Philosophy 550A: Causation

University of British Columbia
Department of Philosophy
Spring 2002
W2:00 - 5:00, GEOG 242

Instructor Office Telephone E-mail Office Hours
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Description: In 1912, Bertrand Russell wrote, “the word ‘cause’ is so inextricably bound up with misleading associations as to make its complete extrusion from the philosophical vocabulary desirable,” and added: “in advanced sciences such as gravitational astronomy, the word ‘cause’ never occurs” (“On the Notion of Cause”). Nevertheless, the concept of causation has proved to be quite resilient; even Russell changed his mind. Today, the word ‘cause’ is ubiquitous in both scientific and philosophical contexts.

Russell was right about one thing: the venerable concept of causation is confusing, and has many different meanings. The purpose of this seminar is to disentangle and explore a number of these meanings. There is a vast literature on the subject, to which this course provides only an entry.

In the first part of the course, after presenting some historical background, we examine accounts of deterministic causation. Following a brief discussion of the nature of probability, the main portion of the course will focus on leading theories of probabilistic causation. We will look at both broad issues – is there such a thing as probabilistic causation? Do probabilistic causes play a role in explanation? What is the connection between particular (token) and general (type) causation? – and detailed issues, such as whether causal relations can be inferred from statistical data. Our objective here is to appreciate the central issues and difficulties in formulating an account of causation.

Texts: All materials will be photocopied and placed in the Philosophy Department office (E370). There will be selections from a wide variety of sources, with some emphasis placed on the following texts:


Course web page: www.philosophy.ubc.ca/faculty/bartha/p550w01.htm
**Requirements:** The final grade will be based upon the following scheme:

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<th>Weight</th>
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<tr>
<td>1. Class presentation 25%</td>
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<td>2. Participation 15%</td>
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<tr>
<td>3. Term paper (5000 words/16-20 pages) 60% <strong>Due April 8</strong></td>
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1. **Presentation.** Each student will be responsible for presenting one of the assigned readings during the term. The presentation should include:

   a) outlining the most important ideas and arguments (10-15 minutes);
   b) raising some important issues and questions for discussion (5 minutes);
   c) leading the ensuing class discussion (20-30 minutes).

   In addition, the student should follow up with a brief (3-5 page) write-up of the presentation, to be submitted by two weeks after the presentation.

2. **Participation.** This is a graduate seminar. Although I will lecture in each class, we will develop our ideas largely through class discussion. Each student will be expected to contribute to class discussion of the assigned readings. In addition, by the Monday evening preceding each lecture, by 8 p.m. to be precise, each student is expected to post one question regarding one of the readings up for discussion in the forthcoming seminar. Since we have such a small group, we can do this by e-mail: just send your message to me and to all the students in the class.

   The participation mark will be based on two components:

   a) the quality of comments and questions in class discussion;
   b) the quality of questions submitted prior to each seminar.

3. **Term paper.** The paper is the major assignment for the course. Students should choose a topic by March 8, and discuss it with me.

The (tentative) schedule of topics and readings follows.
<table>
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<th>Class Date</th>
<th>Readings</th>
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<td>Jan. 9</td>
<td><strong>Introduction</strong></td>
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David Hume, *An Enquiry Concerning Human Understanding*, sections 1-7  
Bertrand Russell, “On the Notion of Cause”  
Paul Horwich, *Assymetries in Time*, chapter 8

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<th>I. Basic issues and deterministic causation</th>
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<td>Jan. 16</td>
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John Mackie, “Causes and Conditions”  
Dan Hausman, *Causal Asymmetries*, chapter 3  
Ellery Eells, *Probabilistic Causality*, introduction (focus on 1-11)

Recommended:  
Michael Scriven, “Defects of the Necessary Condition Analysis of Causation”  
Jaegwon Kim, “Causes and Events: Mackie on Causation”

| Jan. 23 | **Lewis’ counterfactual analysis** |

David Lewis, “Causation”  
David Lewis, “Counterfactual Dependence and Time’s Arrow”

Recommended:  
David Lewis, “Postscripts” to “Causation” and “Counterfactual Dependence and Time’s Arrow”  
David Lewis, “Causation as Influence” (last word on the subject)  
Jaegwon Kim, “Causes and Counterfactuals”  
Paul Horwich, “Lewis’s Programme”

| Jan. 30 | **Causation and Manipulation** |

Peter Menzies and Huw Price, “Causation as a Secondary Quality”  
James Woodward, “Explanation, Invariance and Intervention”  

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<th>II. Probabilistic causation</th>
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<td>Feb. 6</td>
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Brian Skyrms, “The Probability Calculus”  
Ellery Eells, *Probabilistic Causality*, chapter 1  
Feb. 13  Probabilistic Causation: Introduction

Wesley Salmon, “Probabilistic Causality”
Nancy Cartwright, “Causal Laws and Effective Strategies”
Ellery Eels, *Probabilistic Causality*, chapter 2, sections 2.1 and 2.2

Feb. 20  Reading Break

Feb. 27  Token and type causation; causal processes

Wesley Salmon, “Causality: Production and Propagation”
Ellery Eells, *Probabilistic Causation*, chapter 6
Daniel Hausman, “Causation Among Tokens, Types and Variables”

Recommended (for later):
Pearl-Halpern on token causation

Mar. 6  Disjunctive causal factors

Ellery Eells, *Probabilistic Causality*, section 3.2
Paul Humphreys, *The Chances of Explanation*, chapter 2
Chris Hitchcock, “Farewell to Binary Causation”

Mar. 13  Probabilistic causal explanation

Paul Humphreys, *The Chances of Explanation*, chapter 4

Mar. 20  Probabilistic causation re-considered

Daniel Hausman, “Deterministic Causation of Probabilities”
John Dupré, “Probabilistic Causality Emancipated”

Mar. 27  Causal connection, the causal Markov condition, the Principle of the Common Cause

Wesley Salmon, *Scientific Explanation and the Causal Structure of the World*, chapter 8
Daniel Hausman, *Causal Assymetries*, sections 4.1, 4.2
Daniel Hausman and Jim Woodward, “Independence, Invariance and the Causal Markov Condition”

Apr. 3  The causal Markov condition and causal inference

Richard Scheines, “An Introduction to Causal Inference”
Judea Pearl, “Reasoning with Cause and Effect”