**Outline Chapter 3C**

Intro

•Evolutionary Psychology- Studies behaviors, emotions and thinking capacities which allows us as a species to survive.

•Different conditions which may affect the type of person we may turn out to be-Parents, peers, culture, gender.

Behavior Genetics: Predicting Individual Differences

•Behavior Genetics- study differences among different individuals and weigh the relative effects of hereditary environment.

•Environment- Every influence other than genetic which may influence us

Genes : Our codes for Life

•Chromosomes- threadlike structures made of DNA molecules that contain the genes

•DNA – deoxyribonucleic acid, which is a complex molecule containing the genetic information that makes up the chromosomes

•Genes- Biochemical units of heredity that make up the chromosomes. They are a part of the DNA which synthesizes the protein. [Provides the code for creating protein molecules.]

•Genome – Contains the total genetic material in the organism’s chromosomes.

•23 genes are from your mother’s while 23 genes are from your father’s side. There are a total of 46 genes.

•Every person shares about 99.9% of the same DNA with a .1% difference.

•We share 96% of the same information with Chimpanzee.

•Human traits are usually influenced by gene complexes.

•Gene complexes is when many genes work together to form a particular trait.

Twin Studies

•Most accurately describes the influence of nature-nurture, since it eliminates other variables which may be used to influence the results of the experiment.

•Identical Twins- from a single fertilized egg which splits into two. Share the same genes.

•Fraternal Twins- from separate eggs. If a fraternal twin has a disease, the other twin has a 30% chance of getting that disease. If an identical disease gets it, there is a 60% chance of the other twin getting it.

•If an identical twin gets divorced, the other twin has a 5.5 greater chance of getting divorced. –there comes the theory that divorce is 50% genetic

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Separated Twins

•Jim Lewis and Jim Springer (separated twins) shared similar personalities, intelligence, heart rate and brain waves, although they were brought up in two different environments.

•Bouchard conducts separated twin studies. Has found similarities in taste, personalities, etc

•Bouchard concluded that separated fraternal twins do not show enough similarities as of those shown by separated identical twins

•Obstacles to such studies include the unplanned reunion of twins, similar placement by the adoption agency.

Adoption Studies

•Even if a child is brought up by their adoptee parents and not their biological parents, they may not share the same similarities among – showing that environmental factors have a minimal effect on individuals as an influence

•Siblings are rarely alike

•Parents influence children’s attitudes, values, manners, faith and politics

•Adopted children are more likely to become attached to their parents since the adoptive parents undergo testing before they can adopt a child.

Temperament Studies

•Temperament – an individual’s emotional reactivity. Whether a person is placid or aggressive.

•Certain facts have been revealed from these studies- the most emotionally reactive newborns tend also to be the most reactive children.

•Children who react to change with pumping legs, arched backs are more likely to be placid and shy when they grow up. Children who react with smiles will be more sociable.

•When a child is more impulsive during their pre-school years, they will be more aggressive as they grow up.

•Identical twins tend to have similar temperament behaviors, showing that temperament could be contributed to genetics.

Heritability

•Heritability – proportion of variation among individuals that we can attribute to genes. The heritability of a trait may vary depending on the range of populations and environments.

•It refers to the extent to which differences among people are attributed to genes.

•As environments become more similar, heredity becomes more important as a source of the differences.

Nature and Nurture

•The Biological mechanism of adaptability to one’s environment allows diversity to prosper

•Genes respond to environmental factors

•Genes are known to be self-regulating due to their adaptability

•Human differences are always said to be genetically as well as environmentally influenced

Gene- Environment Interaction

•Genetically influenced traits evoke significant responses in others (like how a person may react angrily to a over hyper child, while that same person may react friendly towards other children)

•Identical twins are more likely to share the same view on different environments or parental approaches, when they are placed differently. Fraternal twins are more likely to find variations in the same environment

•The interaction between our genetic predisposition and surrounding environment helps us shape us who we are.

•Genes affect how people react to and influence each one of us

•Biological appearances have social consequences.

The New Frontier: Molecular Genetics

•Molecular genetics is the subfield of biological that studies the molecular structure and function of genes.

•The goal of molecular behavior genetics is to find some of the many genes that influence normal human traits

•At risk populations for certain diseases are found from research such as this

•To bring out the diseased genes, molecular geneticists seek links between certain genes or chromosome segments and specific disorders.

•The process includes taking blood from diseased family members, in which the disease has been passed down through many generations. They then compare the blood of the diseased family members and the family members who were not diseased.

•Questions ethics as parents are able to decide what type of children they want by eliminating a certain gender or disease prone child

•The Brave New World depicts a world in which people are genetically selected, changed to become stupid or smart.

•Robert Wright depicts that in the future, parents will choose their children’s traits

Natural Selection

•Evolutionary Psychology is the study of the evolution of behavior and the mind, using principles of natural selection

•Belyaev performed an experiment in which he sought to breed the tamest foxes. It took him over 30 generations of foxes to achieve this peculiar breed. The major revealing fact of this study is that certain traits could be selected. Mutations may also occur within a certain generation; allowing a weaker or either a stronger adaptability to the environment.

•Our ability to adapt is one of the most important traits humans have in order to respond to a new environment and survive.

•Steven Pinker believed that our shared human traits such as smiling and crying were shaped by natural selection.

•The humans’ biological similarities arise from our shared human genome.

•There is less than 5% differences (genetic) among humans

•95% of genetic variations exists within populations

•If comparing the genetic variations for Americans and Africans, the typical genetic differences between two American villagers or between two Africans are much greater than the average difference between the two groups

•Richard Lewontin exclaimed that if a worldwide catastrophe eliminated all races but two, the human species would only suffer a “trivial reduction” in its genetic diversity

Gender Differences in Sexuality

•Men who preferred attractive physical features which suggests youth and health

•Women preferred resources and social status which suggested mates who would stick by the woman once the child was born

•Men and women also have different perspectives on sexual activities, men prefer multiple partners and more casual sex, while women are more likely to stick with a single partner and prefer a more stable relationship. Did not matter whether the males were homosexual or whether the females were lesbians.

Natural Selection and Mating preferences

•Women are more likely pair wisely, since they spend much time nursing a child. While men are more likely to spread their genes with more partners.

Critiquing the Evolutionary Perspective

•There are three criticisms regarding the evolutionary perspective1.Evolutionary psychologists start with an effect and work backward to anexplanation2.Evolutionary perspectives underestimates cultural expectations andsocialization.3.Allows people not to take a moral or ethical responsibly on sexual behavior.

Parents and Peers

•Although identical twins may share a placenta, they may have differences when one twin may have a lower supply of the richer blood or oxygen supply. A different placental barrier may also have better protection against viruses

•2/3s of twins share the same placenta

•Those twins with separate placentas are less similar in their psychological traits

Experience and Brain Development

• Near puberty, a child’s unused synapses will weaken and they will lose the roles that these synapses would have functioned as. Like how an older person finds it harder to learn a new language than a younger child. Synapses which we use frequently are strengthened during this time.

•Babies who were massaged, were more likely to develop faster neurologically and gain more weight

•William Greenough discovered the weakening process of unused synapses through his experiment with rats.

•Mark Rosenzweig and David Krech noticed that rats which were put in a social environment developed their brains through a stronger cerebellum cortex while rats placed in isolation did not experience the same growth.

Blaming Parents?

•Freudian psychiatry and extreme environmentalism blames a child’s failures and successes on the parents.

•Parents are more associated with influenced a child’s manners and political/religious beliefs.

•Peter Neubauer and Alexander Neubauer illustrate how, with hindsight, we may inappropriately credit or blame our parents.

•Abused become abusive and neglected become neglectful.

•Environmental settings and parental care only result in 10% of change in personality

Peer Influence

•Children are more likely to conform in order to fit into certain groups

•They also select other children who share the same interests

•The parents’ role is more important when it comes to education, responsibility. Charity, orderliness, discipline and interaction

•Peers are more influential when it comes to cooperatitive skills, styles of interaction as well as the importance placed on popularity.

•When parents choose the environment for their children, they hold influence over the peer settings.

•Habits such as smoking is most likely to be learned from peers

Cultural Influences

•Culture is the enduring behaviors, ideas, attitudes, values and traditions shared by a group of people and transmitted from one generation to the next.

•Culture and our capacity for language lets us preserve life saving techniques which we then pass to other generations, for their benefit

•Allows more diversity

Variation across cultures

•Each culture has their own accepted and expected behaviors

• Norms- rules and expected behaviors

•Cultural shock may be experienced by those who come from different cultures

Variation over time

•The speed at which cultural changes take place over time is much faster than theslow pace of evolutionary changes in the human gene pool

Culture and Self

•Collectivism gives priority to the goals of one’s group rather than the individual\

•Western nations are more likely to stress individualism

•Signs of individualism include

1. Casual or temporary relationships

2. Identity is based on self-esteem, personal goals, personal rights and liberties.

•Collectivism is more compromised of interdependence, tradition and harmony.

•Relationships in collectivism are enduring

•Morality is based on one’s duty to society

•Identity is based on group goals and commitments

Culture and Child rearing

•The child bearing in Collectivist nations tend to stress more of a family sense and tend to be more focused on emotional closeness

•Individualist nations tend to stress independence, which is reflected in their childrearing techniques.

Developmental similarities across groups

•Humans share many similarities including genetics, life cycle, and capacity for language, biological needs and the sense of wanting to belong

•Similar behaviors could be predicted from a group of individuals due to their similarities

Gender similarities and Differences

•Both males and females share over 46 of the same chromosomes.

•Women have 70% more fat, 40% less muscle and are over 5 inches shorter

•Women also hit puberty 2 years earlier and outlive men

•Women are more likely to have depression, express emotions more freely

•10 times more the risk at eating disorders

•Men are more likely to commit suicide, suffer alcoholism, have antisocial personality disorder, hyperactivity, autism and color blindness

Gender and Aggression

•Men are more likely to act aggressive than women

•It is more physical than verbal

•Males are also more likely to commit crimes than women

•Men are more likely to support violent behaviors and war