

U3450/G4450: Evolution of intelligence & Consciousness

Syllabus

This seminar will systematically review the implications of Darwin's theory of evolution for contemporary studies of animal and human cognition, with particular emphasis on the evolution of language. Grades, on a 100-point scale, will be calculated as follows:

Seminar presentation:	40 points
Seminar participation:	20 points
Take home exam:	40 points

Format of course: Each student will lead a seminar on a topic of his/her choice that will be selected from the following list of alternatives.

1. Theory of evolution
2. Instinct & Conditioned behavior
3. Animal & Primate cognition
4. Ape language
5. Infant cognition
6. Human cognition & Artificial intelligence
7. Intentionality & Intersubjectivity
8. Joint attention
9. Social intelligence
10. Theory of mind
11. Evolution of language

Please see attached files that contain reading suggestions for each topic. To insure that students have an adequate amount of time to prepare their seminars, I will meet intensively with students that chose one of the earlier topics during the first two weeks of the semester. The purpose of those meetings is to provide a basis for the preparation of the seminar. I will, of course, also meet with all students prior to their seminars. I envision at least 3 meetings with each student (see below). There will be 11 seminars. I intend to have all the topics covered but, in some cases, two students will be assigned to lead a seminar on a particular date. How this works will be determined by individual preferences that will be discussed during the first meeting of the seminar on January 20 and by the number of students that actually take the course.

NOTE: TO PARTICIPATE IN THIS SEMINAR, IT IS ESSENTIAL TO APPEAR AT THE FIRST MEETING.

Background reading. Depending on the extent to which a student is familiar with a particular topic, I will assign that student enough background material to insure that he/she will be able to lead a discussion of that topic.

Selection of assigned readings for seminar. These readings will be circulated at least one week before each seminar.

Preparation of outline for talk. After discussing those aspects of a particular topic that are to be highlighted during a seminar, the student will prepare a 1-2 page outline of his/her seminar.

Annotated bibliography. Each student should select 2-3 readings that were especially helpful for his/her talk and summarize in a short paragraph what was special about that reading. The annotated bibliography should **NOT** be in the format of a book report. Instead, it should provide commentary about the innovation, incisiveness, brilliance, etc. of a particular reading. These bibliographies will be helpful for each student while they work on a take-home exam.

Seminar: The leader(s) of each topic will distribute his/her outline at the seminar and be prepared to cover the main points and to also lead the discussion.

Take home exam: About 3 weeks before the end of the seminar I will distribute an essay exam about the topics that were discussed in this seminar. The exam will be due one week after final exams begin.

Please peruse the topics that will be covered before we meet on Wednesday, September 9 to make sure that they are what you were expecting. If you're planning to take the seminar, please think about a topic that you would like to present when you give your required seminar. The readings I've attached are intended to show what **might** be relevant for your topic. Feel free to add your own favorites. We will discuss the readings, my suggestions and yours, at our first meeting for preparing your talk. At that meeting we will select readings for all members of the seminar and for your talk.

Copy of **last take home exam (Spring, 2015):** Write a critical essay on the evolution of intelligence and language that addresses the following issues.

- To what extent do animal species differ qualitatively with respect to their intelligence?
- What adaptive pressures might have selected for different types of intelligence?
- The role of dyadic and triadic interactions in the evolution of language.
- Are computers conscious and/or intelligent?
- What role did social pressure exert in the evolution of language?

Your paper should be ~10-15 double-spaced pages. When I grade it, I will be concerned with:

- . The clarity of your arguments about the positions you take on each issue rather than on whether you agree with my position, or with anyone else's.
- . Your ability to include information from your own reading and seminar discussions

During your work for this course, please keep in mind the following Faculty Rules regarding academic integrity.

The intellectual venture in which we are all engaged requires of faculty and students alike the highest level of personal and academic integrity. As members of an academic community, each one of us bears the responsibility to participate in scholarly discourse and research in a manner characterized by intellectual honesty and scholarly integrity.

Scholarship, by its very nature, is an iterative process, with ideas and insights building one upon the other. Collaborative scholarship requires the study of other scholars' work, the free discussion of such work, and the explicit acknowledgement of those ideas in any work that inform our own. This exchange of ideas relies upon a mutual trust that sources, opinions, facts, and insights will be properly noted and carefully credited.

In practical terms, this means that, as students, you must be responsible for the full citations of others' ideas in all of your research papers and projects; you must be scrupulously honest when taking your examinations; you must always submit your own work and not that of another student, scholar, or internet agent.

Any breach of this intellectual responsibility is a breach of faith with the rest of our academic community. It undermines our shared intellectual culture, and it cannot be tolerated. Students failing to meet these responsibilities should anticipate being asked to leave Columbia.

W3450 Syllabus SPRING 2016

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Seminar meets on Wednesday mornings (10:10-noon) in 200C Schermerhorn
Office hour: Wednesday 9-10 AM and other times tba.

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| 1. January | 20 | INTRODUCTION |
| 2. January | 27 | READING PERIOD (Preparation for February 17 seminar) |
| 3. February | 3 | READING PERIOD (Preparation for February 17 seminar) |
| 4. February | 10 | READING PERIOD (Preparation for February 17 seminar) |
| 5. February | 17 | THEORY OF EVOLUTION |
| 6. February | 24 | INSTINCTS & CONDITIONED BEHAVIOR |
| 7. March | 2 | ANIMAL & PRIMATE COGNITION |
| 8. March | 9 | APE LANGUAGE |
| 9. March | 23 | INFANT COGNITION |
| 10. March | 30 | HUMAN COGNITION & ARTIFICIAL INTELLIGENCE |
| 11. April | 6 | SOCIAL VS. INTELLECTUAL INTELLIGENCE |
| 12. April | 13 | INTERSUBJECTIVITY & JOINT ATTENTION |
| 13. April | 20 | THEORY OF MIND |
| 14. April | 27 | EVOLUTION OF LANGUAGE |