

PHIL 8400

SEMINAR IN THE PHILOSOPHY OF SCIENCE

2:30-5:30P MONDAY (Peabody Hall 205S)

Professor Richard Dien Winfield
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OFFICE HOURS: 2:30-3:15P M, TH, F

The seminar will begin by calling into question the defining dogmas of the Philosophy of Science and then proceed to investigate critically the pioneering attempts of Aristotle, Kant, and Hegel to obtain *a priori* knowledge of nature.

All academic work must meet the standards contained in "A Culture of Honesty." All students are responsible to inform themselves about those standards before performing any academic work.

REQUIRED READINGS

- Aristotle, *Complete Works, Vol. I* (Oxford: Oxford U. Press, 1984; ISBN-10: 0691099502)
Michael B. Foster, "Christian Theology and Modern Science of Nature" (Part I, *Mind*, Vol. XLIV, No. 176, October 1935, p. 439-466; Part II, Vol. XLV, No. 177, January, 1936, p. 1-27) - downloadable from jstor.org
Kant, Immanuel, *Metaphysical Foundations of Natural Science* (Cambridge: Cambridge U. Press, 2004; ISBN-10:0521544750)
Kant, Immanuel, *Critique of the Power of Judgment* (Cambridge: Cambridge U. Press, 2001; ISBN-10: 0521348927)
Hegel, G. W. F., *Philosophy of Nature* (Oxford: Oxford U. Press, 2004; ISBN: 0199272670)
Jonas, Hans, *The Phenomenon of Life* (Evanston, IL: Northwestern U. Press, 2001; ISBN-10: 0810117495)

SYLLABUS

- 1/9 M Introduction (Aristotle, *Physics, Book II*, Ch. 1, 2, 7, 8; Kant, *Metaphysical Foundations of Natural Science*, 467-479; Hegel, 1-27; Foster, 439-466)
1/16 M MLK DAY
1/23 M Space and Time (Foster 1-27; Aristotle, *Physics, Book IV*, Ch. 1, 4, 10, 11, 13, 14, Book VI, Ch. 1; Kant, *Metaphysical Foundations of Natural Science*, 480-495; Hegel, 28-41)
1/30 M Matter (Aristotle, *Physics*, 192a25-35; Kant, *Metaphysical Foundations of*

- Natural Science*, 496-523; Hegel 41-49)
- 2/6 M Inertial Motion (Aristotle, *Physics*, Book III, Ch. 1, 2, 3, Book V, Ch. 1, 2, 8, Book VII, Ch. 1, 2, Book VIII, Ch. 7; Kant, *Metaphysical Foundations of Natural Science*, 536-552; Hegel, 44-62)
- 2/13 M Gravity and the Self-Contained System of Matter in Motion (Aristotle, *Physics*, Book VIII, Ch. 1, 2, 3, 6, 9, 10; Kant, *Metaphysical Foundations of Natural Science*, 554-565; Hegel, 62-84)
- 2/20 M Light and Elementary Physics (Aristotle, *On Colours*, 791a1-799b1; Hegel, 85-105)
- 2/27 M The Physical Elements and Their Process (Aristotle, *On the Heavens*, Book III, Ch. 5, 6, 7, 8, *On Generation and Corruption*, Book II, Ch. 1-5; Kant, *Metaphysical Foundations of Natural Science*, 524-529; Hegel, 105-124)
- 3/5 M Physics of Density, Cohesion, Sound, and Heat (Aristotle, *Physics*, Book IV, Ch. 7, 8, 9, *On Things Heard* 800a1-804b38; Kant, *Metaphysical Foundations of Natural Science*, 529-535; Hegel, 124-158)
- 3/12 M SPRING BREAK
- 3/19 M Physics of Shape, Color, Smell, and Taste (Hegel, 158-220)
- 3/26 M Electro-magnetism and Chemistry (Hegel, 220-232, 232-244)
- 4/2 M Chemical Process (Hegel, 232-272)
- 4/9 M Geology, Life, and Evolution (Hegel, 272-303, Jonas, 38-58, 64-92; Kant, *Critique of Judgment*, #63, 64)
- 4/16 M Plant Life (Kant, *Critique of Judgment*, #65, 66; Hegel, 303-351)
- 4/23 M Animal Life (Aristotle, *Physics*, Book VIII, Ch. 4, 5; Hegel, 351-410, Jonas, 99-107)
- 4/30 M Animal Life continued and Concluding Reflections (Hegel, 410-445)

ESSAY ASSIGNMENTS

- Essay #1 (Due 2/13)
- Essay #2 (Due 3/26)
- Final Term Paper (Due Monday, 5/7)

GRADING

- Essay #1 = 25%
- Essay #2 = 25%
- Final Exam Essay = 50%

ATTENDANCE POLICY: 1 letter grade penalty for 3 or more unexcused absences