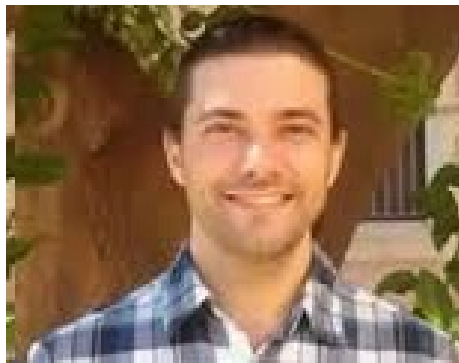


GSH / CLCG Linguistics Summer Lectures 2017

10-11-12 July

14:00, room 1315.036



Jordi Fortuny Andreu
University of Barcelona

Ambiguity and Language Design

Jordi Fortuny (1977) obtained his PhD at the University of Barcelona in 2007. His dissertation *The emergence of order in syntax* was published by Benjamins. He then worked as a postdoc for two years at the University of Groningen, in the context of the NWO-funded project *Dependency in Universal Grammar*. After that he has been employed by the University Autònoma of Barcelona and since 2012 by the University of Barcelona.

His work on theoretical syntax and formal semantics applies mathematical models to core issues in linguistics, including ambiguity, duality of patterning, hierarchical structure, and grammatical constraints. In 2015 he edited a special volume of the journal *The Linguistic Review* on 'The locus of ambiguity and the design of language'.

He is a frequent visitor to international centers of linguistic research, and obtained an Erasmus teaching mobility grant for this return to Groningen.

The three lectures he proposes to give this week are intended for graduate students, but research master students and other faculty are particularly encouraged to attend.

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Jordi Fortuny
Seminar on Ambiguity and Language Design

ABSTRACT

It is a common observation that natural languages are ambiguous, namely, that linguistic utterances or parts of linguistic utterances can potentially be assigned more than one interpretation, whereby receivers need to resort to supplementary information (i.e., the communicative context) to choose among the available interpretations. Indeed, one of the traditional tasks of grammar is to illustrate ambiguity, which may be lexical, structural or relative to the scope of quantifiers, as well as to determine how apparently ambiguous utterances are disambiguated at the relevant levels of representation.

The objective of this seminar is twofold. Firstly, we shall provide a relatively extensive review of ambiguity within grammar. We shall discuss several lexical, syntactic, phonological and semantic aspects involved in ambiguity and we shall argue for the thesis that ambiguity appears at the externalization branch of language. In brief, our claim is that ambiguity appears because phonetic forms dispense with part of the information that is present in semantic representations. Secondly, we shall provide a theoretical investigation of why natural languages are ambiguous.

We shall devote most of our attention to the second question above mentioned, which can be viewed as a particular exploration of Chomsky's Strongest Minimalist Thesis (Chomsky 2000): is the property of ambiguity an imperfection of language, a fingerprint of the poor design of language for communication (Chomsky 2008)?

We shall propose that ambiguity is an unavoidable property given certain general efficiency considerations in natural communication systems (Fortuny & Corominas 2013). More precisely, we shall develop the intuition that there must be a compromise in the coding and decoding complexities: on one hand, the coder tends to define a code as vague as possible, and on the other, the decoder pushes the code to be as specific as possible (Zipf 1949). After introducing certain general concepts such as Landauer's logical irreversibility (Landauer 1961) and Turing's computing machine (Turing 1936), we shall express this compromise in terms of a symmetry equation that introduces a balance between the complexities of the coding and decoding machines.

Finally we shall also comment on other factors that may favour the existence of ambiguity (Wasow 2015; Wasow et al. 2005), especially Piantadosi et al. (2012)'s proposal that "ambiguity is a desirable feature of any communicative system when context is informative about meaning".

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Landauer, R. 1961. Irreversibility and heat generation in the computing process. *IBM Journal of Research and Development* 5(3): 183-191.

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