

Spring 2020

## **Philosophy 693S: Causation**

### *Administrative Details*

*Instructor:* Professor K.D. Hoover

*Lecture:* 4:40-7:10 PM, Tuesdays, 106 White

*Office:* 231 Social Science Building (West Campus)  
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*Telephone:* 660-1876

*E-mail:* [kd.hoover@duke.edu](mailto:kd.hoover@duke.edu)

*Personal Website:* <http://public.econ.duke.edu/~kdh9/>

*Course website:* I will keep up-to-date information about the course on my website:  
<http://public.econ.duke.edu/~kdh9/Courses/Causality%20Course/CausalityMaster.htm>

*Office Hours:* By appointment (e-mail me or see me in class).

### *Course Description*

This will essentially be a seminar course in which we will read, discuss, and try to understand some important works related to various aspects of causality. Causality is a huge subject with a large variety of approaches. We cannot hope to touch on it all – much less master it. We will consider a mixture of classic and modern contributions with a bias towards issues related to causality in the philosophy of science.

### *Required Work and Grading*

There are *three required graded parts to the course*:

1. *Weekly short assignments:* 30 percent. These assignments are meant to make sure that you are up to speed on, and engaged in, the primary readings. Instructions are given below. I will give further instructions about in class.
2. *Class participation:* 30 percent. The class will be conducted as a seminar and discussion and participation is essential. Students are expected to be prepared to discuss topics and to participate actively.
3. *Final Paper:* 40 percent. A research paper on a topic of your choice related to the course (topic subject to my approval).

### *Academic Ethics*

#### *Academic Ethics and the Conduct of the Class*

I will hold you to strict standards of academic ethics. Please click on the [Academic Ethics & Conduct](#) link on the [course website](#) for the detailed policy.

Our classroom is a space for the free expression of thoughts and ideas and for critical engagement. It is essential that students and the instructor alike treat others in the class with respect and courtesy. So long as these are maintained, any idea, belief, or criticism of ideas or beliefs that are relevant to the subject matter of the course may be freely expressed, however unpopular or disagreeable others may find them.

### Readings

Many of the readings are electronically accessible: go to the Readings link on the course website: <http://public.econ.duke.edu/~kdh9/Courses/Causality%20Course/CausalityMaster.htm> From there, you can either click on direct links, or download from a password protected secure directory. Contact me for login information. Not all of the readings have hyperlinks in this version of the syllabus. A complete update will be available in due course.

#### **Background. Aristotle on Cause**

Stephen Mumford and Rani Lill Anjum, *Causation: A Very Short Introduction*. Oxford: Oxford University Press, 2014. (Purchase; not downloadable. A nice, accessible, quick introduction to the topic.)  
Aristotle. *Metaphysics*, [Book I](#) and [V](#).  
Aristotle. [Physics, Book II](#).

#### **I. Hume on Cause**

David Hume. [A Treatise of Human Nature](#), 1739, Book I, Part III.  
David Hume, [An Enquiry Concerning the Human Understanding](#), 1777, section II-VII.  
David Hume, [“Of Interest,”](#) in *Essays: Moral, Political, and Literary*, 1754.  
Don Garrett, [“Hume,”](#) in Helen Bebee, Christopher Hitchcock, and Peter Menzies, editors, *Oxford Handbook of Causation*. Oxford: University Press, 2009, pp. 73-91.

#### **II. Regularity Accounts**

John Stuart Mill. [A System of Logic](#), vol. 1, 1843, book III, ch. 5.  
J.L. Mackie. [The Cement of the Universe: A Study of Causation](#). Oxford: Clarendon, 1974, ch. 3.

#### **III. Causes and Counterfactuals – 1**

David Lewis. [“Causation,”](#) *Journal of Philosophy*, 70(17), 1973, pp. 556-567.  
David Lewis. [“Counterfactual Dependence and Time’s Arrow,”](#) *Nous* 13(4), 1979, pp. 455-47.  
Jaegwon Kim. [“Causes and Counterfactuals,”](#) *Journal of Philosophy* 70(17), 1973, pp. 570-572.  
Peter Menzies, “Counterfactual Theories of Causation,” *Stanford Encyclopedia of Philosophy* (<http://plato.stanford.edu/entries/causation-counterfactual/>)

#### **IV. Causes and Counterfactuals – 2**

John Collins, Ned Hall, and Laurie Paul, [“Counterfactuals and Causation: History, Problems, and Prospects,”](#) in Collins, Hall, and Paul, editors, *Causation and Counterfactuals*, Cambridge, MA: MIT Press, 2004, pp. 1-57.

## **Background for Topic V: Some Key Concepts of Probability**

*Use as much or little as needed and/or congenial:*

Robert Wolfe, "[Probability Review](#)" (some notes for a biostatistics course; short and to the point).

Alan Hájek, "[A Philosopher's Guide to Probability](#)" (fills in some background on different accounts of probability).

Bernard Lindgren, *Statistical Theory*, chapter 1 "Probability Models" (a standard textbook account of elementary probability with problems).

Christopher Hitchcock, "[Probabilistic Causality](#)," *Stanford Encyclopedia of Philosophy*, revised 9 March 2018, esp. sections 1 & 2.

John Haigh, *Probability: A Very Short Introduction*. Oxford: Oxford University Press, 2012. (A very good starting place for the complete novice. For purchase, not on course website. Easily available through Amazon.)

## **V. Probabilistic Theories of Causality**

Hans Reichenbach. *The Direction of Time*. Berkeley: University of California Press, 1956, section 19, pp. 157-167.

Patrick Suppes. "A Probabilistic Theory of Causality," *Acta Philosophica Fennica*, Fasc. XXIV. Amsterdam: North-Holland, 1970, [chapter 1](#), [chapter 2](#) and [chapter 6](#).

Wesley Salmon. "[Probabilistic Causality](#)," *Pacific Philosophical Quarterly* 61(1), pp. 50-75.

## **VI. Causal Models and Causal Inference**

Judea Pearl. *Causality: Models, Reasoning, and Inference*, Cambridge University Press, Cambridge, 2000, Chapter 1 and Epilogue.

Richard Scheines. "[An Introduction to Causal Inference](#)," in Vaughn McKim and Steven Turner, editors, *Causality in Crisis?*: South Bend, Indiana: University of Notre Dame Press, 1997, pp. 185-200.

Nancy Cartwright. "[What's wrong with Bayes' Nets?](#)" *Monist* 84(2), 2001, 242-264.

*Supplementary Reading:* Christopher Hitchcock, "[Causal Models](#)," *Stanford Encyclopedia of Philosophy*, revised 7 August 2018.

## **VII. Interventionist Accounts**

Woodward. *Making Things Happen*, [ch. 2](#) & [ch. 3](#).

## **VIII. Agent and Manipulability Accounts**

Peter Menzies and Huw Price. "[Causation as a Secondary Quality](#)," *British Journal for the Philosophy of Science*, 44(2), 1993, pp. 187-203.

Woodward, James 2001, 'Causation and Manipulability', *Stanford Encyclopedia of Philosophy* (available at: <http://plato.stanford.edu/entries/causation-mani/>)

## **IX. Process Accounts**

- Wesley Salmon. [\*Scientific Explanation and the Causal Structure of the World\*](#), Princeton: Princeton University Press, 1984, ch. 5.
- Phil Dowe. "[Wesley Salmon's Process Theory of Causality and the Conserved Quantity Theory](#)," *Philosophy of Science* 59(2), 1992, 195-216.
- Phil Dowe. "[Causes are Physically Connected to their Effects: Why Preventers and Omissions are not Causes](#)," in Christopher Hitchcock, editor, *Contemporary Debates in Philosophy of Science*: Oxford: Blackwell, 2004, pp. 189-196.
- Jonathan Schaffer. "[Causes need not be Physically Connected to their Effects: The Case for Negative Causation](#)," in Christopher Hitchcock, editor, *Contemporary Debates in Philosophy of Science*: Oxford: Blackwell, 2004, pp. 197-216.

## **X. Mechanistic Accounts**

- Peter Machamer, Lindley Darden, and Carl Craver. "[Thinking About Mechanisms](#)," *Philosophy of Science* 67(1), 2000, pp. 1-25.
- Peter Machamer. "[Activities and Causation: The Metaphysics and Epistemology of Mechanisms](#)," *International Studies in the Philosophy of Science* 18(1): 27-39.

## **XI. Causation in the Physical Sciences**

- Bertrand Russell. "[On the Notion of Cause](#)," *Proceedings of the Aristotelian Society* 13(1), 1913, 1-26.
- Marc Lange. "[Causation in Classical Mechanics](#)," in Helen Beebe, Christopher Hitchcock, and Peter Menzies, editors, *The Oxford Handbook of Causation*, Oxford: University Press, 2009, pp. 649-660.

## **XII. Causation in the Biomedical Sciences**

- James Woodward. "[Causation in Biology: Stability, Specificity, and the Choice of Levels of Explanation](#)," *Biology and Philosophy* 25(3), pp. 287-318.
- Federica Russo and Jon Williamson. "[Interpreting Causality in the Health Sciences](#)," *International Studies in the Philosophy of Science* 21(2), 2007, pp. 157-70.

## **XIII. Causation in History**

- Michael Scriven. "[Causes, Connections and Conditions in History](#)," in William Dray, editor, *Philosophical Analysis and History*. New York: Harper and Row, 1966, pp. 238-264
- Julian Reiss. "[Counterfactuals, Thought Experiments and Singular Causal Analysis in History](#)," *Philosophy of Science* 76(5), 2009, 712-723.