

The Semantics and Pragmatics of Numerals

Linguistics 97r, Spring 2017

Instructor: Teodora Mihoc
Contact: tmihoc@fas.harvard.edu
Office hours: by appointment

Class time: Mon 2-4 pm, 3/20-4/24/2017
Class location: Boylston G07
Website: <https://goo.gl/pQB6fC>

Tutorial description

In this tutorial students will be introduced to the semantics and pragmatics of numerals, both bare (*three*) and modified (comparative: *more than three*, *less than three*; superlative: *at least three*, *at most three*). We will approach numerals along three dimensions:

1. Empirical: Bare and modified numerals do not always behave alike; their behavior differs in at least four ways: scalar inferences, epistemic inferences, behavior in downward entailing environments (esp. negation), and maximized or non-maximized interpretation.
2. Theoretical: Semantic analyses of bare and modified numerals have often used notions such as scalar implicature and positive polarity, with different ways to explain, compute, or derive them. We will cover some of those notions and see how the discussion as relates to (esp. modified) numerals is in many ways still open.
3. Experimental: Sometimes there is uncertainty about what the data are really like, or theories make predictions that need to be tested. The literature on numerals has led to various experiments that have helped us gain a better understanding of the data. We will discuss some experiments.

Prerequisites

An introductory course in semantics (e.g., *Ling 106 Knowledge of Meaning* or *Ling 116 Semantic Theory I*) would be ideal but is not required. The pace and the content/focus of the tutorial can be adjusted to the background of the students.

Requirements and grading

- 18%** Attendance and class participation. 3% for each class. If you have a good reason to miss a class, get in touch with me to discuss alternative ways to make up for the lost points.
- 20%** Two short in-class quizzes in weeks 2 and 4 testing students' understanding of concepts and theories discussed in class. Each worth 10%.

- 20%** One short presentation on a given topic. Topics will be announced in class and students may choose them for presentation in subsequent classes. Example of such a topic: What meaning does Nouwen (2010) give for a sentence such as *I have at least three stamps from Nigeria*? What does he predict for (a possibly ungrammatical sentence such as) *I don't have at least three stamps from Nigeria*?
- 42%** Final project, graded in two steps: (1) presentation of final project in last week of class (21%); (2) final paper, due one week after the end of classes (21%). The project may be a critical overview of a paper on a topic related to the topics discussed in class (summary + criticism) or an extension of the theories discussed in class to new data.

Tentative schedule

Week	Date	Topic	Readings (* = required)
1	3/20	Entailment. Implicature. The exact meaning of bare numerals as scalar inference	Spector (2013)*, Horn (1972, 37-41), Barwise and Cooper (1981), Kennedy (2013, 1-6)
2	3/27	Exactly vs. non-exactly theories of bare numerals. Maximality as a separate issue?	Spector (2013)*, Kennedy (2013; 2015)*, Krifka (1999), Buccola and Spector (2016)
3	4/3	The epistemic and scalar inferences of modified numerals	Kennedy (2013; 2015)*, Mendia (2015)*, Spector (2015)*, Barwise and Cooper (1981), Krifka (1999), Fox and Hackl (2006), Mayr (2013), Geurts and Nouwen (2007), Nouwen (2010)
4	4/10	Embedding in downward-entailing environments	Spector (2015)*, Spector (2014), Cohen and Krifka (2014), Geurts and Nouwen (2007)
5	4/17	Experimental evidence	TBD
6	4/24	Student presentations (final project part (1))	
7	5/1	No class. Deadline for submitting final project (final project part (2))	

Readings

- Barwise, J. and Cooper, R. (1981). Generalized quantifiers and natural language. *Linguistics and Philosophy*, 4(2):159–219.
- Buccola, B. and Spector, B. (2016). Modified numerals and maximality. *Linguistics & Philosophy*.
- Cohen, A. and Krifka, M. (2014). Superlative quantifiers and meta-speech acts. *Linguistics and Philosophy*, 37(1):41–90.
- Fox, D. and Hackl, M. (2006). The universal density of measurement. *Linguistics and Philosophy*, 29(5):537–586.

- Geurts, B. and Nouwen, R. (2007). *At least et al.*: The semantics of scalar modifiers. *Language*, pages 533–559.
- Horn, L. R. (1972). *On the semantic properties of logical operators in English*. University Linguistics Club.
- Kennedy, C. (2013). A scalar semantics for scalar readings of number words. In Caponigro, I. and Cecchetto, C., editors, *From Grammar to Meaning: The Spontaneous Logicality of Language*, chapter 7, pages 172–200.
- Kennedy, C. (2015). A “de-Fregean” semantics (and neo-Gricean pragmatics) for modified and unmodified numerals. *Semantics & Pragmatics*, 8(10):1–44.
- Krifka, M. (1999). At least some determiners aren’t determiners. *The semantics/pragmatics interface from different points of view*, 1:257–291.
- Mayr, C. (2013). Implicatures of modified numerals. *From grammar to meaning: The spontaneous logicality of language*, ed. Ivano Caponigro and Carlo Cecchetto, pages 139–171.
- Mendia, J. A. (2015). Conveying ignorance: Ignorance inferences with superlative numeral modifiers. *Proceedings of ConSOLE XXIII*, 150:174.
- Nouwen, R. (2010). Two kinds of modified numerals. *Semantics & Pragmatics*, 3:3–1.
- Spector, B. (2013). Bare numerals and scalar implicatures. *Language and Linguistics Compass*, 7(5):273–294.
- Spector, B. (2014). Global positive polarity items and obligatory exhaustivity. *Semantics & Pragmatics*, 7(11):1–61.
- Spector, B. (2015). Why are class B modifiers global PPIs? Handout for talk at Workshop on Negation and Polarity, February 8-10, 2015, The Hebrew University of Jerusalem.