

Truth, sets, and paradoxes

The course will be concerned with the logical paradoxes— such as Russell’s paradox of the class of all non-self-membered classes and the liar paradox of the person who says of herself that she is lying—and philosophical issues surrounding the responses that have been offered. After an initial look at some paradoxes, we consider the main responses: initially, type-theories and Tarski’s theory of truth; today, the iterative conception of set and Kripke’s theory of truth. We then turn to problems and apparent shortcomings of the latter pair of responses: the strengthened liar paradox, the problem of proper classes, and the problem of absolute generality. We end by considering some attempts by the instructor and others to solve these problems.

The course presupposes knowledge of predicate logic but nothing more advanced.

There is no official textbook, although fairly extensive use will be made of M. Giaquinto, *The Search for Certainty* (OUP, 2002).

1. Introduction to the logical paradoxes

M. Sainsbury, *Paradoxes*, 2nd ed., Ch. 5

Quine, “The ways of paradox”

M. Giaquinto, *The Search for Certainty* (OUP, 2002), pp. 20-30, 37-41, 58-65, 69-84 [38 pp]

2. Russell’s diagnosis of the logical paradoxes

Main readings

B. Russell, “[Mathematical Logic as Based on a Theory of Types](#)”, *American Mathematical Journal* 30 (1908), 222-262; Sections 1-5

K. Gödel, “Russell’s Mathematical Logic”, in Benacerraf and Putnam (eds.), *Philosophy of Mathematics*, 2nd ed., (CUP, 1983), esp. pp. 453-456 [4 pp]

Stephen Yablo, “[A Paradox without Self-Reference](#),” *Analysis* 53 (1993), pp. 251-2

Optional further readings

B. Russell, “On some difficulties in the theory of transfinite numbers and order types”, in his *Essays in Analysis*, ed. Lackey. Originally published in Proc. London Math. Soc. (2) 4 (1907) 29-53.

B. Russell, “On ‘insolubilia’ and their solution by symbolic logic”, in his *Essays in Analysis*, ed. Lackey

3. Russell’s cure: Higher-order logic, simple type theory, and predicativity

M. Giaquinto, *The Search for Certainty* (OUP, 2002), pages to be determined

Øystein Linnebo, “[Higher-Order Logic](#)”, *Continuum Companion to Philosophical Logic* (2011)

4. Ramsey’s analysis of the logical paradoxes

Frank Ramsey, “The Foundations of Mathematics,” pp. 20-29

G. Priest, “[The structure of the paradoxes of self-reference](#)”, *Mind* 103 (1994), pp. 25-34

Optional background

Giaquinto, pp. 85-11 [32 pp]

5. Transition to iterative conception

K. Gödel, “The Present Situation in the Foundations of Mathematics” (1933), in *Collected Works* (OUP, 1995), 45-53

G. Boolos, “[The Iterative Conception of Sets](#)”, in Benacerraf & Putnam, pp. 486-502

Optional background readings

Giaquinto, pp. 119-129, 201-213 [24 pp]

Zermelo 1930, “On boundary numbers and domains of sets”, in Ewald (ed.), *From Kant to Hilbert*, Vol. II (OUP, 1996), esp. Section 5

6. Tarski on truth

Tarski, Alfred (1944). “[The semantic conception of truth: And the foundations of semantics](#)” *Philosophy and Phenomenological Research* 4 (3):341-376.

7. Kripke on truth

Kripke, Saul A. (1975). “Outline of a theory of truth,” *Journal of Philosophy*, 72(19):690-716.

Richard Heck, “[Notes on Kripke’s Theory of Truth](#)”

8. The strengthened liar and contextualism about truth

Parsons, “[The Liar Paradox](#)”, *Journal of Philosophical Logic*, 3(4): 381-412

Glanzberg, “[The Liar in Context](#)”, *Philosophical Studies*, 103(3): 217-251

Optional further readings

Burge, “Semantical paradox”, *Journal of Philosophy* 76 (1979): 169-98

Williamson, “Indefinite Extensibility”, *Grazer Studien*

9. Iterative conception

C. Parsons, “What is the Iterative Conception of Sets”, in Benacerraf & Putnam, pp. 503-529 [27 pp]

10. The problem of proper classes

C. Parsons, “[Sets and Classes](#)”, *Nous* 8 (1974), pp. 1-12

Boolos, “Reply to Parsons”, in his *Logic, Logic, and Logic*

Uzquiano, Gabriel (2003). “[Plural quantification and classes](#)”, *Philosophia Mathematica* 11 (1):67-81.

George Boolos (1984). “[To be is to be a value of a variable \(or to be some values of some variables\)](#)”, *Journal of Philosophy* 81 (8):430-449.

11-12. Generality relativism and generality absolutism

Michael Glanzberg (2004). “[Quantification and realism](#)”, *Philosophy and Phenomenological Research* 69 (3):541–572.

Timothy Williamson (2003). “[Everything](#)”, *Philosophical Perspectives* 17 (1):415–465.

Øystein Linnebo and Agustín Rayo, “[Hierarchies Ontological and Ideological](#)”

13-14. Towards a solution?

Linnebo, Øystein (2010). “[Pluralities and Sets](#),” *Journal of Philosophy* 107 (3):144-164.

Øystein Linnebo, "A Partial Defense of Basic Law V"