
Fall 2014

Dates / contact hours: 300 contact minutes per week (two 150 minute sessions per week) for seven weeks

Academic Credit: 1 course

Areas of Knowledge: SS, NS

Modes of Inquiry:

Course format: two seminars/week (one semester of contact hours compressed into 7 week format)

Instructor’s Information

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Prerequisite(s), if applicable

N/A

Course Description

Are we born with a peaceful or a violent nature? Can Kung-Fu masters or superheroes save the world? Or how about at least saving pandas and elephants from extinction? Does the hero still need to bring a diamond ring if he asks the princess to marry him? The fairy tale says in the end they live together happily ever after, but really? When should they start to have kids? Should they force their kids to learn piano? How much money can and should they save? How to convince their kids to eat more Greek salad but less French fries? In this course you will explore these real-life questions through examining how human nature has been shaped by our evolutionary history as social primates.

In Eastern and Western cultures, the conventional view on human nature is that it is uniform and a result of external, environmental factors. This philosophy has long-lasting impacts: From educating the youth to developing global strategies, decisions are made based on the notion that human behaviors are
largely shaped by educational, cultural or institutional factors. However, one important piece of human nature has long been overlooked – the biological basis. The goal of this seminar is to use critical reading of first-handed literature to help students understand and apply the biological principles of human behaviors to analyse real-life problems, and eventually design empirical tests and propose solutions.

Course Goals / Objectives

1. Describe Tinbergen’s four principles of analyzing behaviors: mechanism, function, phylogeny and development.
2. Break down the media coverage of a specific topic and assess whether and why they ignore the biological perspective
3. Examine the first-handed literature on a specific topic and formulate biological and non-biological hypotheses on human behaviors
4. Critique current research on a specific topic and propose further tests
5. Develop communicative skills to quickly, accurately and concisely communicate thoughts.
6. Develop critical thinking skills to question and evaluate scientific literature, general media and opinions from colleagues.

Required Text(s)/Resources

No textbook is required. Weekly reading assignments will be uploaded to the online teaching platform (Sakai).

Recommended Text(s)/Resources

The reading assignments for the class will be selected from the following list based on level of student reading skills in English and upon determination by the instructor of which papers are most appropriate for individual discussion units. The comprehensive nature of the list is intended as a bibliography for students interested in further reading outside the classroom or for their future studies. Ten topics have been determined by instructors, but two extra topics will be proposed by students at the beginning of the class.

Reading List (5-7 readings/meeting, see below for the tentative course schedule)

1. Intro & Violence


2. Scientific misinformation


3. Health


4. Debt


5. Mating


6. Reproduction


Ebenstein A The " Missing Girls " of China and the Unintended Consequences of the One Child Policy.


8. Education


9. Nutrition


10. Environment


11. Cheating


Nettle D, Nott K, Bateson M (2012) “Cycle thieves, we are watching you”: impact of a simple signage intervention against bicycle theft. PloS one 7:e51738. doi: 10.1371/journal.pone.0051738

Additional Materials (optional)

N/A

Course Requirements / Key Evidences

1. All students should finish the reading assignments prior to each meeting.
2. For every session, 3-4 students will lead the discussion. They are expected to provide a one-page summary of the readings, and to stimulate discussion.
3. Leaders would also be required to collect several op-ed articles from mainstream media on the topic of the week, and summarized whether a biological perspective is represented in media.
4. Students will be divided into two teams. Each team will design a research project to test a hypothesis about the biology of human behavior formulated based on class discussion. The final meeting will be a debate between two teams about the merits of each project.

5. Every student will be required to write an essay (2-4 pages) exploring the biological basis of a real-life problem. This essay is not a summary of academic literature. Instead, the format of this essay will be loosely based on news articles with a goal to communicate the role of biology in human behaviors to general public. Therefore, this format will be relatively less challenging to non-native English speakers.

Technology Considerations, if applicable

No technology is required, except for 1) regular access to online resources of academic journal articles, 2) an online teaching platform (e.g. Sakai) for students to access announcements and reading assignments, and 3) projectors for powerpoint presentation.

Assessment Information / Grading Procedures

Students will be graded based on attendance (25%), participation in discussion (25%), participation in the final class project/debate (25%), and writing assignments (weekly one-page summary + final paper, 25%). Feedback on the one-page summaries will be provided so that students can remedy any short-comings in their written analyses and so that they understand instructor expectations for the final paper. Guidance on the expectations for classroom participation will also be provided for students unused to the open seminar style of pedagogy.

Diversity and Intercultural Learning (see Principles of DKU Liberal Arts Education)

The seminar will help break cultural barriers since we focus on the biological basis of human cognition that unites all humans while explaining the origins of cultural differences. In addition, this seminar will selectively address real-life issues that either have universal impacts on personal life (e.g. obesity, health care) or have global impacts (e.g. climate change, over-population). These topics will raise common interests among all students. Finally, the seminar format is effective in encouraging oral communication among students from different cultures.

Course Policies and Guidelines

In order to do well in this class, you must keep up with the readings and attend all discussions. If you miss class due to illness, etc., it your responsibility to obtain class notes from a fellow student. Please do not hesitate to ask questions or make comments. Be engaged, but respectful. Coming to class late, leaving early, or having extended conversations with your neighbors are not acceptable behavior. Please ensure that your cell phones are turned off prior to class. We maintain the right throughout the semester to excuse any individual from class who is disturbing myself or the other students. In
addition, anyone leaving a mess (food wrappers, etc.) in class repeatedly will be penalized. Finally, the current Duke University standard for academic integrity can be found at http://www.integrity.duke.edu. You are expected to follow this standard at all times.

Tentative Course Outline or Schedule

Meeting 1: Introduction / Violence: Can Kung-Fu masters or superheroes bring us peace?
Meeting 2: Scientific misinformation: The science of anti-science
Meeting 3: Health: Why do people trust rhino horn powder but not vaccines?
Meeting 4: Economics: Why do we save almost no money?
Meeting 5: Sex: The bloody diamond ring
Meeting 6: Reproduction: When is the best time to be a mom?
Meeting 7: Conducting course projects
Meeting 8: Education: Is Tiger Mom a good mom?
Meeting 9: Nutrition: The crave for Greek salad and French fries
Meeting 10: Environment: Why did we save the pandas but fail to save the elephants?
Meeting 11: Cheating: Are there Lance Armstrong everywhere?
Meeting 12: Topic proposed and selected by students #1
Meeting 13: Topic proposed and selected by students #2
Meeting 14: Evaluation of course projects

Bibliography (optional)

Post / course codes pending
18 February 2014