

CGSC 391: CURRENT TOPICS IN COGNITIVE SCIENCE

Spring 2013

Tuesday 3:30-5:20, SSS 201

Course website: https://classesv2.yale.edu/portal/site/cgsc391_s13

Instructor: Steve Guglielmo (steve.guglielmo@yale.edu)

Office hours: Thursday 3-5 PM (office: SSS 412), and by appointment

Course Overview and Format

In Current Topics in Cognitive Science, we will explore recent empirical and theoretical discoveries in cognitive science, gaining a broad overview of several hot topics in the field. We will survey a sampling of topics from across many disciplines within cognitive science, including philosophy, social psychology, cognitive psychology, cognitive neuroscience, linguistics, and evolutionary psychology. A great deal of specific course content will be student-guided – students will have opportunities to select the topics and readings that interest them the most.

Readings for the course will consist of articles from review journals in cognitive science, including *Behavioral and Brain Sciences* and *Trends in Cognitive Sciences*. The set of readings for each week will typically consist of 50-60 pages. All readings will be available electronically via the course website.

The course is discussion-based, providing maximal opportunities for students to discuss and debate ideas, to challenge existing research, and to generate novel interpretations, connections, and predictions. Students will submit reading responses in advance of each meeting, contributing to a collective dialog about the topic and facilitating in-class discussion. Each week, one student will be responsible for leading the class discussion

Course Assignments

Reading Responses and Participation (35%)

Prior to each weekly meeting, you will submit a reading response to the course discussion board. These responses can include critiques of the authors' work (e.g., regarding methodology, interpretations, claims, etc.), synthesis of ideas across multiple readings, questions for future research, and so on. Your response each week should be around 400-500 words. Your reading responses will constitute 25% of your grade for the course, and your in-class participation will constitute another 10%.

Post reading responses to Forums section of the course website by **6 pm the day before class.**

Discussion Leading (10%)

Once during the semester, you will lead the in-class discussion. The format for doing so is flexible. You might extract the major themes that emerge from students' discussion submissions and organize the class discussion around these themes. You might synthesize the claims and perspectives from the readings and organize the discussion around how

the set fits together and informs our understanding of the topic. You might pose questions to the class regarding interpretations of data/theory or how such data/theory relate to other topics or questions. These options are of course not mutually exclusive – you might choose to implement several of these strategies in leading your discussion (or you might choose some other option). **Email me a copy of your presentation (.ppt or .pdf) by midnight the night before your presentation.**

Research Paper and Peer Review (45%)

You will write a research paper related to a topic covered in the course. The paper should be formatted in APA style and should be 12-15 pages in length (1" margins with 12-point double-spaced font; title page and references excluded from page count). Your research paper may take one of two approaches: (1) a *Research Review*, in which you review and synthesize relevant research on your chosen topic and propose/defend a thesis or argument based on this research; or (2) a *Research Proposal*, in which you propose a study (or studies) that would extend the extant research on your chosen topic, and you describe your predicted results and their implications for the literature. You will submit a brief outline of your plans for the paper about a month before the draft is due. More details about all aspects of the paper will be provided in class.

As part of your research paper assignment, you will also provide peer review feedback for your fellow students. You will read and comment on 2 of your peers' papers (consequently, you will receive feedback from 2 of your peers). This serves both to help you improve your own and your peers' writing, and also to familiarize you with the process of peer-review, which is a central part of scientific writing. In the feedback you provide, your aim is to help improve your peers' papers – you might do so by identifying passages/claims that are unclear, describing ways in which the author's arguments could be better supported by providing further argumentation or evidence, or pointing out other relevant evidence that the author should consider or address.

Together, your research paper and peer review feedback will constitute 45% of your grade for the course. In particular, the final version of your paper (revised after receiving feedback from your peers) will count for 35%; the peer review feedback that you provide will count for 10%.

Due dates: Outline (Fri 3/8), Draft (Fri 4/5), Peer review (Fri 4/19), Final paper (Wed 5/1)

Presentation of Research Paper (10%)

At the end of the semester, you will give a brief (approximately 10-minute) presentation of your research paper. This presentation will allow you to share your project with the class, to learn about other students' projects, and to practice your professional presentation skills. **Email me a copy of your presentation (.ppt or .pdf) by midnight on Monday 4/22.**

All presentations will take place during the last class of the semester, Tuesday 4/23

Topics and Schedule

1/15 (week 1): Introduction and Overview

1/22 (week 2): You Knew We'd Cover This: ESP and Philosophy of Science

- Bem, D. J. (2011). Feeling the future: Experimental evidence for anomalous retroactive influences on cognition and affect. *Journal of Personality and Social Psychology*, *100*, 407-425.
- Bones, A. K. (2012). We knew the future all along: Scientific hypothesizing is much more accurate than other forms of precognition—A satire in one part. *Perspectives on Psychological Science*, *7*, 307-309.
- Fiedler, K., Kutzner, F., & Krueger, J. I. (2012). The long way from α -error control to validity proper: Problems with a short-sighted false-positive debate. *Perspectives on Psychological Science*, *7*, 661-669.
- Giner-Sorolla, R. (2012). Science or art? How aesthetic standards grease the way through the publication bottleneck but undermine science. *Perspectives on Psychological Science*, *7*, 562-571.
- Neuroskeptic. (2012). The nine circles of scientific hell. *Perspectives on Psychological Science*, *7*, 643-644.
- Simmons, J. P., Nelson, L. D., & Simonsohn, U. (2011). False-positive psychology: Undisclosed flexibility in data collection and analysis allows presenting anything as significant. *Psychological Science*, *22*, 1359-1366.
- Wagenmakers, E. J., Wetzels, R., Borsboom, D., van der Maas, H. L., & Kievit, R. A. (2012). An agenda for purely confirmatory research. *Perspectives on Psychological Science*, *7*, 632-638.

1/29 (week 3): Different Strokes For Different Folks: Cultural Variability In Behavior

- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world. *Behavioral and Brain Sciences*, *33*, 61-135.

2/5 (week 4): Let's Argue About It: The Reason For Reason

- Mercier, H., & Sperber, D. (2011). Why do humans reason? Arguments for an argumentative theory. *Behavioral and Brain Sciences*, *34*, 57-111.

2/12 (week 5): You're Fooling Yourself: Self-Deception

- Von Hippel, W., & Trivers, R. (2011). The evolution and psychology of self-deception. *Behavioral and Brain Sciences*, *34*, 1-56.

2/19 (week 6): The Cognitive Science Of Religion and The Soul

- Bering, J. M. (2006). The folk psychology of souls. *Behavioral and Brain Sciences*, *29*, 453-462.
- Norenzayan, A., & Gervais, W. M. (2012). The origins of religious disbelief. *Trends in Cognitive Sciences*.

2/26 (week 7): Free Will and Automaticity

- Bargh, J. A. (2012). Social psychology cares about causal conscious thought, not free will *per se*. *British Journal of Social Psychology*.
- Bargh, J. A., Schwader, K. L., Hailey, S. E., Dyer, R. L., & Boothby, E. J. (2012). Automaticity in social-cognitive processes. *Trends in Cognitive Sciences*, *16*, 593-605.
- Baumeister, R. F. (2008). Free will in scientific psychology. *Perspectives on Psychological Science*, *3*, 14-19.

Miles, J. B. (2011). 'Irresponsible and a Disservice': The integrity of social psychology turns on the free will dilemma. *British Journal of Social Psychology*.

Vohs, K. D., & Schooler, J. W. (2008). The value of believing in free will: Encouraging a belief in determinism increases cheating. *Psychological Science*, 19, 49-54.

3/5 (week 8): Mental Time Travel: Thinking About the Past and the Future

Suddendorf, T., & Corballis, M. C. (2007). The evolution of foresight: What is mental time travel, and is it unique to humans? *Behavioral and Brain Sciences*, 30, 299-351.

**** Research Outline due Friday 3/8 by midnight ****

Upload .doc to Dropbox folder on course website. Use filename: *Lastname_Outline.doc*

3/26 (week 9): Social Minds: Shared Intentions And Group Cognition

Tomasello, M., Carpenter, M., Call, J., Behne, T., & Moll, H. (2005). Understanding and sharing intentions: The origins of cultural cognition. *Behavioral and Brain Sciences*, 28, 675-690.

4/2 (week 10): Revenge And Forgiveness

McCullough, M. E., Kurzban, R., & Tabak, B. A. (in press). Cognitive systems for revenge and forgiveness. *Behavioral and Brain Sciences*.

**** Draft of Research Paper due Friday 4/5 by midnight ****

Upload .doc to Dropbox folder on course website. Use filename: *Lastname_Draft.doc*

4/9 (week 11): Breaking Bias: Causes Of And Solutions To Prejudice

Dixon, J., Levine, M., Reicher, S., & Durrheim, K. (2012). Beyond prejudice: are negative evaluations the problem and is getting us to like one another more the solution? *Behavioral and Brain Sciences*,

4/16 (week 12): What Are Emotions? Brain Bases And Dimensionality

Barrett, L. F., Lindquist, K. A., Bliss-Moreau, E., Duncan, S., Gendron, M., Mize, J., & Brennan, L. (2007). Of mice and men: Natural kinds of emotions in the mammalian brain? A response to Panksepp and Izard. *Perspectives on Psychological Science*, 2, 297-312.

Hamann, S. (2012). Mapping discrete and dimensional emotions onto the brain: controversies and consensus. *Trends in Cognitive Sciences*.

Izard, C. E. (2007). Basic emotions, natural kinds, emotion schemas, and a new paradigm. *Perspectives on Psychological Science*, 2, 260-280.

**** Peer Review comments due Friday 4/19 by midnight ****

Email your peer review comments as separate text file attachments (e.g., txt, doc, rtf) – one file for each paper you reviewed – to steve.guglielmo@yale.edu

4/23 (week 13): Student Research Presentations**** Revised Final Research Paper due Wednesday 5/1 by 6 pm ****

Upload .doc to Dropbox folder on course website. Use filename: *Lastname_Final.doc*

Other Possible Topics:**Perceiving Our Own And Others' Minds**

Carruthers, P. (2009). How we know our own minds: The relationship between mindreading and metacognition. *Behavioral and Brain Sciences*, 32, 121.

Waytz, A., Gray, K., Epley, N., & Wegner, D. M. (2010). Causes and consequences of mind perception. *Trends in Cognitive Sciences*, 14, 383-388.

Language Universals

Evans, N., & Levinson, S. C. (2009). The myth of language universals: Language diversity and its importance for cognitive science. *Behavioral and Brain Sciences*, 32, 429-448.

Disorders Of The Mind: Autism And Psychopathology

Chevallier, C., Kohls, G., Troiani, V., Brodtkin, E. S., & Schultz, R. T. (2012). The social motivation theory of autism. *Trends in Cognitive Sciences*.

Anderson, N. E., & Kiehl, K. A. (2011). The psychopath magnetized: insights from brain imaging. *Trends in Cognitive Sciences*.

Bayesian Cognition

Jones, M., & Love, B. C. (2011). Bayesian Fundamentalism or Enlightenment? On the explanatory status and theoretical contributions of Bayesian models of cognition. *Behavioral and Brain Sciences*, 34, 169-188.

Oaksford, M., & Chater, N. (2009). Précis of Bayesian rationality: The probabilistic approach to human reasoning. *Behavioral and Brain Sciences*, 32, 69-84.

Consciousness

Block, N. (2007). Consciousness, accessibility, and the mesh between psychology and neuroscience. *Behavioral and Brain Sciences*, 30, 481-498.

Cohen, M. A., Cavanagh, P., Chun, M. M., & Nakayama, K. (2012). The attentional requirements of consciousness. *Trends in Cognitive Sciences*.

Descriptive vs. Prescriptive Accounts Of Behavior

Elqayam, S., & Evans, J. S. B. (2011). Subtracting “ought” from “is”: Descriptivism versus normativism in the study of human thinking. *Behavioral and Brain Sciences*, 34, 233.