

CHFD 2950 Module 3: pg 36-43

- Human genome: the computer set of genes for building and operating a human body
- Chapter two introduces current thinking about " what makes development happen"
- Four main Questions:
 1. How have ideas about nature and nurture changed?
 2. What are genes? What exactly do they do?
 3. What is environment?
 4. How do the genetic code and environmental contexts interact in development?

Perspectives on nature and nurture:

- Four main views put forward:
 1. Development is driven by nature
 2. Development is driven by nurture
 3. Development is part nature, part nurture.
 4. Development results from the interaction of nature with nurture

Development Is driven by nature:

- The idea that intelligence and other characteristics are innate or inborn, not acquired or learned, called nativism.
- In the seventeenth century, biologists and others took the concept of inborn traits quite literally. The prevailing view was that the embryo was preformed, a miniature adult whose future anatomy and behavior were already determined.
- The belief in preformationism was accompanied by beliefs about human nature. In general, Western culture has viewed children innately bad. This outlook comes from the biblical concept of "original sin", the belief that all human beings are descended from Adam and Eve and inherit the weakness that led them to disobey God and eat fruit from the Tree of Knowledge.
- Jean Jacques Rousseau was an exception; he believed that children are innocent at birth and develop according to nature's plan, much as a flower develops.
- Environment matters but nature plays the leading role.
- A parent's job is to protect the child from harmful interference and let the child development unfold
- The expression "innocent as baby" comes from Rousseau.

Genetic Determinism and Eugenics:

- A number of scientists came to believe in genetic determinism: the idea that human qualities are genetically determined to and cannot be changed by nurture or education .
- Preformationism and genetic determinism share a central assumption
- Internal (natural, genetic) factors control development, and external (nurturing, environmental) factors have little impact. Thus, the complete individual is already a fertilized egg - literally

according to preformationism - or locked in genes, and development is merely a process of growing.

- Eugenics --- good genes
- Eugenicists advocated the use of controlled breeding to encourage childbearing among people with characteristics considered "desirable" and to discourage (or eliminate) childbearing among those with "undesirable" traits.
- The best known example was Hitler's effort to "purify" the Aryan race.

Development is driven by nature:

- Environmentalists hold that the newborn is unformed, like a lump of clay, and the individual's characteristics are entirely the product of experience, upbringing, and learning.
- John Locke (1690) introduced the environmentalist view in a highly influential essay, "Concerning Human Understanding."
- Locke argued that the infant's mind is a tabula rasa, or "blank state." In his view, nothing about development was predetermined, everything the child becomes is a product of his or her environment and experience.
- One social consequence was the mental hygiene movement.
- Advocates of mental hygiene, in contrast, took an environmentalist view

Watson's Behaviorism:

- Watson's theory of behaviorism was, in effect, a revival of Locke's tabula rasa, a strict, "fundamentalist" version of environmentalism.
- By extension, anyone can become intelligent if he or she is rewarded (reinforced) for studying and learning and for solving problems with intellect rather than emotions. Nurture is everything.

Development is part nature, part nurture:

- The central question changed from whether nature or nurture drove development, to how much each contributed to different traits.
- Developmentalists began attempting to calculate the degree to which different traits were influenced by genetic factors, or the heritability of the traits. This measurement was called the heritability quotient.
- The most common of the studies of heritability, twin studies, took advantage of a "natural experiment"
- If Identical Twins are more alike than fraternal twins such as intelligence, this trait is likely to be genetic in origin and have a high heritability quotient. Additional evidence comes from studies of identical twins who were separated at birth and raised in different families.
- In adoption studies, researchers looked at children who were adopted soon after birth and raised by parents to whom they were not genetically related.
- Several studies found that adoptive parents resemble their biological parents more than their adoptive ones