

BIO 45 -- Journal Exercise #5 -- Due Monday 2 December 2002

MORE BRAINSTORMING

As you continue making behavioral observations, think about of your ideas and those of others. This last part of the course deals head on with the maximum complexity of both ideas and animal biology. In order to sort it all you need to abandon any attempt to just memorize everything. Instead you must continually use the conceptual tools we have developed to explore the ways in which ideas and biology interact with each other. A good way to do this is to look at the same issue or phenomenon from different perspectives.

Much of the course has been about how shifts in ways of thinking (including biases) have affected what behavior people have looked for and seen, what hypotheses they have proposed, and how they have tested their ideas. From the abundance of examples encountered in the course, I want you to brainstorm on the major "shifts" in thinking (see below). You should write in a way that shows you understand the theory, the science, and the significance of the shift in thinking. At least one of these "shifts" will show up on the exam, so here is a good way to get prepared for that.

You also should get an idea of what is going on in the behavior literature these days. The third part of the assignment requires you to go to the library and find a recent article that you feel ought to be in Alcock as an example of some important topic in behavioral ecology. I have decreased the number of hours of observations to give you time to find a behavior article you can really relate to. Do not leave this assignment to the last minute!

ASSIGNMENT: Make Sure to do the Whole Assignment!

1) Continue your general observations of animals. We want to see a **minimum of 1 solid hour of observation (as 3 x 20 min or 2 x 30 min)**. Try to tie these observations into the themes in the course. Ask questions, think up answers, design experiments (even if you cannot do them). Mark one observation that reveals progress in your observation or experiment designing skills.

2) Explore alternative perspectives. The purpose of this exercise is to have you formulate a concise exploration of fairly complex shifts in ways of thinking or shifts in biases. Show us the level of understanding and synthesis you have reached in the course. This is an opportunity to put together concepts and factual information in preparation for the final exam. Each brainstorm should illustrate what is involved in the shift and what the consequences of such a shift can be (was).

A. Do at least **three** of these. Think on paper and then, when you are ready, produce a concise statement that is **not more than 200 words**. Mark **two** of them for us to read .

B. Have someone in your section read and comment on **one** of your brainstorms - and you on theirs.

What happens when we shift our focus or way of thinking from:

- Mammals → fish and/or insects as research subjects
- The perspective of the parent → The perspective of the offspring
- Short term costs and benefits → long term costs and benefits
- Measuring fitness as number of matings → Measuring it as number of surviving offspring
- A focus on males → A focus on females
- Selection as the environment → Selection as the behavior of conspecifics
- High parental investment → high degree of influence over reproduction

3) Going to the Source. Go to the library and look at articles in recent (1990 to present) animal behavior journals (Animal Behaviour (QL750 A7), Behaviour (QL750 B6), Behavioral Ecology (QL 750 B534), Behavioral Ecology and Sociobiology (QL750 B533), Ethology (BF3 Z49), and Ethology and Sociobiology (BF1 E73). Choose one that strikes your fancy and that you feel ought to be part of one of Alcock's chapters. In your journal, write down the author, year, title, journal, volume and page numbers. Make a Xerox of the abstract to paste in your journal. Then write a page or so of brainstorming that makes it clear why you think it would be a good addition to the course. Make sure to go beyond just what it says in the abstract of the paper.

NOTE: This will be your **last chance to have completed all of the journal assignments** for the semester! Failure to do so will most likely result in an NC for the course. There will be no extensions and no incompletes for the journal part of the course.