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Psychology 111

Name: _____ Date: _____

Lecture Series: Chapter 9 The Inheritance of Personality: Behavioral Genetics and Evolutionary Theory Pages:18

TEXT: Funder, David C., (2000). *The Personality Puzzle* (2nd) New York: W. W. Norton.

Principal Features



Behavioral Genetics

[Page Reference]

"This field of research examines the way inherited biological material, that is, genes, can influence broad patterns of behavior."

"A pattern of behavior that is relevant to more than one situation-the only kind of pattern worth considering-is, by definition, as personality trait."

Calculating Heritabilities

"The basic methodology of behavioral genetics is to compare similarities in personality between individuals who are and are not genetically related, or who are related to each other to different degrees."

"The classic technique is to look at twins ... identical (also called monozygotic, or MZ) twins, and fraternal (also called dizygotic, or DZ) twins."

"Humans are highly similar to each other genetically."

[Examples] MZ and DZ twins.

(219)

Calculating Heritabilities (Continued)

[Page Reference]

Question: What is the value of a statistic called the **heritability coefficient**?

(220)

Question: What does the following statement mean?

"Twin studies are simple and elegant ... "

What Heritabilities Tell You

GENES MATTER

Question: What does the following statement mean?

"Heritabilities challenge (the) presumption that all personality was determined environmentally."

(221)

INSIGHT INTO ETIOLOGY

[Page Reference]

" ... heritabilities sometimes can tell you whether specific behavioral or mental disorders are part of the normal range or are pathologically distinctive."

[Evidence] Heritability and behavioral or mental disorders.

(221-222)

INSIGHT INTO EFFECTS OF THE ENVIRONMENT

" ... heritability studies ... provide a window into how the early environment does-or does not-operate in determining later personality."

[Evidence] Effects of the environment.

(222)

Does the Family Matter?

[Page Reference]

Question: What did the psychologist Judith Rich Harris say about the influence of the family environment on the development of personality?

(222-223)

Question: What are the questions that could be raised regard the claim of Judith Rich Harris that shared family environment has no effect on development?

(223-224)

Nature vs. Nurture

[Page Reference]

Question: What do the following statements mean?

"The heritability coefficient is not the 'nature-nurture ratio' ... " (224-225)

" ... heritability is the proportion of of *variation* due to genetic influences." (225)

" ... traits with high heritabilities are likely to be those that have *not* been important for survival or reproductive fitness." (225-226)

Nature vs. Nurture (Continued)

[Page Reference]

Question: What does the following statement mean?

"Certain traits appear to be adaptations to microenvironments (*niches*) within the larger society."

(226)

[Example] A trait adaptive to a microenvironment.

How Genes Affect Personality

Question: What does the following statement mean?

"... statistics do not by themselves yield conceptual understanding of *how* personality develops."

How Genes Affect Personality (Continued)

[Page Reference]

[Examples] Statistics do not yield conceptual understanding.

(226-227)

"In the past few years ... a few studies have gone beyond heritability calculations and dived into the actual DNA to see which genes are involved in various behavior patterns."

[Example] The search for a personality gene.

(227)

How Genes Affect Personality (Continued)

[Page Reference]

Question: What do the following statements mean?

"... genes themselves cannot cause anybody to do anything."

(227-228)

"Researchers have found that some behaviorally relevant physiology is heritable."

(228)

[Example] Reward deficiency syndrome.

Gene-Environment Interactions

[Page Reference]

Question: What do the following statements mean?

"Without an environment there would be no behavior at all ... " (228)

"The environment can even affect heritabilities themselves." (228-229)

"Genes and the environment interact in several ... ways."

[Examples] Gene-environment interactions. (229)

Gene-Environment Interactions (Continued)

[Page Reference]

Question: What does the following statement mean?

"Behavior genetics sometimes is portrayed as a pessimistic view of human nature ... "

(229-230)

The Future of Behavioral Genetics

Question: What is the likely future of behavioral genetics?

(230)

Evolutionary Theory

"An important part of the foundation of all of modern biology is evolutionary theory."

"In general, the evolutionary approach to human behavior assumes that behaviors seen in people are present because in the evolutionary history of the human species, these behaviors are helpful or necessary for survival."

Complete the following:

"The more a behavior helps an individual to survive and reproduce, according to evolutionary theory, the more likely the behavior is to occur ... "

(231)

"The evolutionary approach to explaining personality, therefore, is to identify a common behavior pattern and then ask how that pattern could have been ... "

Evolutionary Theory (Continued)

[Page Reference]

Complete the following:

"The focus is not on individual differences but on ...

(231)

"A wide range of human behavior has been examined through this evolutionary lens."

[Example] Human behavior viewed through the evolutionary lens.

"Evolutionary theory has even been used to explain why our self-esteem is so important to us."

[Example] Evolutionary theory used to explain self-esteem.

Sex Differences in Mating Behavior

[Page Reference]

MATE SELECTION

Question: What are the evolutionary explanations of mate selection? (232-233)

MATING STRATEGIES

Question: What are the evolutionary explanations of mating strategies? (233)

[Evidence] Evolutionary theory used to explain mating strategies. (234)

Question: What, evolutionarily speaking, is man's greatest worry?

(234)

Question: What, evolutionarily speaking, is woman's greatest worry?

Question: Why do some women seem to seek out men who are obviously unstable?

(234-235)

Objections and Responses

[Page Reference]

" .any objections have been raised to sociobiology and the evolutionary approach to the explanation of human behavior in general, and of sex differences in mating behavior in particular."

METHODOLOGY

"The first objection concerns scientific methodology."

Question: What is the main methodological objection to evolutionary explanations of behavior? (235)

(235-236)

Question: What is the evolutionary response to the scientific methodology objection? (235-236)

REPRODUCTIVE INSTINCT

Question: What is the reproductive instinct objection to evolutionary explanations of behavior? (236)

REPRODUCTIVE INSTINCT (Continued)

[Page Reference]

Question: What is the evolutionary response to the reproductive instinct objection?

(236)

HUMAN FLEXIBILITY

Question: What is the human flexibility objection to evolutionary explanations of behavior?

Question: What is the evolutionary response to the objection concerning human flexibility?

(237)

CONSERVATISM

[Page Reference]

Question: What is the conservatism objection to evolutionary explanations of behavior?

(237)

Question: What is the evolutionary response to the conservative bias objection?

(237-238)

BIOLOGICAL DETERMINISM OR SOCIAL STRUCTURE

Complete the following:

"Most of the more intelligent criticisms of the evolutionary approach to personality boil down to one point."

"Critics are skeptical that our current behavioral tendencies are biologically ..."

(238)

BIOLOGICAL DETERMINISM OR SOCIAL STRUCTURE
(Continued)

[Page Reference]

"The psychologists Alice Eagly and Wendy Wood have provided an alternative to the evolutionary account of the differences in the criteria used by men and women in choosing mates."

Question: What is the Alice Eagly and Wendy Wood alternative explanation to the evolutionary account of mate selection differences? (238-239)

The Contribution of Evolutionary Theory

Question: What does the following statement mean?

"After the introduction of evolutionary thinking into psychology, the field will never be the same again." (239)

 **Will Biology Replace Psychology?**

Question: Why does the author believe that a purely biological approach will answer the questions of psychology at least in the foreseeable future? (239-240)

Putting It All Together: Sexual Orientation

[Page Reference]

"A novel theory by the psychologist Daryl Bem shows how anatomical, neurochemical, evolutionary, and genetic perspectives can be combined with social psychology and even sociology to explain the process that determine (sexual orientation)."

"... Bem's theory tries to account for the development of *all* varieties of sexual orientation."

Question: How does Daryl Bem identify childhood *temperaments*? (241)

Question: What does the following statement mean?

"... Bem calls this theory 'exotic becomes erotic.' " (241-243)

"The evidence for Bem's theory is reasonably good."

[Evidence] Developmental theory of sexual orientation. (234)

END