

## **Philosophy 5341 Logic and Philosophy of Science I (Fall 2019): Frege**

### **Instructor**

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During his lifetime, Gottlob Frege (1848–1925) was looked upon by many as a second-rate provincial mathematician, a sharp-tongued polemicist obsessed with what seemed to be minor points of detail. Rare were the philosophers who understood the vital importance of his groundbreaking work in logic, philosophy of mathematics and philosophy of language. Though greatly appreciated around the turn of the twentieth century by Russell, and somewhat later by Carnap, Wittgenstein, and others, Frege's ideas would only gain a measure of popularity in the mid-twentieth century, well after his death, when he was celebrated by numerous philosophers for his role in putting philosophy on a new path. This seminar will be devoted to a fairly wide-ranging introduction to Frege's thought, including his logical system, his work on the foundations of arithmetic, his seminal papers in the philosophy of logic and language, and his set-to with David Hilbert over the latter's *Foundations of Geometry*.

**Evaluation:** Contributions to the seminar (15%); Seminar presentation (35%); Final paper (50%)

### **Seminar presentations:**

Each student will be responsible for one presentation during the term, the purpose of which will be to introduce part or all of the week's readings. In addition to speaking for 15–20 minutes, you will write a short paper (4–5 pages), which is to be submitted to me by e-mail no later than Monday before the meeting in question. These papers will then be posted to the course web-site so that everyone in the seminar can read them in advance. (If you would like to have comments on your papers before submitting them, I will have to receive them at least a week before the meeting.) A sign-up sheet will be posted on my door in early September.

**Final Paper** (Length: 4000–5000 words): You should choose a topic that engages a substantive issue in Frege’s philosophy and discuss it in light of the secondary literature. Here are the elements and deadlines:

- A brief description of your topic (1 page max.) and preliminary bibliography (deadline: 21 October).
- A good draft of your paper (Deadline: 28 November); papers will be returned with comments by 6 December. (If submitted, the draft counts for 50% of the mark on the final paper.) If you wish, you may skip this step, and simply submit your paper at the final deadline.
- Final submission of the paper (Deadline: 18 December).

### **Schedule of Readings**

All the main texts are available at the reserve desk, Morrisset Library. Links to on-line versions are provided on the course website. There are also a number of editions of Frege’s works in English for those who like books.

#### **12 September: The Nature of Logic**

MAIN TEXTS:

1) Two texts entitled “Logic,” pp. 1–8 and 125–151 in G. Frege, *Posthumous Writings* (London: Blackwell, 1979).

2) G. Frege, “On the Scientific Justification of a Conceptual Notation,” in T. W. Bynum ed., *Conceptual Notation and Related Articles* (Oxford: Clarendon Press, 1972), pp. 83–89. Time permitting, we will proceed to the *Conceptual Notation* (see readings for 19 September).

#### **19 September: Conceptual notation (*Begriffsschrift*)**

MAIN TEXT: T. W. Bynum ed., G. Frege, *Conceptual Notation* in *Conceptual Notation and Related Articles*; selections reproduced in M. Beaney ed., *The Frege Reader* (see also Beaney’s appendix, pp. 376–385). Our focus will be on Part I. M. Beaney gives helpful summaries and commentary in the *Frege Reader*, pp. 75–78 and Appendix 2: “Frege’s Logical Notation” pp. 376–382. Richard Mendelssohn presents the contents of Frege’s book in modern notation in an appendix to his *The Philosophy of Gottlob Frege* (Cambridge University Press, 2005), pp. 185–201.

OTHER TEXTS: G. Frege, “Boole’s Logical Calculus and the Concept Script,” in P. Long and R. White tr., *Posthumous Writings*, pp. 9–46.

**26 September: The Foundations of Arithmetic**

MAIN TEXT: *The Foundations of Arithmetic*, tr. J. L. Austin (London: Blackwell, 1953), Introduction and §§1–33.

OTHER TEXTS: Frege’s review of Husserl’s *Philosophy of Arithmetic* (available on-line: see course web page for URL).

**3 October: The Foundations of Arithmetic** (§§34–69)

Main text as above.

**10 October: The Foundations of Arithmetic** (§§70–106).

Main text as above.

**17 October: No Meeting (Reading week)**

**24 October: Function and Concept**

MAIN TEXTS:

1) “Function and Concept” (In B. McGuinness ed., *Collected Papers on Mathematics, Logic, and Philosophy*, pp. 137–156; also M. Beaney ed., *The Frege Reader*, pp. 130–148).

2) What is a Function? (In B. McGuinness ed., *Collected Papers on Mathematics, Logic, and Philosophy*, pp. 285–292; also in P. Geach and M. Black ed., *Translations from the Philosophical Writings of Gottlob Frege*, pp. 107–116).

**31 October: Sense and Signification**

MAIN TEXT: “On Sense and Meaning” (In B. McGuinness ed., *Collected Papers on Mathematics, Logic, and Philosophy*, pp. 157–177; also in M. Beaney ed., *The Frege Reader*, and in many other places). Also translated as: “On *Sinn* and *Bedeutung*,” “On Sense and Reference,” and “On Sense and Nominatum.”

**7 November: Sense and Signification (continued); Concept and Object**

MAIN TEXTS:

1) “Comments on Sense and Meaning,” in *Posthumous Writings*, pp. 118–125; (= “Comments on *Sinn* and *Bedeutung*,” in M. Beaney ed., *The Frege Reader*, pp. 172–180.)

2) “On Concept and Object” (In B. McGuinness ed., *Collected Papers on Mathematics, Logic, and Philosophy*, pp. 182–194; also in M. Beaney ed., *The Frege Reader*, pp. 181–193; and P. Geach and M. Black ed., *Translations from the Philosophical Writings of Gottlob Frege*.)

OTHER TEXTS: Frege, Letter to Husserl in M. Beaney ed., *The Frege Reader*, pp. 149–150.

**14 November: The Thought**

MAIN TEXT:

“The Thought: a Logical Inquiry” (In B. McGuinness ed., *Collected Papers on Mathematics, Logic, and Philosophy*, pp. 351–372; also in M. Beaney ed., *Frege Reader*, pp. 325–346 ; and G. Frege, *Logical Investigations*.)

**21 November: The Frege-Hilbert dispute**

MAIN TEXT: E.-H. W. Kluge ed. and tr., *On the Foundations of Geometry and Formal Theories of Arithmetic* (Yale UP, 1971). Frege’s texts are also in B. McGuinness ed., *Collected Papers on Mathematics, Logic, and Philosophy*, pp. 273–284, 293–340. This week, we will focus on Frege’s first paper and Korselt’s reply (Kluge ed., to p. 48).

OTHER TEXTS: D. Hilbert, *Foundations of Geometry* tr. L. Unger (Chicago: Open Court, 1987).

**28 November: The Frege-Hilbert dispute (continued)**

Texts as above. This week, we will focus on Frege’s second paper (Kluge ed., pp. 49–112).