9.20 MIT

Class #27: Sociobiology and human culture

Study questions: Alcock ch 8

1. Explain the statement (p 150), that "the brain is essentially a reproductive organ...."

2. What would the long-range evolutionary outcome be if, at a given time, most people had "blank slate" brains at birth? (p 153)

3. Conditional strategies are common in humans. Give an example of a conditional strategy in an insect, showing that insect behavior is not always rigidly pre-programmed. (p 156-159)

4. Learning mechanisms have evolved in order to increase fitness – to increase the likelihood that an individual's genes will be reproduced. As a result, these mechanisms are less general than many learning theorists have claimed. Give an example, from the learning of ingestion-related behavior in rats as studied by John Garcia. (p 162)

5. Give two or three examples of the channeled nature of learning abilities in humans. Are there similar special abilities in animals? (p 167f, 171-173)

6. The use of spices in cooking seems at first to be a human luxury with no particular adaptive value, and thus their widespread use, and the great value placed on spices in human history, presented a Darwinian puzzle. What adaptive value of spices has been approved and supported by data? (p 177-179)

7. Define the "demographic transition" in human populations. It presents a Darwinian puzzle, for which the proposed solutions are incomplete.

8. See Appendix, ch 8, Q1.

9. See Appendix, ch 8, Q2.

10. See Appendix ch 8, Q3.

Practical issues in thinking about and collecting data on adaptations

Study questions: Alcock ch 9

1. Give three examples of the misuse of scientific findings or claims in service of political goals. At least one of these examples should concern sociobiology or Darwinian theory. P 189-192

2. Formulate two statements summarizing a sociobiological finding, in the following manner: For one of them, make it sound like people ought to behave in a certain way. Then re-state the finding in a more objective way. P 193

3. Give an example of a medical issue that can be illumined by sociobiological ideas and data. P 195-196

4. Why are studies of the behavior of white-fronted bee-eaters (birds) relevant to human behavior? P 196-201

5. What does adaptationist thinking (by sociobiologists) predict about human marriage and step families? These predictions have been tested and verified. P 200-203

6. What important kind of data on male-female differences is not mentioned by Alcock (p 204ff)?

7. What is the "naturalistic fallacy" often made by people, including some scientists, who are opposed to sociobiology's studies of human nature? [Note: The philosophical expression of the naturalistic fallacy as a logical fallacy was described by the philosopher G.E. Moore (Principia Ethica, 1903). See Wikipedia, "Naturalistic fallacy".]

8. Is it true that "all rape is an exercise in power" and is not about sexual desires?

9. Answer Q1 in the Appendix for ch 9.

10. Would Alcock's sex education class, designed to reduce the incidence of rape, really work? Why or why not?

9.20 Animal Behavior

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