

Philosophy of Biology

(Graduate Seminar: Philosophy 290)

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Winter 2014; Humanities 1, room 400; 12-3 pm Tuesdays

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In this graduate seminar, we shall explore philosophical questions and thematics surrounding the biological sciences as they manifest themselves at three levels of organization: (i) genetics/body, (ii) mind, and (iii) society. The biological sciences are pertinent to each of these levels (and “are” the first level). This kind of multi-level and multi-dimensional investigation will allow us to see the biological sciences in context, and to bring in normative and political concerns.

Each of the three sections of this class addresses one level of organization, and is divided into two themes. Note that *methodology* figures prominently in the assigned material for this course. There will also be ample time and space for pause. At the end of each section, we shall spend one class period without readings, for presentations and discussions of the previous two weeks. This will allow us to integrate themes, clarify confusions, and touch base.

COURSE ASSIGNMENTS

1. Weekly “think pieces” of no more than 1 page (and possibly less). To be read/discussed in class.
2. One presentation (2-3 pages) during one of three “touch base” sessions (Weeks 4, 7, and 10).
3. A term paper of approx. 10 pages. Rough draft due Week 8-ish. Final draft due during finals week. (You *must* talk to me if you wish to write on a topic of your own choosing, beyond the given prompts.)
4. Class participation.

GENERAL CLASS MOTTOS

+ *Prøv igen, spørg en ven, spørg en voksen.*

+ “Back to the Academy” – absolute minimal electronic communication.

+ Consult the *Stanford Encyclopedia of Philosophy*. <http://plato.stanford.edu/contents.html>

WRITING ADVICE

Writing is essential to our craft as philosophers. Your writing can always improve. Here are some relevant online resources. Read and enjoy!

1. Guidelines for philosophical writing (first one is in course packet):

<http://www.public.asu.edu/~dportmor/tips.pdf>

<http://www.hps.cam.ac.uk/research/wp.html>

<http://www.jimpryor.net/teaching/guidelines/writing.html>

2. Guidelines for essay writing, in general:

<http://www.westmont.edu/~work/material/writing.html>

3. Oxford English Dictionary. You have online to this extraordinary resource at:

<http://www.oed.com.oca.ucsc.edu/>

4. "Politics and the English Language." Please read this funny and useful essay by George Orwell (author of *1984*) here:

<http://www.resort.com/~prime8/Orwell/patee.html>

5. From the inimitable Kurt Vonnegut (in course packet):

<http://knh-lanl.hansonhub.com/pc-24-66-vonnegut.pdf>

BOOKS TO PURCHASE (All available at the Literary Guillotine):

1. Levins, Richard, and Richard Lewontin. 1985. *The Dialectical Biologist*. Cambridge, Massachusetts: Harvard University Press.
2. Oyama, Susan. 2000. *The Ontogeny of Information: Developmental Systems and Evolution*. 2nd ed. Durham: Duke University Press.
3. Rose, Nikolas, and Abi-Rached, Joelle M. 2013. *Neuro: The New Brain Sciences and the Management of the Mind*. Princeton University Press.
4. Course packet (will be available in early January 2014).

WARNING

Academic misconduct will not be tolerated. Please consult:

http://www.ucsc.edu/academics/academic_integrity/index.html

READING LIST

Week 1 (Thursday Jan 9): INTRODUCTION + Levins, Richard; Lewontin, Richard. 1985. *The Dialectical Biologist*. [Selections]

I. BIOLOGY AND GENETICS/BODY

Adaptationism (Week 2; Jan 14):

1. Gould SJ, Lewontin R. 1979. The Spandrels of San Marco and the Panglossian Paradigm: A Critique of the Adaptationist Programme. *Proc. R. Soc. London, Series B* 205: 581-598.
2. Lloyd, EA. 1993. Pre-Theoretical Assumptions in Evolutionary Explanations of Female Sexuality. *Philosophical Studies* 69: 139-153.
3. Godfrey-Smith P. 2001. Three Kinds of Adaptationism. In: *Adaptationism and Optimality*. Orzack SH and Sober E (eds.), Cambridge University Press, pp. 335-357.

Reductionism (Week 3; Jan 21):

1. Oyama, Susan. 2000. *The Ontogeny of Information: Developmental Systems and Evolution*. 2nd ed. Durham: Duke University Press. [Introduction, Chapters 2: "The Origin and Transmission of Form: The Gene as the Vehicle of Constancy," 6: "Variations on a Theme: Cognitive Metaphors and the Homunculoid Gene," and 7: "The Ontogeny of Information"]
2. Cartwright, N. 1999. *The Dappled World: A Study of the Boundaries of Science*. Cambridge: Cambridge University Press. [Introduction and Chapter 1: "Fundamentalism versus the patchwork of laws" approx. 35 pp.]

Week 4 (Jan 28): Touch Base.

II. BIOLOGY AND MIND

Embodied Cognition (Week 5; Feb 4):

1. Wilson, Margaret. 2002. Six views of embodied cognition. *Psychonomic Bulletin & Review* 9: 625-636.

http://people.ucsc.edu/~mlwilson/publications/Embodied_Cog_PBR.pdf

2. Winther, Rasmus Grønfeldt. 2011. Consciousness Modeled: Reification and Promising Pluralism. *Pensamiento* (Madrid, Spain) 67 (254): 617-630.

<http://philpapers.org/rec/WINCMR>

Methodology (Biology and Mind) (Week 6; Feb 11):

1. Rose, Nikolas; Abi-Rached, Joelle. 2013. *Neuro. The New Brain Sciences and the Management of the Mind*. Princeton University Press. [Selections]

2. Hacking, Ian. 2007. Kinds of People: Moving Targets. *Proceedings of the British Academy* 151: 285-318.

Week 7 (Feb 18): Touch Base.

III. BIOLOGY AND SOCIETY

Race (Week 8; Feb 25):

1. Mills, Charles W. 1988. "But What Are You Really?" In Mills, *Blackness Visible: Essays on Philosophy and Race*, pp. 41-66, Cornell University Press.

2. Winther, Rasmus Grønfeldt. 2014. The Genetic Reification of 'Race'? A Story of Two Mathematical Methods. Forthcoming in *Critical Philosophy of Race*. <http://philpapers.org/rec/WINTGR> Previously appeared as 2011. "¿La cosificación genética de la 'raza'? Un análisis crítico", in *Genes (&) mestizos. Genómica y raza en la biomedicina mexicana*. (C. López Beltrán, ed.), UNAM, Mexico City (in Spanish).

Methodology (Biology and Society) (Week 9; March 4):

1. Lloyd, GER. 2010. History and Human Nature: Cross-cultural Universals and Cultural Relativities. *Interdisciplinary Science Reviews* 35: 201-14.

2. Viveiros de Castro, E. 2004. Perspectival Anthropology and the Method of Controlled Equivocation. *Tipiti. Journal of the Society for the Anthropology of Lowland South America*. 2: 3-22.

3. Levins, Richard; Lewontin, Richard. 1985. *The Dialectical Biologist*. Cambridge, Massachusetts: Harvard University Press.[Selections]

Week 10 (March 11): Touch Base & Wrap-Up.