Fall 2024

BCL, Université Côte d’Azur

**Formal Semantics**

**Schedule and Introduction**

Instructor: Friederike Moltmann

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Time: Mondays 10.00h-12.00h

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Course webpage: <http://www.friederike-moltmann.com/teaching/formal-semantics-fall-2024/>

Requirements

* Regular readings
* Active participation in the course and preparation of answers to problems
* Take-home exam

Textbook

Elisabeth Coppock / Lucas Champollion: *Introduction to Formal Semantics (IFS)*

Available online: <https://eecoppock.info/semantics-boot-camp-spring-2024.pdf>

**Schedule**

Session 1 (November 18)

What is Formal Semantics? (handout)

Session 2 (November 25)

Foundations of Semantics (IFS, chap. 1)

Sets, Relations, Functions (IFS, chap. 2)

Session 3 (December 2)

Negative polarity items, Sets, Relations, Functions (IFS, chap. 2)

Session 4 (December 9)

Propositional Logic and its Linguistic Applications (IFS, chap. 3)

Session 5 (December 16)

Predicate Logic and Its Linguistic Applications (IFS, chap. 4)

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**Introduction**

**1. Standard division of linguistics**

Theory of form: syntax, morphology, phonology

Theory of meaning: semantics

Theory of use: pragmatics

**2. Issues about the division**

**2.1. Syntax – semantics interface issues**

Two examples:

1. Are selectional restrictions of predicates as semantic or a syntactic issue?

(1) Colorless green ideas sleep furiously.

(2) a. John believes that that the world is round.

b. John believes the proposition that the world is round  
(3) a. John thinks that the world is round.

b. \* John thinks the proposition that the world is round.

(4) a. John belief that the world is round

b. \* John’s belief the proposition that the world is round

The choice between *that* S and *the proposition that* S seems to be syntactically conditioned.

2. Are quantifier scope possibilities due to semantic or syntactic constraints?

(5) a. Two students solved every problem. (two readings)

b. Two students solved no problem. (only one reading)

c. Two students solved few problems. (only one reading)

Intonation plays a role for available of inverse scope reading in (5a).

(6) a. Every problem was solved by two students.

b. No problem was solved by two students.

c. Few problems were solved by two students.

(7) a. No student believes that every professor is a genius.

b. Some students believe that every professor is a genius.

**2.2. Semantics – pragmatics division**

1. Is pragmatics about utterance meaning that is not encoded in grammar?

Sentence mood - speech acts

(8) a. John solved the problem  
 b. Did John solve the problem?

c. Solve the problem!

Explicit performatives:

(9) a. I am asking whether John solved the problem.

b. I am requesting that you solve the problem.

Modals, on a descriptive and a performative use:

*Must*: modal of necessity

*May*: modal of possibility

(10) a. John must solve the problem.

b. You must solve the problem.

(11) a. The participants may leave the meeting when they feel uncomfortable.

b. You may leave the meeting.

One view

Pragmatics as everything else that is not part of *lexical meaning* or structural meaning

Another view

Pragmatics includes semantics of expressions and constructions that relate to speech acts.

**3. What is formal semantics?**

Semantics is the theory of meaning - but what are meanings?

**3.1. Notions of meaning**

1. Concepts, conceptual meaning: meaning as something in the mind

2. Objects being referred to

3. Truth conditions: conditions under which a sentence is true or false / is true or false in a circumstance.

Meanings of words are generally taken to be conceptual meaning.

Exception:

Proper names and names for kinds: are nowadays (since Kripke) taken to be directly referential: referring to objects / kinds without the mediation of concepts.

An important divide:

Lexical meaning vs. sentence meaning (structural meaning, syntactic meaning)

Lexical meanings: meanings of words and idioms (e.g. *kick the bucket*)

Lexical meaning and sentence meaning are generally conceived very differently.

**3.2. Lexical meaning**

What exactly is in the lexicon?

1. Words with their syntactic category specifications, argument structure syntactic and semantic selection requirements

2. Only roots: insertion into syntactic structures goes along with categorial specification, argument structure etc. (Distributive Morphology)

**3.3. Sentence meaning**

The meaning of syntactic constructions

The meaning of syntactic features

The meaning of functional expressions

Functional expressions

Light verbs: *have, be, give, make*

Prepositions: *of, at, on*

determiners: *the, every, no*

coordinators: *and, or, but*

modals: *may, must, should, can, could*

Functional expressions form a closed class.

The lexicon forms an open class.

Interactions word meaning – grammar

1. Semantic and syntactic selection

2. Category specification and type of lexical meaning

Basic properties of sentence meanings:

Truth conditions, truth or falsity relative to counterfactual circumstances

But not all sentences have truthconditions.

Some sentences have expressive meanings: e.g., optatives, exclamatives

**4. Linguistic meaning and other meaning**

Sentences as carriers of meaning

Speech acts, utterances as carriers of meaning

Mental states and acts as carriers of meaning

(12) John believes / thinks / assumes that it is raining.

(13) a. John asked whether it is raining.

b. John wonders whether it is raining.

(14) a. John thought ‘it is raining’.

b. John said ‘It is raining’.

c. John asked ‘Is it raining?’.

d. John wondered ‘is it raining?’.

(15) a. What a nice house!

b. John thought ‘what a nice house!’.

Nonlinguistic signs as carriers of meaning: the field of semiotics