

Theories of Human Uniqueness
CGSC 412 / PSYC 412
Fall 2017

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Time/Location: Mondays 3:30-5:20, SSS201
Office Hour: Mondays 2:00-3:00; SSS 205 H (inside “Panda Lab”)
Course Website: on Canvas

General Information

In what ways, if any, are humans *categorically* different from other animals? A partial list of proposed answers might include: Speech. Culture. Cooperation. Morality. Religion. Cooking. Bipedalism. Opposable thumbs. Rationality.

Or perhaps humans are not unique in any important ways. The past few decades of research with nonhuman animals have revealed the deep evolutionary roots of many of our cherished cognitive abilities, surprising both scientists and lay observers with (e.g.) sophisticated animal communication systems and prosocial behaviors.

Objectives

In this seminar, we will engage with several proposals for how human cognition differs from cognition in other animals. In doing so, we will touch on many areas in cognitive science (e.g., linguistics, ethics, modularity).

Importantly, the objective will *not* be to determine which of these proposals is correct to the exclusion of the others; instead, the objective will be to see how these proposals relate to each other, and to evaluate the extent to which each of them constitutes uniquely human cognition. Reflecting this, the organization of the course into distinct sections (e.g., “language”) suggests a greater independence of the sections than exists in reality. Thus, the most important objective of the course is building to the last meeting, the “Capstone” day, when each student re-reads self-chosen articles from earlier in the semester and integrates them with information from later in the semester.

Prerequisites

This course is intended for advanced undergraduates, and it is expected that each student will be comfortable reading, evaluating, and discussing articles in cognitive science. On the other hand, it is expected that the students will come from diverse academic backgrounds. Therefore, there are no specific prerequisites for this course. Students who wish to verify their preparation for this course should look through the readings provided in the week-by-week breakdown of the course, and should feel free to contact me for additional information.

Course Requirements and Evaluation

Half of the final grade is based on participation and reading responses. Each week, there will be a 250-word pre-class reading response, and a 250-word post-class update. Below are more details about these two types of assignments, and there are examples on the course website.

- The pre-class reading response (“Initial Thoughts”) should address the readings for the upcoming meeting, and should focus on a small number of criticisms, questions, or comments about the readings. These responses will help to structure the discussion of the upcoming meeting. There is a super-firm deadline of 24 hours before class, because I need time to read your responses and modify my plans for the discussion based on your thoughts.
- The post-class reading response (“Update”) should reference your initial thoughts and the subsequent discussion. How has your understanding of the material changed following discussion with your peers? What remaining points of confusion or questions do you have? What would you like to know more about? These are due 24 hours after class.

The other 50% of the final grade will come from a final project submitted at the end of the semester. Typically, your paper will propose an experiment related to the course content. Your final paper should be between 12 and 15 pages (unless you are a psychology major using it as part of your senior essay requirement, in which case it must be 20 pages). You will have the opportunity to receive feedback on both a one-page proposal and a full-length rough draft.

Optional Information: Missing Due Dates and Missing Class

This is the first semester I am including this information on the syllabus. I figure it is good to have it available to everyone at the beginning of the semester, so it is clear what is flexible and what is not flexible (and why!):

- Being late with pre-class assignments: This is a problem because I need to read these before class and use them to structure the discussion. If this part is late, then, you can’t get full credit for the week.
- Being late with post-class assignments: This is not as important. You should get them in within 24 hours while your memory of the discussion is still fresh, but it is fine if you are a day late with one or two of them. Also, if you have a very busy 24 hours every week following class, feel free to work out a different due date with me. (But please do not be chronically late without discussing with me first: I set up my work schedule assuming these will usually be on time.)

- Being late with the paper proposal or paper draft: This is perfectly fine! My goal with these is just to be helpful towards you having the best final draft possible. If you turn it in early or on time, I'll return comments within a week of whenever you submit. If you want to turn it in late, just e-mail me by the due date to let me know when you plan to turn it in (e.g., "1 day late" vs. "3 days late"). Importantly, if you turn it in late, I can't guarantee how quickly I'll get to it. I will aim to return comments within a week of whenever you submit PLUS the number of days late (e.g., 2 days late means I return comments within $7+2=9$ days of submission).
- Being late with final draft: Don't do this. Please don't do this. Not even a minute late. Yale says I have to give you an F. (Fortunately, I'll have a draft from you, so I will treat that as your final paper...but it will be super sad for you to not get credit for all the improvement you do between draft and late-submitted final!)
- Missing class: I assume everyone has a good reason to miss a single class sometime over the course of the semester—you don't even need to tell me what your reason is! Just e-mail me to let me know you will miss (or did miss) class and to ask for supplementary readings. I'll take a look at your pre-class reading response and provide readings that will help you update it. On the other hand, please do not miss more than one class: after all, supplementary readings can't replace your contributions to the discussion!

Statement on Academic Integrity

Please do not violate academic integrity during this course. Most notably, do not plagiarize. Please see this website for more information: <http://ctl.yale.edu/writing/wr-instructor-resources/addressing-academic-integrity-and-plagiarism>

Here is a longer plagiarism warning from the above website: The strength of the university depends on academic and personal integrity. In this course, you must be honest and truthful. Plagiarism is the use of someone else's work, words, or ideas as if they were your own. Here are three reasons not to do it:

- By far the deepest consequence to plagiarizing is the detriment to your intellectual and moral development: you won't learn anything, and your ethics will be corrupted.
- Giving credit where it's due but adding your own reflection will get you higher grades than putting your name on someone else's work. In an academic context, it counts more to show your ideas in conversation than to try to present them as *sui generis*.
- Finally, Yale punishes academic dishonesty severely. The most common penalty is suspension from the university, but students caught plagiarizing are also subject to lowered or failing grades as well as the possibility of expulsion. Please be sure to review [Yale's Academic Integrity Policy](#).

Overview of Topics and Readings by Week

- The topics and readings may change based on student interests and publication of new papers.
- The only required readings each week are those identified with a single letter, and the letters indicate the suggested reading order
- Optional papers have one of two designations: “REC” = recommended to all students, “SPEC” = potentially of specialized interest to some students

Week 1: Course Overview

September 1

Note that this is the Friday that Yale pretends is a Monday

- No readings for first day

Week 2: Introduction 1

September 11

- (A) Reading Guide
- (B) Marean. (2015). An evolutionary anthropological perspective on modern human origins. *Annual Review of Anthropology*.
- (C) Premack. (2010). Why Humans Are Unique: Three Theories. *Perspectives on Psychological Science*.
- (D) Bateson & Laland (2013). Tinbergen's four questions: an appreciation and an update. *Trends in ecology & evolution*.
- (SPEC) Boyd. (2017). The evolution of human uniqueness. *The Spanish Journal of Psychology*.

Week 3: Introduction 2

September 18

- (A) Reading Guide
- (B) Silk (2016). Evolution: Taxonomies of cognition. *Nature*.
- (C) Rosati & Warneken (2016). How comparative psychology can shed light on human evolution: Response to Beran et al.'s discussion of “Cognitive capacities for cooking in chimpanzees”. *Learning & behavior*.
- (D) Richerson et al. (2010). Gene-culture coevolution in the age of genomics. *Proceedings of the National Academy of Sciences*.

Week 4: Language 1

September 25

- (A) Reading Guide
- (B) Berwick et al. (2013). Evolution, brain, and the nature of language. *Trends in Cognitive Sciences*.
- (C) Bolhuis et al. (2014). How Could Language Have Evolved? *PLoS Biology*.

- (D) Kershenbaum et al. (2016). Acoustic sequences in non-human animals: a tutorial review and prospectus. *Biological Reviews*.

Week 5: Language 2

October 2

- (A) Reading Guide
- (B) Preuss (2012). Human brain evolution: from gene discovery to phenotype discovery. *Proceedings of the National Academy of Sciences*.
- (C) Schlenker et al. (2017). Titi semantics: Context and meaning in Titi monkey call sequences. *Natural Language & Linguistic Theory*.

Week 6: Culture 1

October 9

- (A) Reading Guide
- (B) West et al. (2015). Major evolutionary transitions in individuality. *Proceedings of the National Academy of Sciences*.
- (C) Robson et al. (2016). Division of labor in complex societies: a new age of conceptual expansion and integrative analysis. *Behavioral Ecology and Sociobiology*.
- (D) Boyd et al. (2011). The cultural niche: Why social learning is essential for human adaptation. *Proceedings of the National Academy of Sciences*.

Week 7: Culture 2

October 16

- (A) Reading Guide
- (B) Csibra & Gergely (2011). Natural pedagogy as evolutionary adaptation. *Philosophical Transactions of the Royal Society B: Biological Sciences*.
- (C) Powers et al. (2016). How institutions shaped the last major evolutionary transition to large-scale human societies. *Phil. Trans. R. Soc. B*.
- (D) Heyes. (2012). Grist and mills: On the cultural origins of cultural learning. *Philosophical Transactions: Biological Sciences*.

Week 8: Cooperation 1

October 23

- (A) Reading Guide
- (B) Burkart et al. (2014). The evolutionary origin of human hyper-cooperation. *Nature Communications*.
- (C) McAuliffe & Thornton. (2015). The psychology of cooperation in animals: An ecological approach. *Journal of Zoology*.

- (D) Hare. (2017). Survival of the friendliest: Homo sapiens evolved via selection for prosociality. *Annual review of psychology*.

Week 9: Cooperation 2

October 30

- (A) Reading Guide
- (B) MacLean et al. (2017). Individual differences in cooperative communicative skills are more similar between dogs and humans than chimpanzees. *Animal Behaviour*.
- (C) Tomasello & Vaish. (2013). Origins of human cooperation and morality. *Annual Review of Psychology*.
- (D) Sheskin et al. (2014). Life-history theory explains childhood moral development. *Trends in Cognitive Science*.

Week 10: Modularity 1

November 6

- (A) Reading Guide
- (B) Barrett. (2015). Modularity. In book *Evolutionary Perspectives on Social Psychology*.
- (C) Shettleworth. (2012). Modularity, comparative cognition and human uniqueness. *Phil. Trans. R. Soc. B*.

Week 11: Modularity 2

November 13

- (A) Reading Guide
- (B) Rosati (2017). Foraging Cognition: Reviving the Ecological Intelligence Hypothesis. *TiCS*.
- (B) Burkart et al. (2016). The evolution of general intelligence. *Behavioral and Brain Sciences*.

Week 12: Beliefs about Human Uniqueness

November 27

- (A) Reading Guide
- (B) Bilewicz, et al. (2011). The humanity of what we eat: Conceptions of human uniqueness among vegetarians and omnivores. *European Journal of Social Psychology*.
- (C) Gray et al. (2007). Dimensions of mind perception. *Science*.
- (D) Epley et al. (2013). Motivated mind perception: Treating pets as people and people as animals. In book *Objectification and (De) Humanization*.

Week 13: Capstone Day

December 4

- (A) Reading Guide
- (B) First reading you choose to re-read from earlier in the semester
- (C) Second reading you choose to re-read from earlier in the semester