



NATURAL KINDS (PHI 6406)

Fall 2021 Graduate Seminar
Tuesdays 3:05-6:05

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Course Description: This seminar will explore metaphysical and epistemological questions surrounding natural kinds, with a focus on their role in science: What distinguishes natural kinds from non-natural or arbitrary kinds? Should we be realists or conventionalists about scientific classification? How do the kinds of physics, chemistry, biology, and the social sciences differ? In the first half of the seminar, we'll approach such questions from a historical angle, examining the notions of "kind" and "natural class" in the work of Locke, Whewell, Mill, Quine, and others. In the second half, we'll survey contemporary theories of natural kinds, including essentialism, cluster-based views, simple causal theories, and interactive accounts. We'll close by considering Hacking's eliminativist challenge: should we just stop talking about natural kinds? If not, what should philosophical treatments of natural kinds aim to accomplish?

Office Hours: I encourage you to email me to set up a meeting if you want to talk about the course content, paper ideas, or anything else. You can also come to my office hours, which are on Tuesdays from 1-3pm and Thursdays from 11:15am-12:15pm. I plan to conduct office hours remotely via Zoom; the Zoom link can be found on Canvas under the Week 1 module. Send me an email anytime during those office hour times and I'll join the Zoom meeting. I will let you know if/when I go back to in-person office hours in Dodd 182A.

Assessment: Your grade for the seminar will be determined by:

- (1) **Weekly Responses (20%):** Each week, you must submit a thought about one or more of the readings (e.g., an objection, a counter-example, a connection to an earlier reading, a re-working of an argument, an illuminating case study, a question). This should be the length of a single paragraph, and no more than two paragraphs. Please come to seminar prepared to discuss your thoughts, as I may ask you to share your contribution. The hope is that these weekly responses encourage you to read the assigned papers in an engaged, critical mode.

Your response must be submitted to Canvas by the end of the day on Monday before each seminar meeting. I don't care if you get it in by midnight – just make sure it's there when I wake up on Tuesday! Responses will be graded primarily for completion and only secondarily for quality. Your response grade will be reduced if you miss more than 2 responses.

- (2) **Research Paper(s) (80%):** You may write either one longer term paper at the end of the semester, or two shorter papers during the semester. That is, your options are:
 - (i) A normal term paper of roughly 5,000-6,000 words. This is due on December 9. If you choose this route, you must submit a paper proposal on Canvas by November 18. This proposal should include a tentative thesis of one or two sentences, plus a paragraph-length description of how you intend to argue for the thesis. I will give you written feedback on your proposal.

- (ii) Two shorter papers of 2,500-3,000 words. The first paper is due on October 24 and the second on December 11. You do not need to submit proposals if you choose to write short papers, but I am more than happy to talk to you about your ideas. Each short paper will be worth 40% of your grade.

Note that you must decide early in the semester if you wish to pursue route (i) or (ii). If you miss the Oct. 24 deadline for Short Paper #1, you're committed to writing a long term paper at the end of the semester. No matter which option you choose, I recommend that you start a list of potential paper topics as soon as the semester begins. If you choose to write two short papers, your theses should be less ambitious than if you choose to write a normal term paper. Focusing on just one or two of our course readings, for example, may be appropriate for a short paper.

Readings: All readings are available on Canvas. Some of the older works (by Whewell, Mill) are quite large files. If you would prefer not to download them, or to read them in an alternative format, they can also be found online (e.g., on Hathitrust, Project Gutenberg, archive.org).

Summary of Deadlines:

every Monday night	weekly responses
October 24	short paper #1 due [option (ii)]
November 18	long paper proposal due [option (i)]
December 9	long paper due [option (i)]
December 11	short Paper #2 due [option (ii)]

Auditing: I welcome auditors to attend the seminar (subject to space constraints). However, auditors must also e-mail me weekly responses so that they can be included in discussion.

Public Health Precautions: In line with the FSU President's statement on August 9, I expect everyone to (1) wear a mask in class, (2) get fully vaccinated (if you're able), (3) get tested for the virus if you have symptoms, and (4) stay home if you're sick.

Attendance and Illness: You shouldn't attend class in person if you have tested positive for COVID-19 or are quarantining after exposure. If you find yourself in either situation, send me a message. If you are quarantining but would like to come to seminar virtually, let me know and I will set up a Zoom feed for that class session.

University Policies:

1. *University Attendance Policy*

Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness.

2. *Academic Honor Policy*

The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged

violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to "...be honest and truthful and... [to] strive for personal and institutional integrity at Florida State University." (For more details see the [FSU Academic Honor Policy and procedures for addressing alleged violations.](#))

3. *Americans With Disabilities Act*

Students with disabilities needing academic accommodation should:

- (1) register with and provide documentation to the Office of Accessibility Services; and
- (2) bring a letter to the instructor indicating the need for accommodation and what type.

Please note that instructors are not allowed to provide classroom accommodation to a student until appropriate verification from the Office of Accessibility Services has been provided. This syllabus and other class materials are available in alternative format upon request.

For more information about services available to FSU students with disabilities, contact:

Office of Accessibility Services
874 Traditions Way
108 Student Services Building
Florida State University
Tallahassee, FL 32306-4167

(850) 644-9566 (voice)
(850) 644-8504 (TDD)
Email: oas@fsu.edu
<https://dsst.fsu.edu/oas>

Reading Schedule

Week 1 (August 24): Seminar Logistics and Overview

Week 2 (August 31): Locke and Conventionalism

Khalidi (2016), "Natural kinds"

Ayers (1981), "Locke versus Aristotle on natural kinds"

Kornblith (1993), *Inductive Inference and its Natural Ground*, Chapter 2, "Locke and natural kinds"

Optional: Kornblith (1993) §3.4, "Conventionalism again"

Week 3 (September 7): Whewell's Kantian Account

Whewell (1847), *The Philosophy of the Inductive Sciences*, pp. 466-503, pp. 535-542 (Excerpts from Chapter VIII, "Philosophy of the Classificatory Sciences")

Whewell (1860), *On the Philosophy of Discovery*, ¶17-21 on pp. 364-8 and ¶21 & 22 on pp. 475-6

Quinn (2017), "Whewell on classification and consilience"

Optional: McOuat (2009), "The origins of 'natural kinds': Keeping essentialism at bay in the age of reform"

Week 4 (September 14): Mill and His Critics

Mill (1882), *A System of Logic*, pp. 145-164 (Book I, Ch. VII) and pp. 869-883 (Excerpt from Book IV, Ch. VII)

Towry (1887), "On the doctrine of natural kinds"

Peirce (1903), "Kind"

Optional: Magnus (2015), "John Stuart Mill on taxonomy and natural kinds"

Week 5 (September 21): Kinds in Induction

Goodman (1955/1983), "The new riddle of induction"

Quine (1969), "Natural kinds"

Optional: Russell (1948), *Human Knowledge: Its Scope and Its Limits*, pp. 451-463

Week 6 (September 28): Induction, Kinds, and Property Spaces

Broad (1920), "The relation between induction and probability--(part II)"

Gärdenfors (1990), "Induction, conceptual spaces and AI"

Week 7 (October 5): Essentialism and Theories of Reference

Putnam (1975), "The meaning of 'meaning,'" pp. 131-160

Kripke (1980), *Naming and Necessity*, pp. 116-140

Wilkerson (1988), "Natural kinds"

Optional: Dupré (1989), "Wilkerson on natural kinds"

Week 8 (October 12): Against Essentialism

Mellor (1977), "Natural kinds"

Leslie (2013), "Essence and natural kinds: When science meets preschooler intuition"

Optional: Crane (2021), "Two approaches to natural kinds"

Week 9 (October 19): Essentialism and Biology

Dupré (1981), "Natural kinds and biological taxa"

Okasha (2002), "Darwinian metaphysics: Species and the question of essentialism"
Devitt (2008), "Resurrecting biological essentialism" (focus on §1-4, 10)

Week 10 (October 26): Boyd's Homeostatic Property Cluster Account

Boyd (1999), "Homeostasis, species, and higher taxa"
Magnus (2014), "NK≠HPC"
Optional: Boyd (1989), "What realism implies and what it does not"

Week 11 (November 2): Clustering After Boyd

Slater (2015), "Natural kindness"
Chakravartty (2007), *A Metaphysics for Scientific Realism*, Chapter 6, "Sociability: natural and scientific kinds"
Craver (2009), "Mechanisms and natural kinds"

Week 12 (November 9): Realism and Clustering

Massimi (2014), "Natural kinds and naturalised Kantianism"
Franklin-Hall (2015), "Natural kinds as categorical bottlenecks"
Ludwig (2017), "Indigenous and scientific kinds"

Week 13 (November 16): A Simple Causal View

Khalidi (2013), *Natural Categories and Human Kinds: Classification in the Natural and Social Sciences*, Chapters 2 and 5
Optional: Chapter 1 of Khalidi; Lemeire (2021), "The causal structure of natural kinds"

Week 14 (November 23 – ONLINE CLASS): Looping Effects and Human Kinds

Hacking (1995), "The looping effects of human kinds"
Cooper (2004), "Why Hacking is wrong about human kinds"
Laimann (2020), "Capricious kinds"
Optional: Khalidi (2010), "Interactive kinds"

Week 15 (November 30): A Research Program for Natural Kinds?

Hacking (2007), "Natural kinds: Rosy dawn, scholastic twilight"
Bursten (2018), "Smaller than a breadbox: Scale and natural kinds"
Optional: MacLeod & Reydon (2013), "Natural kinds in philosophy and in the life sciences: scholastic twilight or new dawn?"