

PH551 Research Seminar in the Philosophy of Natural Science: Evolution and Human Nature
Department of Philosophy, Logic and Scientific Method
London School of Economics

Teachers responsible

Dr Oliver Curry (o.s.curry@lse.ac.uk)

Dr Helena Cronin

<http://www.lse.ac.uk/darwin>

Content

This series of seminars reviews recent developments in evolutionary theory, and considers their relevance to understanding human affairs. Topics covered include: modern evolutionary theory, evolutionary psychology, sex and sex differences, cooperation and morality, and politics and law. The course will be run as a reading group, with students giving short presentations on the specified readings.

Teaching

Seminars take place on Wednesdays, 2pm-4pm, in weeks 2, 4, 6, 8 & 10 of Lent Term 2008. The first seminar will take place on Wednesday 16th January 2008. The seminars will be held in room T206, CPNSS, Lakatos Building. (Map:

<http://www.lse.ac.uk/resources/mapsAndDirections/findingYourWayAroundLSE.htm>)

Availability

The course is open to all PhD students and staff in all disciplines, at LSE and beyond. However, numbers are limited. If you would like to attend, please send an email expressing your interest to Dr Curry (o.s.curry@lse.ac.uk) by Friday 30th November 2007.

Assessment

LSE Philosophy PhD students can register to take the course for credit. Assessment consists of one essay, of up to 4,000 words. To register, contact Rebecca Matthams (Departmental Manager, Department of Philosophy, Logic and Scientific Method, R.Matthams@lse.ac.uk).

Course Outline

Background reading

Dawkins, R. (1976/2006). *The Selfish Gene* (3rd ed.). Oxford: Oxford University Press.

Pinker, S. (2002). *The Blank Slate: The modern denial of human nature*. London: Allen Lane.

Week 1: Genes and individuals in modern evolutionary theory

It is common to think of individuals using genes to make more individuals. Gene-level thinking reverses this; it envisages genes as using individuals to make more genes. This perspective raises a host of new questions about the individual in biology. Why did replicators form individuals in the first place? To what extent do individuals remain the battleground of genetic civil wars? How do the different parts of an animal work together?

Background reading

Maynard Smith, J., & Szathmáry, E. (1999). *The Origins of Life: From the birth of life to the origin of language*. Oxford: Oxford University Press. (Especially Chapter 10)

Readings for presentations

i) Burt, A., & Trivers, R. L. (2006). *Genes in Conflict: The biology of selfish genetic elements*: Harvard University Press. (Chapter 1: Selfish Genetic Elements; Chapter 12: Summary and Future Directions.)

ii) Dawkins, R. (1982). *The Extended Phenotype: The gene as the unit of selection*. Oxford: W. H. Freeman. (Chapter 14: Rediscovering the Organism.)

iii) Brooks, R. A. (1999). *Cambrian Intelligence: The early history of the new AI*. Cambridge, Massachusetts: MIT Press. (Chapter 5: Intelligence without Representation)
<http://people.csail.mit.edu/brooks/papers/representation.pdf>

Week 2: Evolution and human nature

The theory and methods of evolutionary biology are increasingly being used to shed light on human psychology and behaviour. What is the role of the 'ancestral environment' in evolutionary psychology? What does an 'adaptationist' perspective involve? What does evolutionary psychology reveal about human nature?

Background reading

Cosmides, L., & Tooby, J. (1997). *Evolutionary Psychology: A primer*
<http://www.psych.ucsb.edu/research/cep/primer.html>

Readings for presentations

i) Tooby, J., & DeVore, I. (1987). The reconstruction of hominid behavioral evolution through strategic modeling. In W. G. Kinzey (Ed.), *The Evolution of Human Behavior: Primate models* (pp. 183-237). Albany, New York: SUNY Press
<http://www.psych.ucsb.edu/research/cep/papers/Reconst.pdf>

ii) New, J., Cosmides, L., & Tooby, J. (2007). Category-specific attention for animals reflects ancestral priorities, not expertise. *Proceedings of the National Academy of Sciences*, 104, 16598-16603.
<http://www.psych.ucsb.edu/research/cep/papers/Newpnas2007.pdf>

iii) Kurzban, R., Tooby, J., & Cosmides, L. (2001). Can race be erased? Coalitional computation and social categorization. *Proceedings of the National Academy of Sciences*, 98(26), 15387-15392.
<http://www.psych.ucsb.edu/research/cep/papers/eraserace.pdf>

Week 3: Sex and sex differences

Why reproduce sexually -- passing on only half your genes to each offspring, rather than cloning yourself and passing on all of them? And why two sexes? What are the characteristic male—female differences that occur in all sexually-reproducing species? Why do men use maps and women use landmarks? Why does the lion's share of Firsts and prizes go to males even though, on average, men are no brighter than women? Is it true that men are from physics, women from psychology?

Background reading

Pinker, S. (1997). *How the Mind Works*. New York, W W Norton, pp. 461—93

Readings for presentations

i) New, J., Krasnow, M., Truxaw, D., & Gaulin, S. J. C. (2007). Spatial adaptations for plant foraging: Women excel and calories count. *Proc Royal Society: Biological Sciences*, 274, 2679--84.
http://www.psych.ucsb.edu/research/cep/papers/farmers_market_07.pdf

ii) Deary, I. J., Thorpe, G., Wilson, V., Starr, J. M., & Whalley, L. J. (2003). Population sex differences in IQ at age 11: The Scottish mental survey 1932. *Intelligence*, 31, 533--42.

iii) Browne, K. R. (2006). Evolved sex differences and occupational segregation. *Journal of Organizational Behavior*, 27 (2), 143--62.

Week 4: Cooperation and morality

Evolutionary theorists have identified a number of ways in which 'selfish' genes can give rise to 'selfless' individuals. Kin altruism, mutualism, reciprocal altruism and conflict resolution explain a range of social, cooperative and altruistic behaviour in nature. What do such theories predict when it comes to human morality? What is the relationship between cooperation and morality? Is incest immoral? Could 'trust' be bottled? Is moral philosophy being replaced by moral science?

Background reading

Ridley, M. (1996). *The Origins of Virtue*: Penguin.

Readings for presentations

i) Lieberman, D., Tooby, J., & Cosmides, L. (2007). The architecture of human kin detection. *Nature*, 445, 727-731.

ii) Kosfeld, M., Heinrichs, M., Zak, P. J., Fischbacher, U., & Fehr, E. (2005). Oxytocin increases trust in humans. *Nature*, 435, 673-676.
<http://www.iew.unizh.ch/home/kosfeld/ottruste.html>

iii) Haidt, J. (2007). The new synthesis in moral psychology. *Science*, 316, 998-1002.

Week 5: Politics and law

All political theory relies on a theory of human nature, whether implicit or explicit. What difference might an evolutionary account of human nature make to political thought? Are political preferences innate? Are humans designed for democracy? And how do political animals make law?

Background reading

Dutton, D. (2003). Darwin and political theory. *Philosophy and Literature*, 27, 241-254.
http://denisdutton.com/rubin_review.htm

Readings for presentations

i) Alford, J. R., Funk, C. L., & Hibbing, J. R. (2005). Are political orientations genetically transmitted? *American Political Science Review*, 99(2), 153-167.
<http://www.apsanet.org/imgtest/GeneticsAPSR0505.pdf>

ii) Conradt, L., & Roper, T. J. (2007). Democracy in animals: the evolution of shared group decisions. *Proc. Royal Soc.*, 274(1623), 2317-2326.

iii) Cosmides, L., & Tooby, J. (2006). Evolutionary psychology, moral heuristics, and the law. In G. Gigerenzer & C. Engel (Eds.), *Heuristics and the Law (Dahlem Workshop Report 94)*. Cambridge, MA: MIT Press.

<http://www.psych.ucsb.edu/research/cep/papers/moral%20heuristics%20and%20law06.pdf>