Psych 100.1H Focus Questions

Chapter 3 (pg. 51-70) – Class 5

9/6/2013

1. How do genes affect behavior by coding for proteins? How do they affect behavior through interaction with the environment?
    a. Meiosis. Genes provide the codes for proteins.
    b. Environmental effects can turn genes "on" and "off". This results in body changes that alter individual's behavioral capacity.
2. Describe the processes of mitosis and meiosis. What is a zygote and how does it relate to the development of twins?
    a. Mitosis asexual, Meiosis sexual
    b. Zygote is the fertilized egg, Monozygotic, Dizygotic twins.
3. Define dominant and recessive traits. How does this relate to the Mendelian pattern of heredity?
    a. Traits result from variation in alleles at a single gene locus that interact in a dominant-recessive manner.
4. Give two examples of single-gene (Mendelian) behavior traits. What conclusions can we draw from these examples?
    a. Fearfulness in dogs
        i. Scott and Fuller (1965)
            1. Basenji--timid
            2. Cocker Spaniel—little fear
            3. Mixed-breed—fear. Raised by both types, concluded inheritance not nurture.
    b. Specific Language Disorder
        i. Difficulty articulating words, distinguishing speech sounds from other sounds, and learning grammar.
            1. Brain scans show underdevelopment in several areas for critical language
5. Describe Tryon's classic maze bright v. maze dull experiment. What is selective breeding and how does it relate to polygenetic characteristics? What did Darwin determine about selective breeding in nature?
    a. Genetically diverse group of rats for ability to learn a particular maze. Mated brightest rats. Same next generation, smart and dumb. Each generation became more distinct.
    b. Selective breeding is choosing which traits to pass down. Affected by many genes and environmental variables. Twin studies, adoption studies. As long as inheritable differences that affect the process of survival and reproduction exist among individuals, evolution will occur.
6. What is functionalism? How do we differentiate between ultimate and proximate explanations of behavior?

a. The attempt to explain behavior in terms of what it accomplishes for the individual
b. Ultimate—functional explanations at the evolutionary level. Statements of role that behavior plays in survival and reproduction.
c. Proximate—deal not with function but with mechanism, statements of immediate conditions both inside and outside the animal that bring on the behavior.