

Emory University
Center for Mind, Brain, and Culture

MBC 501: Being Human: Multidisciplinary Approaches to Mind, Brain, and Culture

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Description

We are our own greatest mystery. We, our brains, our minds, and our cultures remain the most complex things that we know of in the universe. Scholars who study human brains, minds, and cultures have developed means for fathoming that complexity and for getting to the heart of questions about our identity.

This seminar will examine two sorts of inquiries. The first is a substantive inquiry -- to carry out a multi-disciplinary investigation of the species *Homo sapiens* and of our apparent hyper-sociality. The second is, basically, a philosophical inquiry -- to examine how readily the characteristic theories and research of different disciplines can (or cannot) be connected with one another in such multi-disciplinary inquiries. This includes ascertaining conditions under which multi-disciplinary inquiries in science may evolve into *inter-disciplinary* inquiries.

The substantive inquiry about *Homo sapiens* will approach our species generally and human sociality and morality in particular at a variety of levels, including the neural, the psychological, and the socio-cultural, and with a variety of methods, including, among others, the experimental, computational, comparative, observational, and ethnographic. Readings will look at being human through investigations of human brains, minds, and cultures either from a synchronic perspective or from diachronic perspectives or from both. The seminar will include scrutiny of works from a variety of disciplines, such as neuroscience, anthropology (biological, psychological, and cultural), archaeology, psychology (cognitive, clinical, developmental, comparative, and evolutionary), and philosophy.

The philosophical issue of how and why the relevant scientific disciplines hang together as complementary inquiries in the service of acquiring knowledge constitutes the seminar's secondary project. The readings, from the philosophy of science, will also provide analytical tools to guide reflection on the epistemological and metaphysical implications of the substantive readings in the seminar.

Not even narrowly focused seminars presume to be comprehensive. It goes without saying that a seminar, which undertakes as broad a set of inquiries as this one, does not involve such presumptions either. The seminar is an *introduction* to multi-disciplinary inquiry about our species and to the underlying philosophical issues that such inquiries occasion. Both the substantive and the philosophical readings are intended to be representative only.

Books and Readings

Most of the seminar's readings will be on electronic reserve through Woodruff Library. We will be reading only one book in its entirety. Consequently, it probably makes sense to purchase a copy.

Turnbull, C., (1972/1984). *The Mountain People*. London: Triad/Paladin.

Evaluation

The evaluation of the performance of students taking the seminar for a grade will turn on three factors:

- (1) 70% of the grade will arise from a 13-15 page double-spaced paper, which is due in my mailbox in the office of the Department of Psychology or my inbox via email by 4:00 on **Thursday, December 11**. Further items of note:
 - a. Be sure to *use page numbers* and to include a one inch margin at the sides and at the top and bottom of each page.
 - b. I will be happy to read and comment on outlines and drafts (especially) delivered to me not later than **Friday, December 5**.
 - c. You should use scientific style references with a reference list at the end. (This list is *not* included in the calculation of the paper's length. Do *not* use the traditional MLA/humanities format using Latin abbreviations such as *ibid.* or *op. cit.*)
 - d. You may use either footnotes or endnotes, but the pages of the latter *are* included in calculating the length of the paper.
 - e. **You should have a preliminary meeting with me to discuss the topic of your paper by no later than Friday, November 7, preferably sooner. (It is your responsibility to make an appointment with me to do so.) You must get your topic approved.**
 - f. **All students MUST submit a WORD file for their final paper, whether they submit a hardcopy of the paper as well or not.**
- (2) 20% of the grade will arise from you taking responsibility for facilitating discussion about at least one of the required readings during the semester. (Typically, this will be somewhere between one third and one half of the reading for any given session.) Considerations that are relevant include:
 - (1) your command of the reading,
 - (2) the organization and clarity that you bring to the session, and, most importantly,
 - (3) your provocation of an engaging discussion.Readings are reserved for this purpose on a first-come-first-served basis. **Students are strongly encouraged to meet with me in advance to discuss the reading and your plan for your part of the seminar session in question.** (See the addendum to this syllabus, entitled "Some Thoughts about Seminar Presentations.")
- (3) 10% of the grade will arise from your participation in seminar sessions; considerations that are relevant include attendance, quantity and quality of both contributions and questions in seminar sessions, and discussions outside of class.

Assignments: Required readings for each session are listed under the instruction "Read." Other relevant readings available are listed under the instruction "See."

September 2 Introduction and Models of Cross-Scientific Relations

September 9 The Unity of Science?

Read: McCauley, R. N. (2007). "Reduction: Models of Cross-Scientific Relations and Their Implications for the Psychology-Neuroscience Interface." In *Handbook of the*

Philosophy of Science: Philosophy of Psychology and Cognitive Science. P. Thagard (ed.). Amsterdam: Elsevier, pp. 105-120.

Fodor, J. A. (1974). "Special Sciences (or: The Disunity of Science as a Working Hypothesis)," *Synthese* 28, 97-115.

Churchland, P. M. and Churchland, P. S. (1998). "Intertheoretic Reduction: A Neuroscientist's Field Guide," *On the Contrary*. Cambridge, MA: MIT Press, 65-79.

See: Nagel, E. (1961). *The Structure of Science*. New York: Harcourt, Brace and World, chapter 11.

Dupré, J. (1983). "The Disunity of Science," *Mind* 92, 321-46.

Oppenheim, P. and Putnam, H. (1958). "Unity of Science as a Working Hypothesis," *Minnesota Studies in the Philosophy of Science--Volume II*. H. Feigl, M. Scriven, and G. Maxwell (eds.). Minneapolis: University of Minnesota Press.

September 16 Eliminativism, Reductionism, Mechanism

Read: McCauley, R. N. (2007). "Reduction: Models of Cross-Scientific Relations and Their Implications for the Psychology-Neuroscience Interface." In *Handbook of the Philosophy of Science: Philosophy of Psychology and Cognitive Science*. P. Thagard (ed.). Amsterdam: Elsevier, pp. 120-154.

Bechtel, W. (2008). *Mental Mechanisms: Philosophical Perspectives on Cognitive Neuroscience*. New York: Routledge, pp. 34-48 and 129-157.

See: Craver, C. F. (2007). "A Field Guide to Levels," *Explaining the Brain: Mechanisms and the Mosaic Unity of Neuroscience*. Oxford: Oxford University Press, chapter 5, pp. 163-195.

Bechtel, W. and Mundale, J. (1999). "Multiple Realizability Revisited: Linking Cognitive and Neural States," *Philosophy of Science* 66, 175-207.

Churchland, P. M. (1989). "Reduction, Qualia, and the Direct Introspection of Brain States," *A Neurocomputational Perspective: The Nature of Mind and the Structure of Science*. Cambridge: The MIT Press, pp. 47-66.

Churchland, P. M. (1989). "Some Reductive Strategies in Cognitive Neurobiology," *A Neurocomputational Perspective: The Nature of Mind and the Structure of Science*. Cambridge: The MIT Press, pp. 77-110.

Churchland, P. S. (1986). *Neurophilosophy: Toward a Unified Science of the Mind/Brain*. Cambridge: MIT Press, chapters 7 and 8, pp. 277-347.

September 23 Diachronic Perspectives: Evolution and Development

Read: Mithen, S. (1996). *The Prehistory of the Mind: The Cognitive Origins of Art, Religion, and Science*. London: Thames and Hudson, chapters 10 and 11, pp. 185-213.

Karmiloff-Smith, A. (1992). *Beyond Modularity: A Developmental Perspective on Cognitive Science*. Cambridge: MIT Press, chapter 1, pp. 1-29.

See: Rosenberg, A. (2006). "Making Natural Selection Safe for Reductionists," *Darwinian Reductionism: Or, How to Stop Worrying and Love Molecular Biology*. Chicago: University of Chicago Press, chapter 6, pp. 177-200.

McCauley, R. N. (2009). "Time Is of the Essence: Explanatory Pluralism and Accommodating Theories about Long Term Processes," *Philosophical Psychology* 22, 611-635.

September 30 Cultural Perspectives and Perspectives on Culture

Read: Geertz, C. (1973). "Thick Description: Toward an Interpretive Theory of Culture," *The Interpretation of Cultures*. New York: Basic Books, chapter 1, pp. 3-30.

Sperber, D. (1996). "Anthropology and Psychology: Towards an Epidemiology of Representations," *Explaining Culture*. Oxford: Blackwell Publishers, chapter 3, pp. 56-76.

Sperber, D. (1996). "Selection and Attraction in Cultural Evolution," *Explaining Culture*. Oxford: Blackwell Publishers, chapter 5, pp. 98-118.

October 7 Culture and Human Sociality (part 1)

Read: Turnbull, C. M. (1972). *The Mountain People*. New York: Simon and Schuster, pp. 11-154.

See: Heine, B. (1985). "The Mountain People: Some Notes on the Ik of North-Eastern Uganda," *Africa: Journal of the International African Institute*, Vol. 55, pp. 3--16.

Abraham, C. (2002). "The Mountain People Revisited," *New African* Issue 404, p. 34.

October 14 Fall Break

October 21 Culture and Human Sociality (part 2)

Read: Turnbull, C. M. (1972). *The Mountain People*. New York: Simon and Schuster, pp. 155-295.

See: Grinker, R. R. (2000). *The Arms of Africa: The Life of Colin M. Turnbull*. London: Palgrave Macmillan.

October 28 Mind and Human Sociality: Comparative and Developmental Psychology

Read: de Waal, Frans. (2009). "Someone Else's Shoes," *The Age of Empathy: Nature's Lessons for a Kinder Society*. New York: Harmony Books, chapter 4, pp. 84-117.

Warneken, F. & Tomasello, M. (2006). "Altruistic Helping in Human Infants and Young Chimpanzees," *Science* 311: 1301–1303.

Hamlin, J. K., Wynn, K. and Bloom, P. (2007). "Social Evaluation by Pre-Verbal Infants," *Nature* 450: 557-560.

November 4 Mind and Human Sociality: Moral Psychology

Read: Graham, Jesse, Haidt, Jonathan, Koleva, Sena, Motyl, Matt, Iyer, Ravi, Wojcik, Sean, & Ditto, Peter H. (2013). Moral foundations theory: The pragmatic validity of moral pluralism. *Advances in Experimental Social Psychology*, 47, 55-130.

Gray, Kurt, & Wegner, Daniel M. (2010). Blaming God for our pain: Human suffering and the divine mind. *Personality and Social Psychology Review*, 14(1), 7-16.

November 11 Mind and Human Sociality: A Mind Built for Social Exchange

Read: Cosmides, L. and Tooby, J. (2008). "Can a General Deontic Logic Capture the Facts of Human Moral Reasoning? How the Mind Interprets Social Exchange Rules and Detects Cheaters." In *Moral Psychology (Volume 1): The Evolution of Morality: Adaptations and Innateness*. W. Sinnott-Armstrong ed). Cambridge: MIT Press, pp. 53-119.

Fodor, J. (2008). "Comment on Cosmides and Tooby." In *Moral Psychology (Volume 1): The Evolution of Morality: Adaptations and Innateness*. W. Sinnott-Armstrong ed). Cambridge: MIT Press, pp. 137-141.

Cosmides, L. and Tooby, J. (2008). "When Falsification Strikes: A Reply to Fodor." In *Moral Psychology (Volume 1): The Evolution of Morality: Adaptations and Innateness*. W. Sinnott-Armstrong ed). Cambridge: MIT Press, pp. 143-164.

See: Buller, D. J. (2005). *Adapting Minds: Evolutionary Psychology and the Persistent Quest for Human Nature*. Cambridge: MIT Press, pp. 163-190.

November 18 Mind and Human Sociality: The Evolution of a Mind Built for Social Exchange

Read: Ridley, M. (1996). *The Origins of Virtue: Human Instincts and the Evolution of Cooperation*. New York: Penguin, chapters 6-10, pp. 103-210.

See: de Waal, F. (1996). *Good Natured: The Origins of Right and Wrong in Humans and Other Animals*. Cambridge: Harvard University Press, chapters 4-5, pp. 133-208.

Mithen, S. (1996). *The Prehistory of the Mind: The Cognitive Origins of Art, Religion, and Science*. London: Thames and Hudson, pp. 61-72, 132-146, and 185-194.

November 25 Mind/Brain and Human Sociality: Naturally Social Minds via Nurture via Culture

Read: Henrich, J., Boyd, R., Bowles, S., Gintis, H., Fehr, E., Camerer, C., McElreath, R., Gurven, M., Hill, K., Barr, A., Ensminger, J., Tracer, D., Marlow, F., Patton, J., Alvard, M., Gil-White, F., and Henrich, N. (2005). "'Economic Man' in Cross-Cultural Perspective: Ethnography and Experiments from 15 Small-Scale Societies," *Behavioral and Brain Sciences* 28, 795-855.

See: Sulloway, F. (1996). *Born to Rebel: Birth Order, Family Dynamics, and Creative Lives*. New York: Pantheon Books, pp. 20-79.

Ridley, M. (2003). "A Budget of Paradoxical Morals," *Nature via Nurture: Genes, Experience and What Makes Us Human*. New York: Harper Collins, pp. 249-275.

Jablonka, E. and Lamb, M. J. (2005). "Lamarckism Evolving: The Evolution of the Educated Guess," *Evolution in Four Dimensions: Genetic, Epigenetic, Behavioral, and Symbolic Variation in the History of Life*. Cambridge: MIT Press, chapter 9, pp. 319-344.

December 2 Brain and Human Sociality: Theory of Mind and Social Decision Making in the Brain

Read: Onishi, K. and Baillargeon, R. (2005). "Do 15-Month-Old Infants Understand False Beliefs?" *Science*. Vol. 308: 255-258.

Saxe, R. and Powell, L. J. (2006). "It's the Thought that Counts: Specific Brain Regions for One Component of Theory of Mind," *Psychological Science* 17, 692-699.

Callaghan, T., Rochat, P., Lillard, A., Claux, M.L., Odden, H., Itakura, S., Tapanya, S., and Singh, S. (2005). "Synchrony in the Onset of Mental-State Reasoning." *Psychological Science*. 16:5, 378-384.

Rilling, James and Sanfey, Alan G. (2011). "The Neuroscience of Social Decision-Making," *Annual Review of Psychology* 62, 23-48

See: Passingham, R. (2008). "Social Cognition," *What is Special about the Human Brain?* New York: Oxford University Press, pp. 173-191.

Saxe, R. and Kanwisher, N. (2003). "People Thinking about Thinking People: The Role of the Temporo-Parietal Junction in 'Theory of Mind'," *NeuroImage* 19, pp. 1835-1842.

Saxe, R. and Wexler, A. (2005). "Making Sense of Another Mind: The Role of the Right Temporo-Parietal Junction," *Neuropsychologia* 43, pp. 1391-1399.

December 9 Brain and Human Sociality: Neural Bases of Moral Emotions and the Virtues

Read: Moll, J., de Oliveira-Souza, R., Zahn, R., and Grafman, J. (2008). "The Cognitive Neuroscience of Moral Emotions." In *Moral Psychology (Volume 3): The Neuroscience of Morality: Emotion, Brain Disorders, and Development*. W. Sinnott-Armstrong (ed.). Cambridge: MIT Press, pp. 1-17.

Casebeer, W. (2008). "Processes and Moral Emotions." In *Moral Psychology (Volume 3): The Neuroscience of Morality: Emotion, Brain Disorders, and Development*. W. Sinnott-Armstrong (ed.). Cambridge: MIT Press, pp. 19-23.

Hynes, C. A. (2008). "Morality, Inhibition, and Propositional Content." In *Moral Psychology (Volume 3): The Neuroscience of Morality: Emotion, Brain Disorders, and Development*. W. Sinnott-Armstrong (ed.). Cambridge: MIT Press, pp. 25-30.

Moll, J., Paiva, M., Zahn, R., and Grafman, J. (2008). "Response to Casebeer and Hynes." In *Moral Psychology (Volume 3): The Neuroscience of Morality: Emotion, Brain Disorders, and Development*. W. Sinnott-Armstrong (ed.). Cambridge: MIT Press, pp. 31-33.

Churchland, P. M. (2007). "Toward a Cognitive Neurobiology of the Moral Virtues," *Neurophilosophy at Work*. New York: Cambridge University Press, pp. 37-60.

See:

Churchland, P. M. (1994). "Moral Perception and Moral Understanding," *The Engine of Reason, The Seat of the Soul*. Cambridge: MIT Press, pp. 143-150.

Some Thoughts about Seminar Presentations

1. Although you may spend a short time (presumably, at the beginning) summarizing the reading's contents, *this is NOT what most of the time should be allotted to*. In summarizing the contents (by whatever means you think will prove most effective), the focus should be on the principal positions and the principal (philosophical, theoretical, conceptual, mathematical, and/or empirical) arguments for those positions. It may often be helpful to reconstruct the intellectual context from which the reading has emerged.
2. ***DO NOT spend your time providing a comprehensive summary that rehearses every point in the reading. You may use Power Point, but DO NOT come with a presentation that simply goes through the text summarizing each and every move made.*** Your job is to help us focus on what is most important and what is most interesting. Choose the two or three (surely, no more than five) most important points, findings, developments, arguments, or criticisms that the text raises.
3. If the reading is especially polemical, then a brief rehearsal of the opposing position(s) might also be in order. Finding some way to summarize the opposing arguments and to tabulate the "score" and the reasons for the tabulation is one strategy. Pardon the sports metaphor, but an account of the points that are scored particularly effectively (and why) could also be helpful.
4. BUT, on the other hand, ***do NOT assume that you have to do all of the work.*** Actually, ***your major goal should be to foster a lively, constructive discussion*** among the seminar participants. So, you could come in and after highlighting the major arguments, throw it to them to hash out (with lots of penetrating and provocative questions!).
5. Whatever approach you decide to employ, *you should come prepared as the seminar's expert on the readings for which you have taken responsibility*. By that I do not mean that you have to do any, let alone loads, of secondary reading (though you are welcome to), but rather that you are going to have clear command of the reading in question. This means that if a disagreement or a question arises about its contents that the other participants cannot work out, you will be able to speak to these matters by directing us to the relevant chapter and verse (so to speak) in the text.
6. You can use whatever means you want to stir up discussion. **If you use a handout, keep it to one side of a single page** that focuses on the two or three items (not more than five!) that you think are really most important about the material under discussion. (Note that those most important items might include what you take as the most important criticisms of the positions.)
7. Informed, careful criticism of the reading is legitimate and welcome, however, your criticisms of any readings will carry much more credibility if you have first unequivocally demonstrated that you thoroughly understand the position you are criticizing.
8. Coming in, be prepared psychologically for the fact that you are going to get interrupted more than you probably expect and that things will not go either as smoothly or as efficiently as you are planning. Also, be prepared emotionally for the fact that I may well be the person who will be interrupting you most frequently. NOTE, do not assume that my comments are always critical. (All too often I find myself exhorting discussion leaders, in effect, to attend more carefully to the first sentence of item 4 above.)
9. You are encouraged to meet with me in advance of the session to talk over what you plan to do and how you plan to do it.