Philosophy 290: Probability as Constraint and Representation

Spring 2012 – Thursday 2-4

This is a course about the use of probability in epistemology. Probability imports assumptions about and imposes constraints on any subject matter you use it to describe. Some of these constraints are well-known, but their implications are not always known or observed. In others it is an open question how much leeway probability allows. We discuss the fate of holism, foundationalism, empiricism, introspective access, self-knowledge, belief in logical truth, and closure of knowledge under known implication. under a probabilistic description. We consider the consequences of the globality of the P function and of extreme probabilities. We discuss artifacts of representation and how to think about idealization in philosophy. Idealizations are false models, so how can one be better than another, or any of them illuminating?

Professor Roush
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(Please do not expect to reach me by phone or phone message.)
Office hours: Tuesday 10-10:45 and 1-2:30, and by apt.

Logistics: For those taking the course for credit, the final written requirement is a 12-15 page paper due at the end of the semester (date tba), and there is a requirement to give a presentation to the seminar at some point during the semester. A tentative topic for your presentation will be chosen before spring break. A one-page written proposal for your term paper will be due at the meeting after the break. Your presentation and term paper should be on the same topic, broadly speaking, but you can ask for an exception.

This class has a website on bspace.berkeley.edu in which I will post the syllabus, etc.

Those not registered for the course, and not graduate students or faculty in the philosophy department, should talk to me about attending.

There will be no interruptions when any attendee is speaking.

Readings:

Assigned readings are indicated below. Many are available online through a Berkeley connection, and for those that are not, either they are in the book *Degrees of Belief*, edited by Franz Huber and Christoph Schmidt-Petri, Springer, 2009, available for $28 new on Amazon, or I will make them available to you under fair use.

Weeks 1, 2: January 19, 26

Introduction to Probability and Probabilism: Implications and Successes, Pros and Cons (explanation, confirmation, falsification, cross-induction, variety of evidence, diminishing return on repetition of experiments, Dutch Books, etc.)

Handout on probability axioms

"Probability and the Art of Judgment," chapter 4, *Probability and the Art of Judgment,* Richard C. Jeffrey, Cambridge: Cambridge University Press, 1992, 44-76.

"Arguments for – Or Against – Probabilism?" Alan Hájek, in Franz Huber, Christoph Schmidt-Petri eds., *Degrees of Belief.* Springer, 2009, 229-251.

> (optional) "Belief and Degrees of Belief," Franz Huber, in Franz Huber, Christoph Schmidt-Petri eds., *Degrees of Belief.* Springer, 2009, 1-33.

Weeks 3, 4 – February 2, 9

Extreme Probabilities: Radical Probabilism and Empiricism

"Radical Probabilism: A User's Manual," Richard C. Jeffrey, *Philosophical Issues,* Volume 2, Rationality in Epistemology (1992), pp. 193-204. <available online:
 http://www.jstor.org/stable/1522862 >

 "Confirmational Holism and Bayesian Epistemology," David Christensen, *Philosophy of Science*, Vol. 59, No. 4 (Dec., 1992), 540-557. <available online: http://www.jstor.org/stable/188129?origin=JSTOR-pdf >

To get the most out of these meetings, familiarize yourself with Quine's "Two Dogmas of Empiricism" and Carnap's "Empiricism, Semantics, and Ontology."

Week 5 – February 16

Extreme Probabilities: Old Evidence

Theory and Evidence, Clark Glymour, 85-93. Princeton: Princeton University Press, 1980.

"Measures of Confirmation," David Christensen, *Journal of Philosophy* (Sept. 1999): 437-461.   <available online: http://www.jstor.org/stable/2564707?origin=JSTOR-pdf >

"On Explication," Rudolf Carnap, chapter 1 of *Logical Foundations of Probability*. Chicago: University of Chicago Press, 1950, 1-9.

Week 5 – February 16: *Meeting with professor to discuss topics for Presentation/Term Paper*

Week 6 – February 23 – Justin Vlasits

Extreme Probabilities: Logical Infallibility

"Old Evidence and Logical Omniscience in Bayesian Confirmation Theory, *Testing Scientific Theories*, Minnesota Studies in the Philosophy of Science, Volume X, John Earman ed., 1983, 99-131.

"Slightly More Realistic Personal Probability," Ian Hacking, *Philosophy of Science*, Vol. 34, No. 4 (Dec., 1967), pp. 311-325   <available online: http://www.jstor.org/stable/186120?origin=JSTOR-pdf >

"Epistemic Space for Non-ideal Agents," Justin Vlasits, manuscript

Weeks 7, 8 – March 1, 8

Extreme Probabilities: Infallibility about One's Beliefs, Miller's Principle

"Higher Order Degrees of Belief," Brian Skyrms, in *Prospects for Pragmatism Essays in Memory of F.P. Ramsey*, 109-137. Cambridge: Cambridge University Press, 1980.

"The Re-Calibrating Bayesian," Roush manuscript

> (optional) "Does Murphy's Law Apply in Epistemology? Self-Doubt and Rational Ideals," in Tamar Szabo Gendler and John Hawthorne eds., *Oxford Studies in Epistemology, Volume 2*, 2007, 3-31.

Week 9 – March 15 – Julian Jonker (tentative)

Elga, Adam (2010). "Subjective probabilities should be sharp," *Philosopher's Imprint* 10: 1-11, www.philosophersimprint.org/010005/.

"Rational Decision-making with Unsharp Credences," Julian Jonker, manuscript

Week 10 – March 22

Extreme Probabilities: Outright belief and degrees of belief

 "Two Models of Belief," "Deductive Constraints: Problem Cases, Possible Solutions," chapters 2, 3 of *Putting Logic in its Place*, David Christensen. Oxford: Oxford University Press, 2004. <available through *Oxford Scholarship Online*>

"Partial Belief and Flat-out Belief," Keith Frankish, in Franz Huber, Christoph Schmidt-Petri eds., *Degrees of Belief*. Springer, 2009, 75-93.

March 22: *1-page Term Paper Proposal due to Professor Roush*

No meeting March 29ᵗʰ – *spring break*

Weeks 11, 12 – Epistemic Closure – Wes Holliday and Sherri Roush

April 5 – Probabilistic Tracking vs. Subjunctive Conditionals

Roush, "Closure on Skepticism," *Journal of Philosophy*, 2010, "Sensitivity and Closure," *The Sensitivity Principle in Epistemology*, Cambridge University Press, 2012, "Tracking: More and Better," Ch. 3 of *Tracking Truth*, OUP 2005, Oxford Scholarship Online.

Holliday, "Epistemic Closure and Epistemic Logic 1," 2012.

April 12 – Probabilistic Representations vs. Qualitative Representations

Wes Holliday, "Notes on Pre-Orders and Popper Functions," ms.

Franz Huber, "Belief Revision Theory," *Philosophy Compass* (2012)

Week 13 – April 19   Roush out of town – meet anyway if you like.

Week 14 – April 26

Possible topics:

Idealization – What is it?

"On Explication," Rudolf Carnap, Chapter 1 of *Logical Foundations of Probability*. Chicago: University of Chicago Press, 1950, 1-9.

"Three Kinds of Idealization," Michael Weisberg, *Journal of Philosophy* 2007: 639-659.   <available online: http://www.journalofphilosophy.org/articles/issues/104/12/2.pdf >

Idealization: How can a false model do the job?

"Coherence as an Ideal of Rationality," Lyle Zynda, *Synthese*, Vol. 109, No. 2 (Nov., 1996), pp. 175-216.   <available online: http://www.jstor.org/stable/pdfplus/20117566.pdf >

Idealization: Revision or revisionism?

"Putting Epistemology into Practice: Normative Disputes in Psychology,"
"Putting Epistemology into Practice: Positive Advice,"
chapters 8, 9, of *Epistemology and the Psychology of Human Judgment*, Michael A. Bishop and J.D. Trout, 119-153. Oxford: Oxford University Press, 2005. <available through *Oxford Scholarship Online*>

Week 15 – May 3 – optional meeting