

V83.0093, Fall 2009

PHILOSOPHICAL APPLICATIONS OF COGNITIVE SCIENCE

COURSE STRUCTURE

Texts Readings are all available on Blackboard

Content We will discuss the relevance of recent discoveries about the mind to philosophical questions about metaphysics, logic, and ethics. Most of the class concerns metaphysics. The questions include: What is causation? Is there a right way to “carve up” the world into categories? Why do we see the world as consisting of objects in places? Are the rules of logic objective or just the way we happen to think? Is there such a thing as objective right and wrong?

Evaluation The coursework for the class consists of five papers. (There is no mid-term or final exam.) Each of these papers is either (a) a 5 to 6-page paper on a topic you haven’t written on before, or (b) a revision and extension, to 10 to 12 pages, of a previous 6-page paper. So you’ll write at least three of these 6-pagers, and then either zero, one, or two 12-pagers (with 6-pagers making up the balance for five papers total).

- The due dates are: October 5th, October 26th, November 9th, November 30th, December 17th. The first four are marked on the list of readings; the last is the first day of exams.

Contact Info Office hours are Wednesdays 11:00 to 12:30, after class, and by appointment.

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READINGS

Introduction

- Sep 9 First class: Overview & administration
- Sep 14 The mind's world
- ▷ Locke, J., *Essay*, Book I, chap. 2, 48–58
 - ▷ Kant, I., *Critique of Pure Reason*, 106–113
 - ▷ Whorf, B. L., "The relation of habitual thought and behavior to language", 134–152 (the rest is optional)
- Sep 16 The perception and metaphysics of color
- ▷ Lakoff, G., *Women, Fire, and Dangerous Things*, 24–30
 - ▷ Mehler, J. and E. Dupoux, *What Infants Know*, 53–59

Causation

- Sep 21 The philosophical psychology of causality: Empiricism
- ▷ Locke, J., *Essay*, Book II, chap. 21, §1–3, 233–234
 - ▷ Hume, D., *Enquiry*, section VII, 60–79
- Sep 23 The philosophical psychology of causality: Kant
- ▷ Kant, I., *Critique of Pure Reason*, 222–223, 306–312
 - ▷ Look at Kant, I., *Critique of Pure Reason*, 172–174, 178–182 (on time, from "Space" reading)
- Sep 28 Are causal concepts innate?
- ▷ Leslie, A. M., "ToMM, ToBy, and agency: Core architecture and domain specificity"

Categories

- Sep 30 Philosophical and empiricist psychology of natural kinds
- ▷ Locke, J., *Essay*, Book II chapters 2, 3, 12, 23:1–19, 24; Book III chapter 3:12–20 (pp. 119–22, 163–6, 295–307, 414–20)
 - ▷ Smith, E. E., "Concepts and categorization", 3–19
 - ▷ Lakoff, G., *Women, Fire, and Dangerous Things*, 32–38

- Oct 5 Concepts of natural kinds: Essentialism ◁ Due date
 - ▷ Keil, F. C., *Concepts, Kinds and Conceptual Development*, 183–194, 307–309
 - ▷ Strevens, M., “The essentialist aspect of naive theories”, §§1–3
- Oct 7 Minimalism and reference
 - ▷ Strevens, M., “The essentialist aspect of naive theories”, §§4–5
 - ▷ Devitt, M. and K. Sterelny, *Language and Reality*, 67–75

Causal Thinking

- Oct 12 Naive physics
 - ▷ Clement, J., “A conceptual model discussed by Galileo and used intuitively by physics students”
- Oct 14 Children’s causal aptitude
 - ▷ Schulz, L., T. Kushnir, and A. Gopnik, “Learning from doing: Intervention and causal inference”
- Oct 19 Why think causally?
 - ▷ Strevens, M., “Why represent causal relations?”, §§1, 4, 5

Space

- Oct 21 Philosophical psychology of space
 - ▷ Locke, J., *Essay*, Book II, chap. 9, §7–10; chap. 13, §7–10 (pp. 145–147, 169–171)
 - ▷ Kant, I., *Critique of Pure Reason*, 172–184
- Oct 26 Early psychology of space ◁ Due date
 - ▷ Descartes, R., *The World and Other Writings*, 131–9
 - ▷ Poincaré, H., *Science and Method*, 93–116
- Oct 28 Neuroscience of space
 - ▷ Stein, B. E. and M. A. Meredith, *The Merging of the Senses*, 87–98, 111–122
 - ▷ Clark, A., “Visual experience and motor action: Are the bonds too tight?”, 495–505
- Nov 2 Anthropology of space
 - ▷ Levinson, S. C. and P. Brown, “Immanuel Kant among the Tenejapans: Anthropology as empirical philosophy”
- Nov 4 Linguistics of space
 - ▷ Lakoff, G., *Women, Fire, and Dangerous Things*, 313–317
 - ▷ Jackendoff, R. and B. Landau, “Spatial language and spatial cognition” 99–112, 118–123

Objects

- Nov 9 Philosophical psychology of objects ◁ Due date
- ▷ Look over Locke, J., *Essay*, Book II, chap. 23, §1–19 (from “Categories” reading)
 - ▷ Quine, W. V. O., *The Pursuit of Truth*, 1–6, 23–36
- Nov 11 Objects and infants
- ▷ Spelke, E., “Principles of object perception”

Logic

- Nov 16 Approaches to the philosophy of logic
- ▷ Carroll, L., “What the tortoise said to Achilles”
- Nov 18 Psychology of logic
- ▷ Holland, J. H., K. J. Holyoak, R. E. Nisbett, and P. R. Thagard, *Induction*, 265–284

Ethics

- Nov 23 Is moral thinking innate?
- ▷ Premack, D. and A. J. Premack, “Moral belief: Form versus content”, 149–161 (the rest is optional)
 - ▷ Brown, D. E., *Human Universals*, chap. 6, 130–141
- Nov 25 Thanksgiving preparation – no classes
- Nov 30 The evolution of distributive justice ◁ Due date
- ▷ Trivers, R. L., “The evolution of reciprocal altruism”
 - ▷ Skyrms, B., *Evolution of the Social Contract*, chap. 1, 1–21
- Dec 2 The anthropology of distributive justice
- ▷ Strevens, M., “A theory of distributive justice”, §§1–4
- Dec 7 Overflow & discussion

Probability

- Dec 9 Maxwell’s Discovery
- ▷ Holton, G., *Introduction to Concepts and Theories in Physical Science*, second edition., 362–367
 - ▷ van Fraassen, B. C., *Laws and Symmetry*, 296–300; 302–306
- Dec 14 Infants’ Probabilistic Aptitude
- ▷ Xu, F. and V. Garcia, “Intuitive statistics by 8-month-old infants”

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