

**Discussion Questions**  
**Week 3 Friday**

**READ:**

Tinbergen (1963) On aims and methods of Ethology  
(reprinted Animal Biology, Vol. 55, No. 4, pp. 297-321 2005)

READ one of the following 4 papers that discuss Tinbergen's original paper.

Dewsbury, D. A. (1992). "On the Problems Studied in Ethology, Comparative Psychology, and Animal Behavior." Ethology 92(2): 89-107.

Alcock, J. and P. Sherman (1994). "The Utility of the Proximate-Ultimate Dichotomy in Ethology." Ethology 96(1): 58-62.

Thierry, B. (2005). "Integrating proximate and ultimate causation: Just one more go!" Current Science 89(7): 1180-1183.

Dewsbury, D. A. (1999). "The proximate and the ultimate: past, present, and future." Behavioural Processes 46(3): 189-199.

**Prepare answers to 2 of the following 4 questions.**

Students are encouraged to work together and discuss these questions but answers should be prepared individually. Bring you answers to class **typed** but be prepared to discuss and amend your response.

- 1) Tinbergen repeatedly breaks categories down using dichotomies. Make a list or graphical representation, of the many divisions discussed by Tinbergen.  
(depending on which paper you read, complete A, B, C, or D)
    - 1A) Indicate which of these would be objectionable to Thiery and why.
    - 1B) Try to relate these categories to those proposed by Dewsbury 1992.
    - 1C) Explain Alcock and Sherman's defense of these categories.
    - 1D) What lingering concerns does Dewsbury still have in 1999.
  - 2) Describe the scientific field to which each of Tinbergen's 4 types of questions is most closely related. To what extent do you think current scientific research fields related to Animal Behavior adheres to, or transcends these boundaries?
  - 3) In the section on "Survival Value", Tinbergen laments the fact that there is often a general lack of interest in studying the problem of survival value. Why was there a lack of interest in studying the problem of survival value? According to the more recent articles you've read, do you feel that this lack of interest persists? If we were to do away with dichotomy between ultimate and proximate, how would that influence the interest, or approach to studying the problem of survival value?
  - 4) Form your own opinion on the relative value of the proximate vs. ultimate dichotomy and the use of Tinbergen's 4 questions. With the goal of describing animal behavior from all sides, define your own "areas of inquiry" in relation to the concerns raised by the authors of the more recent papers.
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