

## **PHIL 280: SEMINAR—THEORIES OF EXPLANATION**

Instructors: Erich Reck & Larry Wright  
UC Riverside, Fall 2006

### **HANDOUT 1: BASIC INFORMATION**

WEBSITE (used mostly for general announcements): *www.ilearn.ucr.edu*, then *PHIL280*

CLASS TIME: Monday, 2:10-5:00 PM

CLASS ROOM: HMNSS 1605B

OFFICE HOURS (Reck): Tuesday, 1:30-3:30 PM

OFFICE (Reck): HMNSS 3206

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#### **COURSE DESCRIPTION:**

At least since G. Hempel & P. Oppenheim's "Studies in the Logic of Explanation", published in 1948, the issue of explanation has attracted a lot of attention, not only in the philosophy of science, but also in philosophy more generally. In this class, we will consider the corresponding debate, by discussing their paper carefully in connection with various complements to and reactions against it from throughout the second half of the 20<sup>th</sup> century, in texts by N. Cartwright, M. Friedman, P. Kitcher, M. Scriven, W. Sellars, W. Salmon, J. Woodward, and others. (The debate is still very much alive today.) In doing so, we will familiarize ourselves with a number of analyses, explications, or models for the notion of scientific explanation; we will compare and evaluate those models, confronting them with various examples; and we will draw some consequences for the general issue of human understanding, also beyond science. (There will be a follow-up seminar, to be offered in the winter quarter, with the focus on additional, supplementary topics, such as the pragmatics of explanation, teleological explanation, the explanation of behavior, and relations between the notions of explanation, cause, reason, and agency.)

#### **READING MATERIAL:**

- 1) A READER (available in the basement of the bookstore, i.e., the textbook section)
- 2) Wesley Salmon, *Four Decades of Scientific Explanation*, University of Minnesota Press, 1990

#### **COURSE REQUIREMENTS:**

For a letter grade:

- a term paper (12-15 pages), due on the Wednesday of Finals Week
- a class presentation (ca. 20 minutes long, modeled on the first few lectures)
- doing the reading, regular attendance, and active participation in class discussions

For auditors (i.e., S/NC):

- doing the reading, regular attendance, and some participation in class discussions

## SYLLABUS/READING

### MAIN READING:

In the seminar, we will discuss the following ten texts (listed chronologically). We'll proceed roughly in this order; more on the precise order and on grouping some together for discussion as we go along. (Texts (1) – (10) are all contained in the READER, as is (12).)

- (1) G. Hempel & P. Oppenheim, "Studies in the Logic of Explanation" (Pitt)
- (2) M. Scriven, "Explanations, Predictions, and Laws" (Pitt)
- (3) W. Sellars, "Theoretical Explanation" (Pitt)
- (4) M. Friedman, "Explanation and Scientific Understanding" (Pitt)
- (5) P. Railton, "A Deductive-Nomological Model of Probabilistic Explanation" (Pitt)
- (6) P. Kitcher, "Explanatory Unification" (Pitt)
- (7) W. Salmon, "Scientific Explanation and the Causal Structure of the World" (Ruben)
- (8) P. Humphries, "The Causes, Some of the Causes, and Nothing but the Causes" (K&S)
- (9) N. Cartwright, "Capacities and Abstraction" (K&S)
- (10) J. Woodward, "The Causal Mechanical Model of Explanation" (K&S)

### BACKGROUND READING:

- (11) W. Salmon, *Four Decades of Scientific Explanation* (originally published in K&S, later also as a separate book—see the reference on p. 1)
- (12) P. Kitcher, "Unification and the Causal Structure of the World" (K&S)

### ORIGINAL SOURCES OF THE TEXTS:

- (I) J. Pitt, ed., *Theories of Explanation*, Oxford University Press, 1988 [Pitt]
- (II) P. Kitcher & W. Salmon, eds., *Scientific Explanation*. Minnesota Studies in the Philosophy of Science, Vol. XIII, University of Minnesota Press, 1989 [K&S]
- (III) D.-H. Ruben, ed., *Explanation*, Oxford University Press, 1993 [Ruben]