people. It helps lift their depression. There is a correlation between the amount of light and changes in their body. Their body responds the same way the body of animals who hibernate. This affects the levels of melatonin in their body, people with SAD start producing more melatonin during winter months. They also have low levels of

serotonin. There seems to be a genetic component to SAD. People who have lighter eyes have less severe symptoms of SAD. The light pigmentation allows more light into their brain.

D. Commonalities Among Psychotherapies
   -

E. Cultures and Values in Psychotherapy
   - Psychotherapists try to be objective, but they bring their values to therapy. One researcher produced that therapists should let people know their values.
   - All psychologists are trained in multiculturalism. It is the therapists job to understand the individual in front of them. The more similar the therapist shares the values and culture with the client the more comfortable the client is.

III. The Biomedical Therapies

- Assumption: When there is a psychological disorder the cause is biological and physiological. Since it is biological and physiological we use biomedical therapies such as drugs, therapies should be used to treat them.

A. Drug Therapy (notes + book)

A1. Some definitions

- Psychopharmacology: field where researchers study the effects of drugs on mind and behavior.
- Psychotropic medications: prescription drugs that are used in order to alter the functioning of the brain for the purpose of alleviating the symptoms of psychological disorders.
- Placebo effect: Placebo is any pill or treatment that has no medical effect. A person takes a placebo without knowing they are taking a placebo. They get better because of their belief that their treatment is working. Placebo effect when related to pain is not imaginary, because brain started releasing endorphins in the same area of the brain as the ones who received the actual treatment.
- Double-blind studies: the subjects and the researchers are blind to who is getting the treatment and who is getting the placebo. This controls for bias on both ends.

A2. Antipsychotic Drugs (Neuroleptics)

- Given to people who suffer from schizophrenia and anyone else who suffer from psychological disorders.
- Introduced in the 1950s.
- Classic Drugs
  - Reserpine
  - Chlorpromazine (Thorazine)
  - Helped many people get better from schizophrenia by dampening the activity of dopamine.
  - They only work on positive symptoms, people with negative symptoms didn't get better at all or got worse. They created revolving door patients, patients who take drugs get better and go back home then the cycle continues all over again.
  - These drugs affected the dopamine activity globally. Dopamine is necessary for motor movements, due to the side effects of these drugs patients had trouble with motor movement, and some people developed Tardive dyskenisia.
  - Tardive dyskenisia: they have uncontrollable facial , they also had chewing habits.
- New Generation
  - Clozapine (Clozaril)
  - They control both dopamine and serotonin.
  - They worked both on positive and negative symptoms.
  - They had fewer side effects than the first generation drugs, they only affected dopamine in certain areas rather than globally.
  - They are less likely to have motor movement problems.
  - Affected white blood cells because it led to deaths, their effects on blood were reversible.
- Abilify: stabilizes dopamine within a certain range, if it is too high it brings it down while if it is too low it brings it up.
- These are not a cure, they are only managing the symptoms.

A3. Antianxiety Drugs

- Given to people who suffer from pathological anxiety.
- Xanax and Valium: reduce anxiety very fast. Within two weeks anxiety subsides. They suppress the activity of the nervous system. They calm jittery feelings, produce relaxation.
    - They calm down the amygdala, they enhance the activity of GABA.
    - They have serious side effects, they impair coordination, reduce mental awareness. They have the potential of being highly addictive. They need a specialist to get rid of them.
    - Higher than average dose can kill you. Regular dose plus wine is also lethal.
- Buspar: calms body, promotes relaxation but it does not impair coordination. They do not slow down reaction time, they take a while to work.
- Psychotherapy is essential.

A4. Antidepressant Drugs

- Used for serious depression
- 1st Generation consisted of two types of drugs: Triciclics and MAO inhibitors.
    - Very effective, 75% of people who take it experience deduction in their depression.
    - These drugs effect multiple neurotransmitters including norepinephrine and serotonin.
    - They have serious side effects. The Triciclics effect the cardiovascular system, high dose can kill people. MAO inhibitors interact with several foods, it can lead to an increased high BP and cause you to have a stoke or death.
- 2nd generation were not more effective and had more side effects.
- 3rd generation in 1984 the picture changed.
    - Prozac: works on serotonin by increasing their levels. They are known as SSRI (selective serotonin reuptake inhibitors)
    - It stops the reuptake of serotonin by increasing the levels of it at the synapse.

        - Increased neurogenesis in rats. It was leading the brain to form more new neurons in the hippocampus which is related with memory and learning.
        - Zoloft and Paxil.
    - 4th generation are known as dual-reuptake inhibitors by inhibiting the reuptake of serotonin and norepinephrine.
    - Therapy and Aerobic exercise is necessary.
    - Bipolar Disorder: Lithium is used to treat it. 70-80% given this drug get better. It reduces suicide rate dramatically. It works on the manic and depressed symptoms. Evidence that it works by maintaining glutamate within a certain range.

B. Electroconvulsive Therapy (notes)
    - An electric current is delivered to the brain with the purpose of creating a seizure that will last for about a minute.
    - Its used for a number of therapies such as depression.
    - It is the most controversial therapy and has a bad reputation.
    - They were zapping the patients when they were awake, shocks causes the muscles to contract and could break bones.
    - It is more effective than any other treatment we have for curing disorders.
    - Today they are given anesthetic and they are given muscle relaxants. 80% of people with major disorder get better but within few months 20-50% relapse.

C. Psychosurgery (notes)
    - Surgery done on the brain where they destroy, remove or cut off connections between brain areas.
    - It is the most drastic biomedical therapy and the least used.
    - Lobotomy: separates frontal lobe from the emotional centers. Drill holes in brain and then pour alcohol to destroy brain tissue. Another way was using a rod and poking it through their eye and twirl it around.

IV. Preventing Psychological Disorders
- Through good parental techniques.

- Reduce poverty.
- Racism, sexism etc.
- Interpersonal skills.

Social Psychology

12-01-11 8:49 PM

Social psychology is the scientific study how we feel, behave relate to one another in social situation whether they are real or imagined.

I. Social Thinking

A. Attributions (notes + book)

- Definition: The mental process by which we evaluate and explain human behavior, whether it is our own or someone else's behavior. It is the actual explanation we offer for the behavior
- Possibilities
  - Dispositional: we explain the behavior by saying something the person, it is internal or personal characteristic.
  - Situational: we explain it using external situations in the environment.
  - Interaction: an explanation using interaction between disposition and situation.
- We tend to fall prey to the fundamental attribution error: when we explain someone else's behavior particularly some one who we don't know very well we focus on dispositional factors and disregard situational factors. It is so powerful that people fall prey to it even though they know someone is acting.
- Exceptions: when it comes to explaining our own behaviors we give value to situational factors. Another explanation is when we ask someone to think about the other persons POV.
- How we explain our behaviors will determine how we think, feel and what we are going to do. It is a cause and effect relationship.

B. Attitudes and Actions (notes + book)

- Definition: it is a learned attitude that we evaluate in a very specific way. Attitudes can be positive, negative or neutral. Attitudes can have a cognitive, an emotional and a behavioral component to them.

  B1. Do our attitudes guide our actions?
  - Attitudes can be a poor predictor of behavior. Just because someone has an attitude does not necessarily translate into actions and behavior. (Even though we do not like animal torture we still eat meat)
  - Our attitudes are more likely to guide our actions when they are very strong, powerful and we are super aware of them. When outside influence is minimal attitude is more

likely to guide our actions. When the attitude is specifically relevant to the behavior.

B2. Do our actions affect our attitude?

- Our actions do affect our attitude, we might change our attitude because of what we are doing.
- The foot-in-the-door: this is when a small request is made first as a set up for a larger request. People do this because of the foot-in-the-door phenomena, because it is our tendency that when we say yes to a smaller request we say yes to a larger request.
- Role-playing: the role determines what you will do in different situations.

B3. Why do our actions affect our attitudes?

- Cognitive dissonance: Festinger thought that when there is a discrepancy between attitudes and actions this creates a state of tension. We are motivates to get rid of the discrepancy our actions and attitudes are aligned with each other.

II. Social Influence

A. Conformity and Obedience (notes + book)

A1. Conformity

- Definition: we change our attitudes, behavior, thinking, feeling due to a pressure from a group whether it is real or imagined. We all conform to different degrees.
- Solomon Asch: he asked what if the opinion of the group is clearly wrong, would we still conform? 76% people conform at least once.
- Why do we conform?
  - Normative social influence: we conform to be accepted by the group. Being rejected by a group is very aversive.
  - Informational social influence: when we aren't sure about something.
- Conformity is higher when: we are made to feel stupid, our self-esteem is low, we value a group and we want to be a part of it, when we must give an answer in front of a group, when we have not committed to an opinion before.

A2. Obedience

- Definition: when we perform an act as a result of a direct order from someone who is a higher status than us or a person of higher authority. We all obey in one way or another.
- It can be good because it can keep order. However it can be destructive with horrific results when abused.
- Can you really get good people to behave against their values by giving them orders? Yes. See study in book.
- When studies were done in office building less people went all the way, when teacher and student were in same room they did not do it, when they had to personally do it they were less likely to do it, when experimenter was in different room they did not do it, when they saw another teacher say no more people denied to do it.
- Milgrim is the most creative researcher in social psychology.

B. Group Influence (notes + book)

B1. Individual Behavior in Presence of Others

- Social Loafing: as individual when we work in group setting we tend to make less effort than when we work individually. One of the reason is the diffusion of responsibility. We assume other people won't work her so why should we work hard.
    - When members of the group know each other very well social loafing is less likely to take place. When people work on a project that is meaningful and important to them they are less likely to do social loafing. When the prestige of the group is on the line less change of it taking place. To avoid social loafing altogether we assign responsibility to specific individuals.
- Social Facilitation: if someone is performing a task and others are present do we tend to do better or worse. Presence of others could help or hinder our performance. When the task is easy or you are really good at it then the presence of others lets us perform better. When the task is difficult or you are not good at it, the presence of others leaves us to perform worse than if we were alone.

        - The presence of others causes us to feel aroused. If we take arousal and put it with a positive expectation we do better and vice versa.
    - Deindividuation: when we are in a crowd and feel anonymous it could lead to self-awareness to come down, inhibitions to come down. We end up behaving in atypical ways. We behave in ways we usually don't behave.
        - Members of African tribes who wear masks tend to be more cruel and be more gruesome.
        - To avoid it, you make the person self-aware and make them connect themselves to who they are.

B2. Effects of group interaction

- Group Polrization: when we become part of a group, our ideas and beliefs become stronger and more entranched than if we did not join the group. It can have a negative effect if you join a prejudiced group. If you want to get out of stereotypes get out of your comfort zone.
- Group think: a term found by Janis. He was fascinated by why people make great decisions and sometimes poor decision. When the members of a group are so into maintaining harmony, pleasing the leaders that they let go of critical thinking, sound decision making and shut themselves off to opinions opposing their own. This is when government, presidents, organizations make bad decisions.
    - To avoid group think we could encourage descend. We can ask someone to be devil's advocate. For us to examine the other ideas rather than disregard them. Hire someone to come from other company and ask them to tell you when you are entering group think.

III. Social Relations

A. Prejudice (notes)

- We are all prejudiced.
- Prejudice is to prejudge. It is reaching a premature conclusion, reaching a conclusion without having all the facts. It is a negative attitude towards members of another group, it is not supported by facts and based on superficial information.

- There are three components to prejudice: your beliefs, emotional (hate, anger, fear), behavioral component (discrimination).
- Prejudice can be explicit or implicit. Explicit means we are conscious and aware of our prejudice. Implicit is when the person is not consciously aware they have a prejudice, however when we look deeper into unconscious believes we find that prejudice is there.
- They believed people who have mental disorders have prejudice. Prejudice is universal.
- Why?

  A1. Psychological factors
    - Mental shortcuts: we tend to take mental shortcuts. We do this to simplify a complex world. We do this to free up mental resources to do other things. For example categorization. We do Us vs. Them.
    - We go into in-group and out-group mentality.
    - In-group is the social group we belong to. And out-group is the one we do not belong to.
    - We tend to perceive that in-group is heterogeneous. We tend to see that we have similarity but even the differences. When it comes to out-group we see them as homogenous and to think they are much more similar than they are.
    - We generate in-group bias, we tend to make positive attributes with ourselves, but negative attributes with others.
    - Ethnocentricity: when we believe our culture, ethnic group is the best and everything else is bad. We use our culture, values, beliefs and judge others using that.
    - Vivid cases: we have the tendency to remember vivid cases more than other things. When we hear something like this we tend to over generalize.
    - Just world phenomenon: we have the tendency to believe good things happen to good people and bad things happen to bad people. Idea that what ever is happening to you is your fault and you deserve it.

- Emotional: people can become prejudiced when they feel threatened or afraid that the out-group is challenging their value, important norms, challenging their worldview.
- Frustration: when we are frustrated and the source is ambiguous or too overwhelming we tend to blame an innocent person of the out-group (scapegoat).
- Some people use prejudice as a tonic to bump up their self-esteem to feel smart.

A2. Social factors

- Learning: if you are prejudiced then we learnt it somehow, through conditioning, observation, modeling. Prejudice is translated through generations through generations.
- Social pressure
- Social identity: for some people a big sense of identity belongs to them belonging to a certain group, culture, race etc. When we hold on to this identity we become prejudiced.

A3. Economic Factors

- When you have a dominant majority, they will be prejudiced to the minority. They do it to justify their power.
- When we have social inequalities, the rich and the poor. They see bad things in the other group.
- Scarce resources: when there is a shortage of resources we tend to become prejudiced and blame a group of people we believe to be responsible.

- Bottom line: to look at our own prejudice will help us get rid of the prejudice, if we look at others it does not help anything.

B. Aggression (notes)

- It is a behavior with the intention to hurt, harm and destroy. It can be premeditated, the person consciously decides that they will use aggression or it can be spontaneous and impulsive.
- We only think of physical aggression it is only a part of it. There are many forms of aggression.
- Why? There is aggression in nature, however animals do not do what we do. Animals aggress to eat, protect their territory. They do not aggress for sports, because they are de-individuated or

hate. They have mechanisms to stop if it seems to be going too far.

- There is a genetic component to aggression. Identical twins are more same for aggression than fraternal twin. There is a link for chromosome 11.
- There are certain areas in our brain which if stimulated can cause aggression. Lower activities in frontal lobes and smaller frontal lobes is associated with aggression. Low levels of serotonin have been linked and associated with aggression.
- Hormones: the higher the testosterone, the higher the probability for aggression. When men or women aggress the level of testosterone goes up. Researchers do not believe that testosterone causes aggression, they believe that high levels can cause person to be overly confident and strong and they feel like they can take over anything.
- 97% of all murders are committed by young men.
- Alcohol reduces the inhibitions and causes one to be aggressive.
- 9/10 people who have mental illness are not dangerous.
- Aversive events/feelings: when rats are given a painful eclectic shock they attack anything in their cage.
    - Frustration-aggression principle: if we are pursuing a goal and something happens so that the pursuit of the goal is hindered. We feel frustrated and some people take it and use it to aggress.
- We learn to be aggressive, children who are abused more likely abuse when they grow up.
- There is a cause and effect relationship between aggression in media and aggression in real life. When we watch violent video games or movies we become desensitized to violence, less empathy to victims of violence.
- Nature/Nurture interaction matters.

C. Conflict (notes)

- Social Trap: when the pursuit of individual interest leads to collective harm or destruction.
    - You like to eat hamburgers, but people are destroying good land in order to raise cattle.

- Enemy Perceptions: when we have an enemy we tend to perceive ourselves as all good and we tend to perceive the enemy as all bad.

D. Interpersonal Attraction (notes)

- Positive feelings we have towards someone plus we are interested in having a relationship with them. We are only interested in only a small number of people.
- What are the factors?
    - Proximity: geographical and physical proximity. We are more likely to have a relationship with someone who live around us.
        - Mere exposure effect: our tendency to like more person, situation, objects that we have been exposed to time and time again.
    - Physical attractiveness: a very important factor when we are in touch with people we have never met before. However, as we get to know people its their qualities and who they are is what we end up liking and caring about.
    - Similarity: we tend to prefer and to stay with people who are similar to us. Similar in beliefs, attitude, interests, age, culture, religion etc.
    - Reward: when you meet someone and interact with them, how rewarding was it. If it was rewarding the more you will want to interact with them. How long you stay in a relationship and how happy you are will depend on how rewarding the relationship has been for you.
    - Reciprocity of liking: we tend to like people who like us.
- Physiological arousal:
    - Two factor theory of emotion: according to this theory, in order for us to experience an emotion two factors must be there: physiological arousal, interpretation of physiological arousal. Emotions have similar physiological arousal to them. In order to determine which emotion you are feeling, you look for cues in the environment. According to this theory physiological arousal in situation 1 will spill over in situation 2 and it will make the feelings related to situation 2 stronger.

- Passionate love: when we have intense feelings of attraction towards someone with erotic undertone. We tend to idealize the person, we tend to be consumed by them and thinking about them all the time. It is gone in 6-30 months. This is because we are not in love with the person but who we want them to be. Some people it is over and done. For some people passionate love may be done but they fall for companionate love.
- Companionate love: the kind of love where it is based on respect, admiration, deep feelings of caring for the other person and a deep commitment to the relationship. And contrary to the passionate love companionate love tends to last a life time.
- Equity: there has to be a very important balance between giving and receiving.
- Self-disclosure: opening up, sharing our dreams, likes, secrets etc. sharing things we would not share with other people. It is important that self-disclosure develop over time. Pay attention if it is reciprocated and build it. However, if there is something that is super important that could affect if the person will be in a friendship or not say it up front.

E. Helping Behavior (notes + book)

- Prosocial behavior: prosocial behavior is any behavior where we help another person regardless of the motivation. It could be done for no other motive but to help, or could be due to another motives.
    - Altruism: this is when we step up and help someone without any other motivation. We do not look for anything to gain. Human beings can be very aggressive but can be very altruistic.
- Kitty Genovese: used to work as a bar manager, and parked her car outside. Some guy was watching her and stabbed her over and over again and raped her while she was dying. She screamed first at 3:20 but someone called the police at 3:50.
- Darly and Latane: said that people who didn't call were not cruel or mean. They behaved like most human beings would behave under the circumstances. Bystander effect: as individuals we are less likely to step up and help someone when there are other people around. This is because people assume that someone else will step up. When other people are around we tend to take cues

from them, if they are doing nothing then that's what we should be doing.

- Notice incident→interpret as an emergency→ assume responsibility, if these steps occur then we are more likely to help, if any of these steps do not occur we are not going to help.
- The psychology of helping
    - Social exchange theory: according to this theory as human beings are always looking to maximize our gains and minimize cost. Therefore, we are more likely to help if it is going to bring us more benefit than it is going to cost us.
    - Reciprocity norm: according to this we are trained, socialized to give back to people who have helped us.
    - Social responsibility norm: we are trained to help those who need help.

F. Peacemaking (notes + book)

F1. Cooperation

- Sherif: recruited 22 boys around 11. They were divided into two group and taken to camp separately. They did not meet each other for a week. They were put in situations where they had to compete each other. Very quickly the two groups started to hate each other. In order for them to work together they put them in situations where they were forced to work each other, they started to together and became friendly. This is because they were given superordinate goals. Goals that go beyond group membership, they are interest to people of different groups and in order for them to get to the goals they have to cooperate.
- The jigsaw classroom: you take people of different background and assign them a project they work on together. You assign a unique and specific responsibility to the member of the group. This way everyone has a role and there are less stereotypes, prejudice etc.

F2. Communication

- Before you engage in communication with someone you have to be clear and specific.

F3. Conciliation

- GRIT: the best method to reduce tension between two groups who are not willing to cooperate.
- One party should step up unilaterally and say to the other party that there is tension and that they prefer there to be harmony and they are willing to give them something they want. And you do give them something they want, you start with something small.