

Philosophy 525  
Truth and Paradox  
Spring 2003

Instructor: Michael Kremer

My office is 119 Wieboldt Hall. I will hold office hours M and W 9-10 (am). If these times are not convenient we can make an appointment for another time. My office phone is 834-9884; my home phone is 643-1223. I can be reached by e-mail at kremer@uchicago.edu.

The class meets T and TH, 12:00-1:20.

Course objectives and prerequisites: The aim of the course is to study in some depth several recent approaches to the problems posed for the theory of truth by paradoxes such as the Liar Paradox. The only prerequisite for the course is a basic course in the metatheory of first-order logic, such as Philosophy 294/396. Other background material, for example the theory of transfinite ordinal numbers, will be introduced as needed.

Texts: Two books, *Logic, Semantics and Metamathematics*, by Tarski, and *The Revision Theory of Truth*, by Gupta and Belnap, are available in the Seminary Co-op. Other readings will be made available on electronic reserve as needed.

The syllabus lists “main readings” and “background readings” for each section of the course. Everyone should do the “main readings” throughout. The (slightly annotated) list of “background readings” is there to guide your more focused research for your term papers. (You will need to find the background readings in the library; fairly complete bibliographic information has been provided. In the case of unpublished materials I can make them available.)

Some useful background readings for the whole course:

Anil Gupta, “Truth,” in the *Blackwell Guide to Philosophical Logic*, Lou Goble, ed. (Surveys much of the material of the course.)

John Burgess, “Set Theory,” in the *Blackwell Guide to Philosophical Logic*, Lou Goble, ed. (Covers very briefly some of the essential elements of set theory needed in the course. For more details, consult a standard text such as Enderton’s *Introduction to Set Theory*. However, this should not be necessary.)

Work of the Course: The main requirement of the course is a term paper (in the range of 20+ pages or so). This is to be turned in at the end of the semester. It can consist in philosophical reflections on one or more of the theories we have covered in the class, technical studies of the theories, or some combination of these.

In addition to writing a term paper, students are required to attend class regularly, and to come to class prepared, having done the assigned readings and ready to talk about them.

## ROUGH Syllabus

0: Introductory. (1/15)

I: Tarski's definition of truth and the object-language/meta-language distinction. (H4/3-H4/17)

### Main readings:

Alfred Tarski, "The Concept of Truth in Formalized Languages," in *Logic, Semantics, Metamathematics: Papers from 1923 to 1938*, J.H. Woodger, trans., J. Corcoran, ed. (Indianapolis: Hackett, 1983). First published in 1933.

Charles Chihara, "The Semantic Paradoxes: A Diagnostic Investigation," *Philosophical Review* 88 (1979), 590-618. (JSTOR)

### Supplementary background readings:

Alfred Tarski, "The Semantic Conception of Truth and the Foundations of Semantics," *Philosophy and Phenomenological Research* 4 (1944), 341-376. (Less formal but better known presentation, may be read alongside "The Concept of Truth in Formalized Languages.")

Alfred Tarski, "Truth and Proof," *Scientific American* (1969). Even less formal.

Nuel D. Belnap, "On Rigorous Definitions," *Philosophical Studies* 72 (1993), 115-146. (Outlines a standard account of definitions, useful for what Tarski means by a "formally correct definition.")

Volker Halbach, "Tarski-Hierarchies," *Erkenntnis* 43 (1996), 339-367. (Explores hierarchies of language and metalanguage.)

David deVidi and Graham Solomon, "Tarski on 'Essentially Richer' Metalanguages," *Journal of Philosophical Logic* 28 (1999), 1-28. (Criticizes Tarski's claim that truth-definition requires an "essentially richer" metalanguage.)

Important philosophical papers on Tarski and his significance include:

Hartry Field, "Tarski's Theory of Truth," *Journal of Philosophy* 69 (1972), 347-375. (A classic interpretation.)

Scott Soames, "What is a Theory of Truth?" *Journal of Philosophy* 81 (1984), 411-429.

See also chapters of Scott Soames, *Understanding Truth* on Tarski.

John Etchemendy, "Tarski on Truth and Logical Consequence," *Journal of Symbolic Logic* 53 (1988), 51-79.

Richard G. Heck, "Tarski, Truth, and Semantics," *Philosophical Review* 106 (1997), 533-554.

II. Kripke's fixed-point theory. (T4/22-T5/13)

### Main readings:

Saul Kripke, "Outline of a Theory of Truth," *Journal of Philosophy* 72 (1975), 690-716. (JSTOR)

Vann McGee, "Applying Kripke's Theory of Truth," *Journal of Philosophy* 86 (1989), 530-539. (JSTOR)

Michael Kremer, "Kripke and the Logic of Truth," *Journal of Philosophical Logic* 17 (1988), 225-278. (e-reserve)

Philip Kremer, "On the 'Semantics' for Languages with Their Own Truth Predicates," in *Truth, Definition and Circularity*, A. Chapuis and A. Gupta, eds., (New Delhi: Indian Council of Philosophical Research, 2000). (e-reserve)

Supplementary background readings:

R.L. Martin and P. Woodruff, "On Representing 'True-in-L' in L," *Philosophia* 5 (1975), 217-221. (Anticipated some of Kripke's ideas.)

A. Gupta and R.L. Martin, "A Fixed Point Theorem for the Weak Kleene Evaluation Scheme," *Journal of Philosophical Logic* 13 (1984), 131-135. (Provides a language containing a "neither true nor false" predicate.)

P. Kremer and M. Kremer, "Some Supervaluation-Based Consequence Relations," forthcoming, *Journal of Philosophical Logic*. (Explores the supervaluation scheme and its logic; P. Kremer has more work on this in progress which may be available this semester, with special attention to truth.)

Michael Kremer, "Logic and Meaning: The Philosophical Significance of the Sequent Calculus," *Mind* 97 (1988), 50-72. (Companion piece to "Kripke and the Logic of Truth.")

Vann McGee, *Truth, Vagueness and Paradox: An Essay on the Logic of Truth* (Indianapolis: Hackett, 1991). (Difficult book expanding the brief article in the main readings. Only if you want to pursue that line.)

Scott Soames, *Understanding Truth*, relevant chapters.

III. Gupta and Belnap's revision theory. (H5/15-H6/4)

Main readings:

Anil Gupta and Nuel Belnap, *The Revision Theory of Truth* (Cambridge: MIT Press, 1993).

Roy T. Cook, "Counterintuitive Consequences of the Revision Theory of Truth," *Analysis* 67 (2002), 16-22. (Library electronic resources)

Michael Kremer, "Intuitive Consequences of the Revision Theory of Truth," *Analysis* 67 (2002), 330-336. (Library electronic resources)

Andre Chapuis, "Alternative Revision Theories of Truth," *Journal of Philosophical Logic* 25 (1996). (e-reserve)

Philip Kremer, "The Gupta-Belnap systems  $S^\#$  and  $S^*$  are not Axiomatisable," *Notre Dame Journal of Formal Logic* 34 (1993), 583-596. (e-reserve)

Philip Kremer, "Does Truth Behave like a Classical Concept when there is no Vicious Reference?" unpublished. (e-reserve)

Supplementary background readings:

Nuel Belnap, "Truth by Ascent," *Dialectica* 53 (1999), 291-306. (A "light-hearted" presentation of the theory.)

Francesco Orilia, "Meaning and Circular Definitions," *Journal of Philosophical Logic* 29 (2000), 155-169. (Explores changes in principles about meaning necessitated by circular definitions.)

Gian Aldo Antonelli, "Non-Well Founded Sets via Revision Rules," *Journal of Philosophical Logic* 23 (1994), 633-680. (Uses the revision theory to obtain models of the non-standard set theory used by Barwise and Etchemendy.)

P. D. Welch, "On Gupta-Belnap Revision Theories of Truth, Kripkean fixed points, and the next stable set." *Bulletin of Symbolic Logic* 7 (2001), 345-360. (Links the revision theory and some Kripkean approaches.)

Philip Kremer, "Comparing Fixed Point and Revision Theories of Truth," unpublished.

(Technical companion to "Does Truth Behave Like a Classical Concept when there is no Vicious

Reference?”)

A number of fairly technical articles on the revision theory and related approaches can be found in the June 2001 issue of *Studia Logica* 68 (2001).

Time permitting (if we get ahead of the syllabus) we may end with a brief discussion of some very recent work of Hartry Field which builds on Kripke and Gupta/Belnap (otherwise you can be aware of these as summer reading!):

Field, Hartry, “The Semantic Paradoxes and the Paradoxes of Vagueness,” forthcoming in Beall and Glanzberg, eds., *Liars and Heaps* (Oxford University Press, 2003).

(<http://www.nyu.edu/gsas/dept/philo/faculty/field/papers/Semantic.pdf>.)

Field, Hartry, “A Revenge-Immune Solution to the Semantic Paradoxes,” *Journal of Philosophical Logic*, forthcoming

(<http://www.nyu.edu/gsas/dept/philo/faculty/field/papers/NoRevenge.pdf>).

Field, Hartry, “Saving the Truth Schema from Paradox”, *Journal of Philosophical Logic* 31 (2002), 1-27.

Yablo, Stephen, “New Grounds for Naive Truth Theory,” forthcoming in Beall and Glanzberg, eds., *Liars and Heaps* (Oxford University Press, 2003).

(<http://www.mit.edu/%7Eyablo/newgrounds.pdf>.)