

9.20

Classes #7-8: Lorenz: Fundamentals of Ethology. Friday, Sep 23 and Monday Sep 26, 2005.

Reading:

Lorenz, K.Z. (1981) *The Foundations of Ethology*, New York: Springer-Verlag. Pp 107-135, 153-188, 235-253.

Study questions: pp 107-135: The centrally coordinated movement, or fixed action pattern.

1. In early writings and discussions concerning fixed motor patterns (fixed action patterns, or FAPs), the concept embraced three physiologically different functions. What are they? (Section 1)
2. What are “intention movements” in relation to fixed action patterns? Give an example from animal behavior. Also describe human intention movements with at least one example. (Section 2)
3. In the case of complex FAPs involving a series of different movements, how can we be sure that we are dealing with a single FAP rather than a series of different ones? Give two or three of Lorenz’ arguments. (Section 4)
4. Summarize Seitz’ method of dual quantification, used to assess the effectiveness of a dummy stimulus. Seitz used this method in studies of fighting behavior of one species of male fish, and it has been used for other studies as well. (Section 5)
5. One of Seitz’ findings was the “law of heterogenous summation”. What does this phrase mean?
6. Contrast “action specific fatigue” and “habituation”. (Section 6)
7. What are “tool activities” (multipurpose movements) – give examples. How is their underlying motivation – their ASP--different? (p 122-123)
8. Give examples of **threshold lowering** of releasing stimuli, and its cause. Include at least one example from human behavior. (Section 7)
9. Closely related is the phenomenon of vacuum activity, or “*in vacuo*” reactions. Define and give examples. (Section 9)
10. What phenomenon which is a major component of most instinctive behavior (FAPs) was defined by Wallace Craig in 1918? (Section 10) Define and give an example.

11. Describe examples of an “appetite for aggression” and the emotional reactions to this concept that people have shown. (Section 11)
12. Describe how the internal readiness, or ASP, varies among different FAPs. (Section 12)
13. Is it true that cats and dogs hunt only in order to eat? Describe evidence for your answer. (p 134-135)
14. Similarly, describe the hunting behavior of at least one species of bird that use prying movements. How is this related to Q13? (p 135-136)