

## Syllabus for FIL4400 Logic and Philosophy of Language

English and many other languages contain a distinction between the singular (e.g. ‘John’, ‘a man’) and the plural (e.g. ‘Mary and Jane’, ‘two women’). The course offers an overview of the analysis of plurals in philosophy, logic, and semantics. In the course of doing so, we are led to discuss a variety of questions in the philosophies of logic, language, and mathematics, as well as metaphysics, for example:

- What is the relation between logic and metaphysics? Is logic in some important sense prior to metaphysics or are the two disciplines on a par?
- Are there sets, and if so, how should they be understood?
- Are there composite objects, and if so, how should they be understood?
- Is it possible to formulate absolutely general thoughts or statements, that is, thoughts or statements concerned with absolutely everything there is?
- Is there a “determinate totality” of absolutely all sets or objects whatsoever?

The course will be structured around a book in progress, namely:

Florio and Linnebo, *The Many and the One: A Philosophical Study*, under contract with Oxford University Press

This book manuscript will be supplemented with a variety of other relevant readings.

### **1. Introduction (guest lecturer: Agustin Rayo, MIT/UiO)**

#### *Topics*

The problem of plurals in philosophy and its history; plural logic; philosophical applications of plural logic.

#### *Readings*

Rayo, “Word and Objects”, *Nous*, 2001

Boolos, “To Be Is to Be the Value...”, *Journal of Philosophy*, 1984, pp. 430-39

#### *Optional further readings*

Florio and Linnebo, “Logic and Plurals”, forthcoming in Marija Jankovic and Kirk Ludwig (eds.), *Handbook of Collective Intentionality* (Routledge)

Plato, *Hippias Major* 300d7–301e5 –303

### **2. Many ways to talk about the many**

#### *Topics*

Plural logic is compared with various systems with a similar formal structure: set theory, mereology, and second-order logic.

#### *Readings*

Florio and Linnebo, ch. 2

### **3. The refutation of singularism?**

#### *Topics*

We examine various recent arguments to the effect that plurals need to be taken as primitive and cannot be reduced to anything singular.

#### *Readings*

Oliver and Smiley, “Strategies for a Logic of Plurals”, *Philosophical Quarterly* 51 (2001)

Florio and Linnebo, ch. 3

#### *Optional further readings*

Review Rayo “Word and Objects” on the paradox of plurality

Yi on substitution argument

### **4. Plural logic and set theory (I)**

#### *Topics*

What is the relation between some things and their set (if any)? Should either be reduced to other? Or should we keep both but perhaps explain sets explained in terms of pluralities?

#### *Reading*

Black, “The Elusiveness of Sets”,

Russell, *Principles of Mathematics*, Section 74 (1p)

Florio and Linnebo, ch. 4

### **5. Plural logic and set theory (II)**

#### *Topics*

The iterative conception of sets; the apparent need for proper classes and the problem of how to understand them; the relation between pluralities and proper classes.

#### *Readings*

Gödel, “Cantor’s Continuum Hypothesis”, p. 180

Boolos, “To Be Is to Be the Value...”, pp. 440-49

Linnebo, *The Philosophy of Mathematics*, Princeton UP (2017), ch. 10

#### *Optional further readings*

Boolos, “The Iterative Conception of Sets”,

Uzquiano, “Plural quantification and classes”

Linnebo, “Pluralities and sets”

Hewitt, “When do some things form a set?”

### **6. Plurals and mereology (I)**

#### *Topics*

In linguistic semantics it is customary to analyze plurals by means of mereology. We explain and discuss some of these analyses.

*Readings*

Champollion-Krifka, "Mereology", pp. 513-28

Florio and Linnebo, ch. 5, first half

*Optional further readings*

Lewis, *Parts of Classes*

**7. Plurals and mereology (II)**

*Topics*

Can mereology be reduced to plural logic or be explained in terms of it?

*Readings*

Hossack, "Plurals and Complexes", *British Journal for the Philosophy of Science* 51 (2000) [only sections 1-2 and 4-8 (17pp)]

Uzquiano, "The supreme court and the supreme court justices", *Nous* 38 (2004) [only sections 1-5 (12pp)]

Florio and Linnebo, ch. 5, second half

*Optional further readings*

Landman, "Groups"

**8. Plural logic and second-order logic**

*Topics*

What is the relation between plural logic and second-order logic? Should either be reduced to other? Or should we keep both?

*Readings*

Quine, *Philosophy of Logic* 1970, Section on "Set theory in sheep's clothing"

Williamson, "Everything" (2003), Section IX

Florio and Linnebo, ch. 6

**9. Plural logic and semantics**

*Topics*

The use of plural logic in the semantics of a first-order language with absolute generality; plural semantics of a plural object language such as PFO; semantic structuralism.

*Readings*

Florio and Linnebo, ch. 7

*Optional further readings*

Boolos, "Nominalist Platonism"

## **10. The innocence and determinacy of plural quantification**

### *Topics*

Plural logic is often claimed to be ontologically innocent and to ensure that plural quantification is determinate. We critically assess these claims.

### *Readings*

Florio and Linnebo, “On the Innocence and Determinacy of Plural Quantification”, *Nous* 50 (2016)

Hossack, “Plurals and Complexes”: excerpts

## **11. Plurals and modality**

### *Topics*

What is the correct way to develop a modal logic of plurals? That is, what is the correct way to add operators for necessity and possibility to plural logic?

### *Readings*

Hewitt, “Modalising Plurals”: excerpts

Florio and Linnebo, ch. 9

## **12. Superplurals**

### *Topics*

Can we talk plurally about pluralities? We critically discuss arguments for and against the legitimacy of such “superplural” talk.

### *Readings*

Lewis, *Parts of Classes*, excerpts

Linnebo and Nicolas, “Superplurals in English”,

Hanoch Ben-Yami, “Higher-Level Plurals vs. Articulated Reference”, *dialectica* 2013

## **13. The problem of absolute generality**

### *Topics*

Is it possible to generalize over absolutely everything? Some arguments for and against the possibility of such generalizations are discussed.

### *Reading*

Florio and Linnebo, ch. 11

### *Optional further readings*

Fine, “Relatively unrestricted quantification”, 2006

Williamson, “Everything”, 2003

## **14. Actualism vs. potentialism**

### *Topics*

Is there a “determinate totality” of absolutely all sets or objects whatsoever? The answer affects what is the correct plural logic.

*Readings*

Florio and Linnebo, ch. 12

Boolos “To Be Is to Be the Value...”, review relevant parts