"SEEING/OBSERVING" ANIMALS ACROSS THE DISCIPLINES

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Overview

Every discipline brings different skills and emphases to the task of learning to "see," particularly within disciplinary methodology. In looking at animals, students can gain from practicing and/or discussing different exercises intended to help them observe animals as a means of collecting information. With a little coordination, faculty can assign these exercises at the same point in the semester, and then bring students together to share what they have learned.

In this exercise, students in a first year biology tutorial, and in upper division seminars in anthropology and art each do an observation assignment; the biology and art students do a modified version of one another's assignments as well. The students are then assigned to small groups that include at least one student from all three classes, instructed to meet outside of class to discuss what they learned, and report back to their classes, both in a group discussion and (for the tutorial) in writing.

The goal of this assignment is to highlight awareness that the act of seeing is not as simple as it may seem. Paying attention takes concentration and focus, and it is necessary for the success of data collection and interpretation. Assignments of this sort could be used for a variety of topics, but works particularly well for looking at animals. We describe here the roles of the exercise for each class, then outline the culminating assignment of discussion between students in different classes.

Tutorial – *Envisioning Nature* – J. Brown (Biology)

This module constitutes an important first step in the tutorial, because it introduces the theme of the entire course:

Seeing is believing. Or is it? How do we perceive Nature when it is beyond our sight, when we are not present at the right time or place, or when our human vision limits our perception? How can visual depictions of Nature and its phenomena lead to acceptance of their truth? Have we accepted false views of nature through the power of images? What is the role of aesthetics —- even beauty -- in this acceptance? This tutorial will consider the ways that Nature and its creatures have been perceived and represented, exploring the history of visualization in biological science and its interdependence with the envisioning powers of the arts.

Students will complete three "looking" assignments in consecutive sessions during the first two weeks of the semester: (1) The EOS exercise for a work of art (described below in Lesley Wright's section), (2) The "Learning to Describe Behavior" exercise on a single animal, and (3) a "Looking at a natural landscape" exercise at our Biological Field Station. They will then discuss their experiences of observing animals with the members of the other courses, though they will also have been thinking carefully about the similarities and differences of looking at different things (art, an individual animal, a place in Nature) and should bring those experiences to the discussion of disciplinary looking. They will have a short written

reflection due following the meetings. Assignment sheets for these weeks (attached separately) illustrate specifics of the assignments and assessment.

Following these initial exercises, students will spend several weeks considering the biology and physics of human vision, with respect to visual art, and consider how artists have responded to and shaped our views of animals and Nature as a whole, both historically and contemporarily. Finally, they will return at mid-course to an earlier assigned reading by Annie Dillard ("Seeing" from *Pilgrim at Tinker Creek*) to write their first major integrative essay. The second half of the course will focus on the use of visualization in biology.

Advanced Exhibition Seminar – *Captured Creatures* – Lesley Wright (Art and Faulconer Gallery)

In preparing an interdisciplinary group of upperclass students--some of whom have studied art and others of whom have not--to curate an exhibition of art and other objects, students will do an exercise to help them look closely at the art before them and to "see" it before they start interpreting it. Since they may be including other types of objects in their exhibition, this exercise is also intended to help them observe any piece of material culture carefully. They will then follow the experience of looking intently at art with the "Learning to Describe Behavior" exercise described by Jackie Brown.

EOS, or Enhance Observational Skills, is an exercise adapted from a project done at Mount Holyoke College for introductory biology students working with the Mount Holyoke College Art Museum. In turn, this exercise modifies a module developed in 1998 by Linda Friedlaender, Curator of Education at the Yale Center for British Art, in collaboration with Dr. Irwin Braverman, Emeritus Professor of Dermatology at the Yale University School of Medicine, for medical students to assist them in learning to look carefully at their patients before jumping to diagnoses. Thus it is an exercise that can be adjusted for students at any level and for any discipline where looking skills are a plus.

Before class, the students will read the Lyanda Lynn Haupt chapter "Seeing," in *Crow Planet: Essential Wisdom from the Urban Wilderness* (2009) and Barry Lopez's essay "Learning to See" from *About This Life* (1999). The Haupt discusses the history of long looking at a specimen as practiced by various natural scientists and should remind them that concentrated looking for 15 minutes is very brief by comparison. The Lopez demonstrates how many skills may be brought to bear in looking at art and the benefits of interdisciplinary looking.

To do EOS, the faculty member works with the museum to select enough works of art for groups of 3 or 4 students (e.g., 4 groups need 4 works of art). Richly detailed narrative works of art, with some ambiguity, work best. In their groups, students first spend 15 minutes silently examining the art before them, sketching, and writing out descriptive notes. They start with 5 minutes of observation at a distance from the work, then move in for 10 minutes of very close looking. The small group takes another 10 minutes to compare notes and add to them. Finally, each small group has 15 minutes to describe their piece to the others. Remind students to use "I see" and use specific, descriptive language, and not to point or use words like "I think" or "I feel."

To strengthen the exercise, class members will write a blog post focusing on clear, descriptive writing to propose an interpretation of the work of art based on details observed. Their post may also help them integrate the Haupt and Lopez readings. Mount Holyoke faculty report that it can be helpful to have a museum staff member or the professor demonstrate close looking before beginning the assignment, in order to walk through the process and separate observations from interpretations. Modeling ahead of time is especially useful with undergraduates.

Seminar – *Human Ethology* -- Vicki Bentley-Condit (Anthropology)

Attached to this document is a copy of the "Human Ethology – Break Assignment" instructions distributed to students at the beginning of summer. Although this version of this assignment is specifically aimed at a junior/senior level seminar in Human Ethology, it could be "tweaked" for other courses where the instructor wants students to gain some experience, from a naïve perspective, in designing and conducting an animal observation project. So, for example, one might keep the article/chapter readings but not have students read the Darwin book. While the project students will ultimately be discussing in their interdisciplinary groups is designed to be conducted over a break, that time period could vary from as short as a week to as long as the summer break depending on the goals of the instructor and at what point in the semester it works best.

Approximately a week and a half at the beginning of the semester will be devoted to the discussion of the mini-projects, associated readings, and the outcome of the interdisciplinary student small-group meetings. The goals of the assignment and group meetings are closely intertwined. The project assignment is to get students to start thinking about what it means to observe an animal and how one might actually approach such an assignment. The small-group meetings are to expose students to the ways in which other disciplines approach similar projects. Ultimately, students should emerge from those meetings with, first, the knowledge that the discussion of animals is a valid cross-disciplinary pursuit and, second, greater understanding of the kinds of questions different disciplines may ask, and the approaches they may take, in considering animals.

As this work in being done in a seminar, the students will not be tested on their knowledge gained. Rather, they will be expected to hone their observation skills – learning how to see/observe and what to see/observe – over the course of the semester and then apply those skills in a human observation project that they will design and conduct later in the semester. They will be expected to specifically discuss, after their small-group meetings, what they learned from those gatherings and how they expect to use what they learned. In a different type of course, one might ask the students to write a short reflection paper – perhaps focused around the questions provided on the group-meeting assignment below – that one could then evaluate as part of the assessment process.

ASSIGNMENT: "SEEING/OBSERVING" ANIMALS ACROSS THE DISCIPLINES

For this assignment, students from J. Brown's first-year Tutorial "Envisioning Nature," L. Wright's upper-level seminar "Captured Creatures" and V. Bentley-Condit's upper-level seminar "Human Ethology" will meet in small groups of 3-4 students (assigned groups; meet between September 7-September 10) to discuss the exercises they have completed on seeing/observing animals.

GOAL: To gain an appreciation of how different disciplines explore "seeing/observing" animals and the ways in which what is seen/observed can be interpreted.

QUESTIONS TO BE ADDRESSED:

What are the similarities/dissimilarities in how the three represented disciplines (anthropology, art, biology) are viewing/seeing animals?

What are their respective goals?

What are their respective methods?

What did you and the other students with whom you are meeting gain from the seeing/observing exercise you completed prior to this meeting? What do you know about animals that you did not know previously? Where were you frustrated? What would you need to be more successful? How will this help your work? What might you learn from other disciplines in how to look at animals?

Look for the following:

- Differences in degree to which disciplines describe physical characteristics of the animal.
- Differences in the level of detail disciplines might present.
- Differences in the types of interpretations disciplines might offer.

ASSESSMENT:

Take notes on your conversations with these other students and come to class prepared to discuss what you learned from your meeting on Tuesday, September 11.