



Semantics & Pragmatics SoSe 2022

Lecture 1: Organization & Introduction

26/04/2022, Christian Bentz



Overview

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Hybrid Teaching

Course Credits

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Tutorials

Moodle

Learning Strategy

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Section 3: Introduction

Form and Meaning

Meaning as Reference

Combinatoriality and Compositionality

Three Levels of Meaning

References



Section 1: Organization



Hybrid Teaching

- ▶ You can attend in person or online.
- ▶ Zoom links for the lectures can be found on moodle.
- ▶ Tutorials are mostly held in person, but we will also offer hybrid tutorials (see details below).

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Course Credits

- ▶ Exam on **Thursday 28th July 2022: 6 ECTS**
- ▶ We plan to have the exam **in person**.
- ▶ Handing in (and passing) 5 Tutorial Exercise Sheets (see details below): **3 ECTS**
- ▶ **Master students in ISCL**: if you need only 6 ECTS for the Semantics and Pragmatics course, then you don't need to hand in exercise sheets.

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Retake Exam

We plan to offer a retake exam for students who failed and who were sick on the day of the original exam. The exact date can only be given once the main exam was marked and students received their marks. It will be roughly at the end of September/beginning of October.



Schedule (2022)

26/04/2022	Lecture 1	Organization & Introduction
28/04/2022	Lecture 2	Information Theory I
03/05/2022	Lecture 3	Information Theory II
05/05/2022	Lecture 4	Formal Semantics I: Propositional Logic
10/05/2022	Lecture 5	Formal Semantics II: Predicate Logic
12/05/2022	Lecture 6	Formal Semantics III: Second-Order Logic
17/05/2022	Lecture 7	Formal Semantics IV: Type Theory
19/05/2022	Lecture 8	Formal Semantics V: Lambda Calculus
24/05/2022	Lecture 9	Summary: Formal Semantics
26/05/2022		Ascension Day (Christi Himmelfahrt)
31/05/2022	Lecture 10	Further Topics in Semantics: Modality
02/06/2022	Lecture 11	Further Topics in Semantics: Evidentiality
		Pentecost Holidays (Pfingstferien)

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Schedule (2022)

14/06/2022	Lecture 12	Applications & Current Research
16/06/2022		Corpus Christi (Fronleichnam)
21/06/2022	Lecture 13	Introduction Pragmatics
23/06/2022	Lecture 14	Discourse Representation Theory I
28/06/2022	Lecture 15	Discourse Representation Theory II
30/06/2022	Lecture 16	Implicatures
05/07/2022	Lecture 17	Presupposition
07/07/2022	Lecture 18	Speech Acts
12/07/2022		Mock Exam
14/07/2022	Lecture 19	Summary: Pragmatics
19/07/2022	Lecture 20	Cross-Linguistic Diversity in Pragmatics
21/07/2022	Lecture 21	Pragmatic Universals
28/07/2022		Exam

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Tutorials

Tutorial 1: Alla Kutkina, alla.kutkina@student.uni-tuebingen.de

Tutorial 2: Sophie Vollmer, sophie.vollmer@student.uni-tuebingen.de

	Monday	Tuesday	Wednesday	Thursday	Friday
8-10					
10-12					
12-14			Tutorial 2		Tutorial 1
14-16					
16-18	Tutorial 2		Tutorial 1		

Tutorial 1 (Wed): Room 1.01 (VG Wilhelmstraße 19-23) ([in person](#))

Tutorial 1 (Fri): Room 1.13 (VG Wilhelmstraße 19-23) ([hybrid](#))

Tutorial 2 (Mon): Room 035 (Neuphilologicum) ([in person](#))

Tutorial 2 (Wed): Room 1.13 (VG Wilhelmstraße 19-23) ([hybrid](#))

Note: you need to go to **only one tutorial (2 SWS)**, so you can choose one of these four options.

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Exercise Sheets

- ▶ You have to **pass five** exercise sheets to get your 3 ECTS points for the tutorial.
- ▶ In order to pass, you have to work on **all exercises**.
- ▶ You can **choose** which exercise sheets to hand in or not.
- ▶ Exercise sheets will go online **after the thursday lectures** for the following tutorial week.
- ▶ You have to send them via email to your tutor **by midnight on the directly following saturday**, in order to get your pass/fail for this exercise sheet.
- ▶ The **format for exercise sheet solutions** can be either handwritten and scanned, or in some kind of text editor (but please convert to pdf).

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Tutorials

Week 1: 02/05-06/05/2022

Week 2: 09/05-13/05/2022

Week 3: 16/05-20/05/2022

Week 4: 23/05-27/05/2022

Week 5: 30/05-03/06/2022

Week 6: 13/06-17/06/2022

Week 7: 20/06-24/06/2022

Week 8: 27/06-01/07/2022

Week 9: 04/07-08/07/2022

Week 10: 11/07-15/07/2022

Week 11: 18/07-22/07/2022

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Notes:

- ▶ Tutorial **Week 11** will be used for discussing the Mock Exam.



Moodle

Please go to moodle and sign up for one of the tutorials. Tutorial choice will be open between **today 14:00** and **coming Sunday 1st May 23:59**.

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The screenshot shows a Moodle course page for 'Semantics and Pragmatics'. The page title is 'Semantics and Pragmatics' and the breadcrumb trail is 'Startseite / Meine Kurse / Sommersemester 2022 / 5 - Philosophische Fakultät / Allgemeine Sprachwissenschaft / Computerlinguistik / General Linguistics / Semantics and Pragmatics'. There are three main sections:

- Ankündigungen** (Announcements): A section with a plus icon and a pencil icon for editing.
- Tutorial Choice**: A section with a plus icon, a pencil icon, and a button that says 'Als erledigt kennzeichnen' (Mark as completed).
- Zoom links**: A section with a plus icon and a pencil icon for editing. It contains two entries:
 - Topic: Semantics and Pragmatics, Tuesday Lectures
Time: Tuesdays 12:00 PM Amsterdam, Berlin, Rome, Stockholm, Vienna
Every week on Tue, until Jul 26, 2022, 14 occurrence(s)
Join Zoom Meeting: <https://zoom.us/j/98516741197?pwd=NUFVMU9nM0grSUxGeUFoL0NNVGhzQT09>
Meeting ID: 985 1674 1197
Passcode: 522639
 - Topic: Semantics and Pragmatics, Thursday Lectures
Time: Thursdays 12:00 PM Amsterdam, Berlin, Rome, Stockholm, Vienna
Every week on Thu, until Jul 28, 2022, 14 occurrence(s)
Join Zoom Meeting: <https://zoom.us/j/95122710249?pwd=VmxRWEFFeFY5QXZzSGhLYzd1bTU2dz09>
Meeting ID: 951 2271 0249
Passcode: 534212



Learning Strategy

- ▶ Attend the lecture.
- ▶ Go through the lecture slides again.
- ▶ Do the exercises (if possible) before the tutorial.
- ▶ Join the tutorial.

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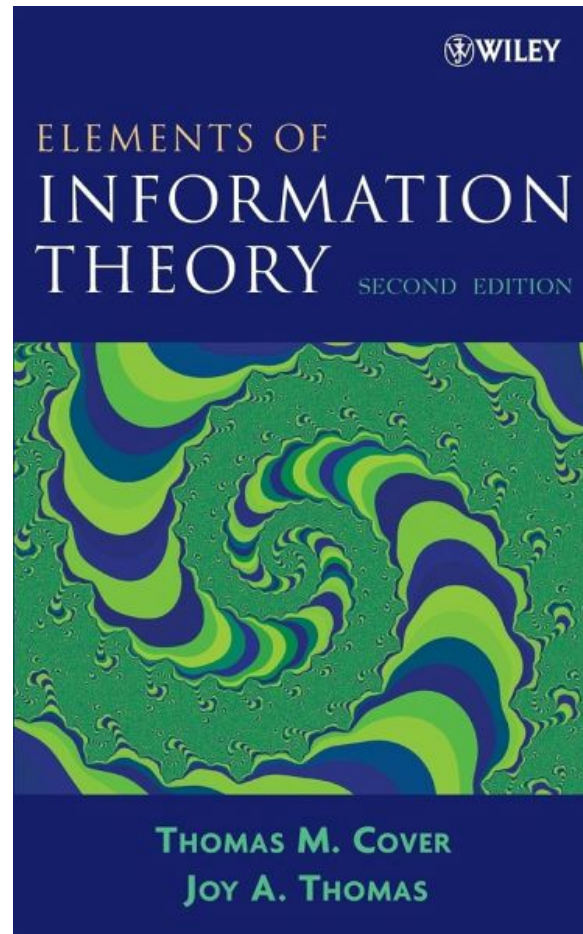


Section 2: Literature



Information Theory

Cover, Thomas M. & Thomas, Joy A. (2006). *Elements of Information Theory*. New Jersey: Wiley & Sons.



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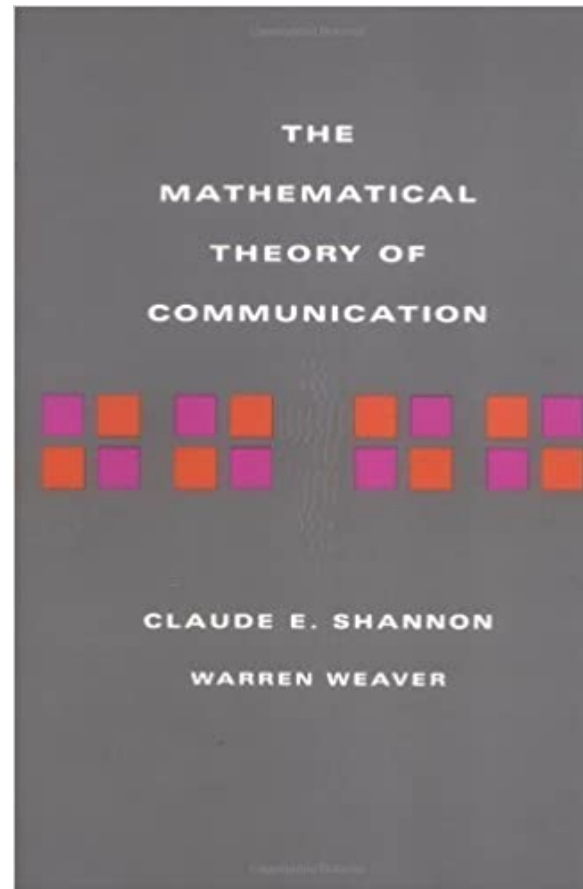
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Information Theory

Shannon, Claude E. & Weaver, Warren (1949). *The mathematical theory of communication*. Chicago: University of Illinois Press.



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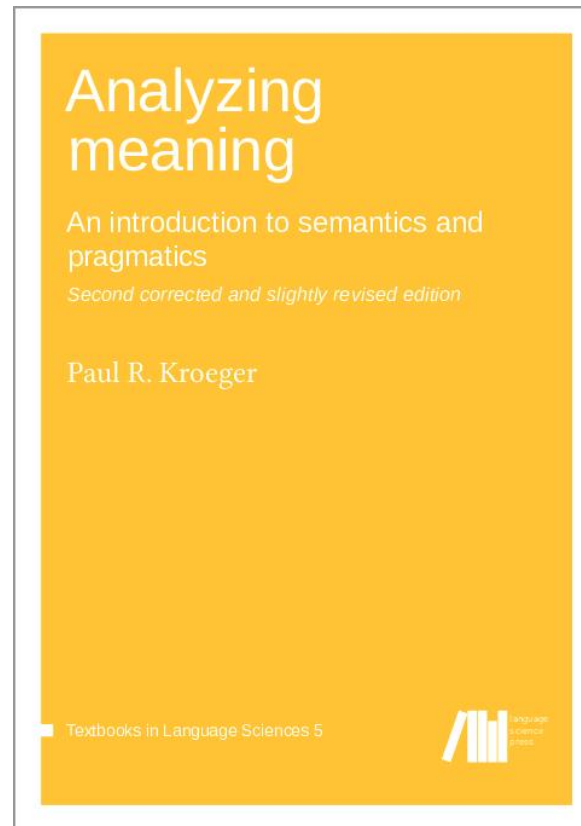
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Semantics

Kroeger, Paul (2019). *Analyzing meaning: An introduction to semantics and pragmatics. Second corrected and slightly revised edition.* (Textbooks in Language Sciences 5). Berlin: Language Science Press.



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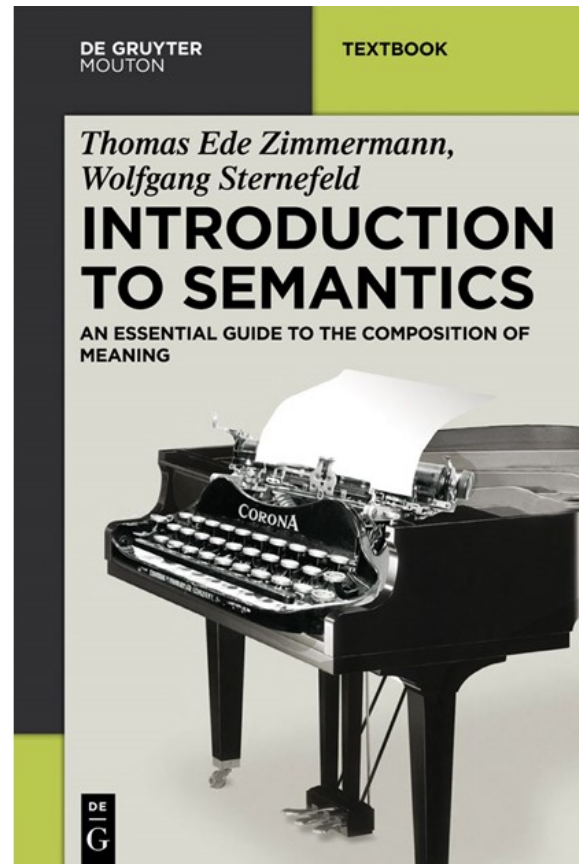
References

download at: <http://langsci-press.org/catalog/book/231>



Formal Semantics

Zimmermann, Thomas E. & Sternefeld, Wolfgang (2013). *Introduction to Semantics. An essential guide to the composition of meaning*. Berlin/Boston: Mouton De Gruyter.



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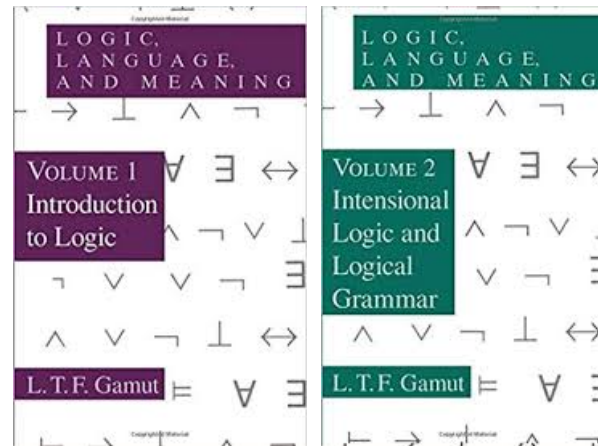
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Formal Semantics

- ▶ Gamut, L.T.F (1991). *Logic, Language, and Meaning. Volume 1: Introduction to Logic*. Chicago: University of Chicago Press.
- ▶ Gamut, L.T.F (1991). *Logic, Language, and Meaning. Volume 2: Intensional Logic and Logical Grammar*. Chicago: University of Chicago Press.



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Further Introductions

- ▶ Dowty, David R., Wall, Robert E. & Peters, Stanley (1981). *Introduction to Montague semantics*. Dordrecht/Boston/London: D. Reidel Publishing Company.
- ▶ Ferreira, Marcelo (2019). *Curso de semântica formal* (Textbooks in Language Sciences 6). Berlin: Language Science Press.
- ▶ Heim, Irene & Kratzer, Angelika (2008). *Semantics in Generative Grammar*. Malden/Oxford/Carlton: Blackwell Publishing.
- ▶ Kearns, Kate (2011). *Semantics*. New York/London: Palgrave Macmillan.
- ▶ Roussarie, Laurent (2017). *Sémantique formelle. Volume 1: Introduction à la grammaire de Montague* (Textbooks in Language Sciences 4). Berlin: Language Science Press.

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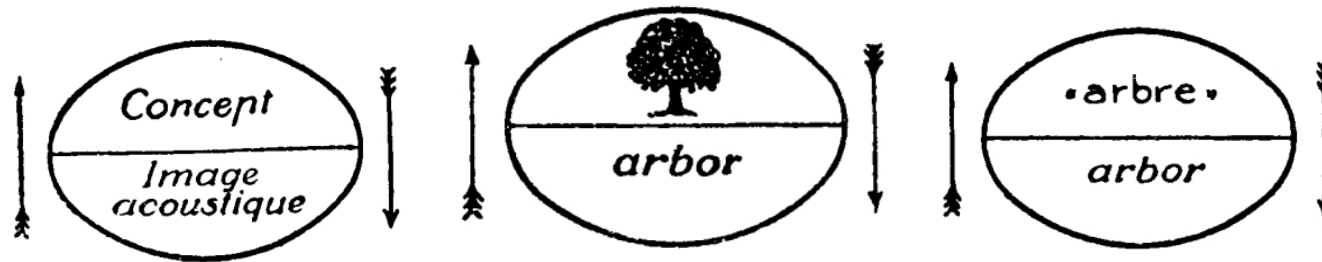


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The Roots

“Signifié et signifiant” at three levels:



Level 1: Abstract Relation

Level 2: Concrete Mapping (Denotation)

Level 3: Metalanguage (Translation)

Saussure (1995). Cours de linguistique générale, p. 99.

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Two Fundamental Concepts

Reference: How does the mapping between form and meaning work? Does it work at all?

tree



Compositionality: How are complex utterances built from smaller units? Are they built from smaller units at all?

apple + tree



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Reference



Meaning as Reference

“[...] we will think about how speakers use language to talk about the world. **Referring** to a particular individual, e.g. by using expressions such as *Abraham Lincoln* or *my father*, is one important way in which we talk about the world.”

“Philosophers have found it hard to agree on a precise **definition for reference**, but intuitively we are talking about the speaker’s use of words to “point to” something in the world; that is, to direct the hearer’s attention to something, or to enable the hearer to identify something.”

Kroeger (2019). *Analyzing meaning*, p. 15 and page 17 respectively.

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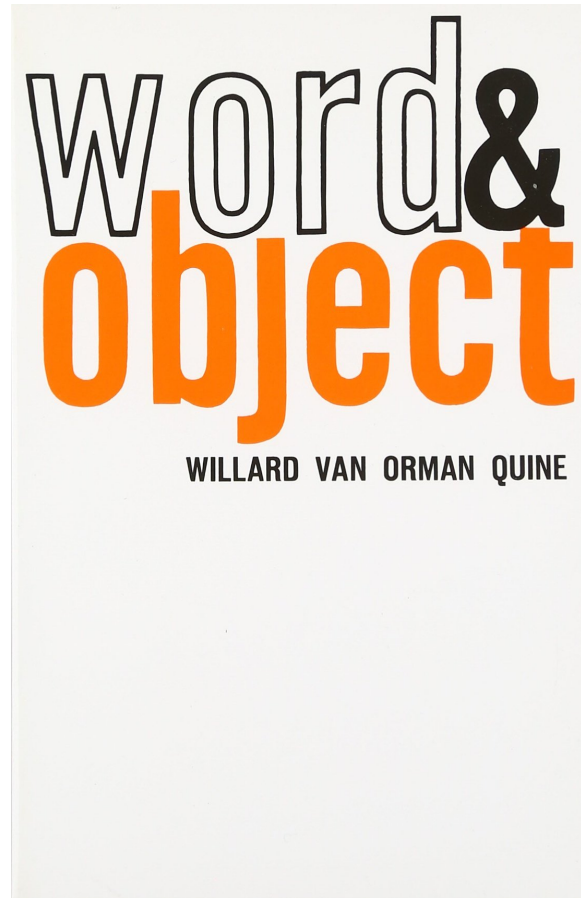
References



Meaning as Reference

“What is relevant rather to our purposes is *radical translation*, i.e., translation of the language of a hitherto untouched people [...] The utterances first and most surely translated in such a case are ones keyed to present events that are conspicuous to the linguist and his informant. A rabbit scurries by, the native says 'Gavagai', and the linguist notes down the sentence 'Rabbit' or 'Lo, a rabbit') as tentative translation, subject to testing in further cases.”

Quine (1960). *Word and object*, p. 28.



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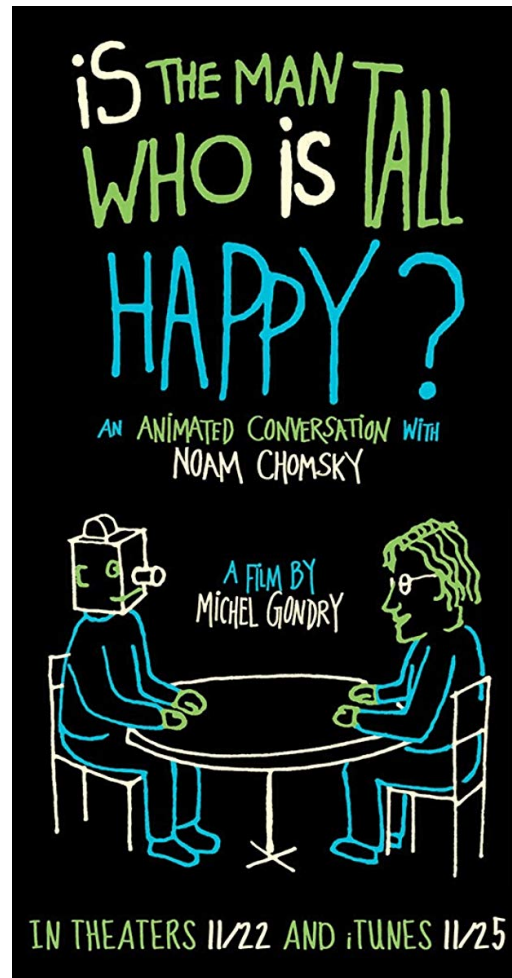
References



Against Reference: Words as Mental Representations

“It’s just a classic error that runs right through philosophy and psychology and linguistics right up to the moment. That’s the idea that words... say, meaning-bearing elements, like, say, “tree” or “person” or, you know, “John Smith” or anything... pick out something in the extramental world, something that a physicist could identify so that if I have a word... say, “cow”... it refers to something, and a, you know, scientist knowing nothing about my brain could figure out what counts as a cow. That’s just not true.”

Noam Chomsky



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Semiotic Triangle (Triangle of Reference/Meaning)

“**Semiotics** is the study of the relationship between **signs and their meanings**. In this book we are interested in the relationship between forms and meanings in certain kinds of symbolic systems, namely human languages. The diagram is a way of illustrating how speakers use language to describe things, events, and situations in the world.”

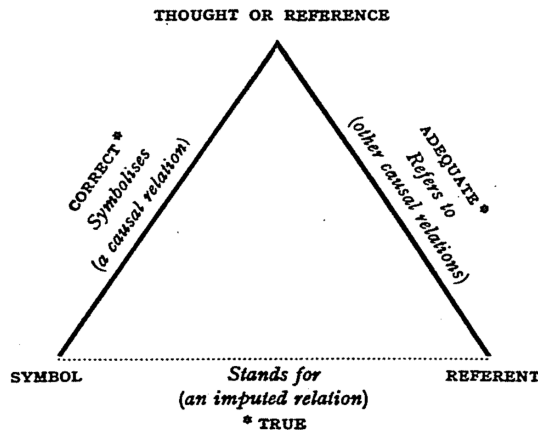
Kroeger (2019). *Analyzing meaning*, p. 16.

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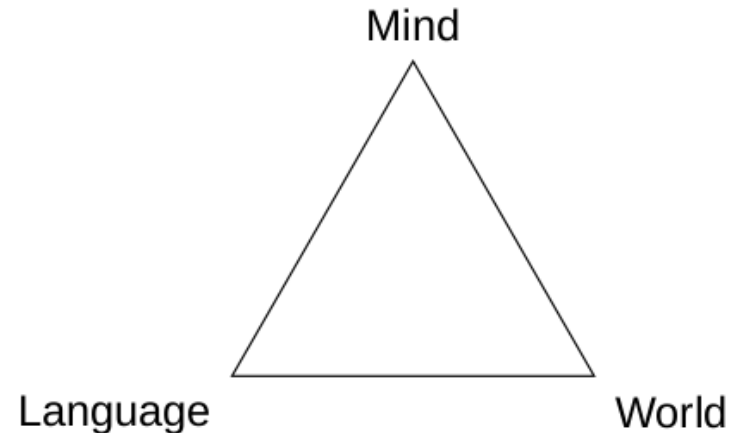
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Ogden & Richards (1923).
The meaning of meaning, p. 11.



Kroeger (2019). *Analyzing meaning*, p. 16.



Denotational vs. Cognitive Semantics

“The basic approach we adopt in this book focuses on the link between linguistic expressions and the world. This approach is often referred to as **denotational semantics** [...] An important alternative approach, **cognitive semantics**, focuses on the link between linguistic expressions and mental representations.”

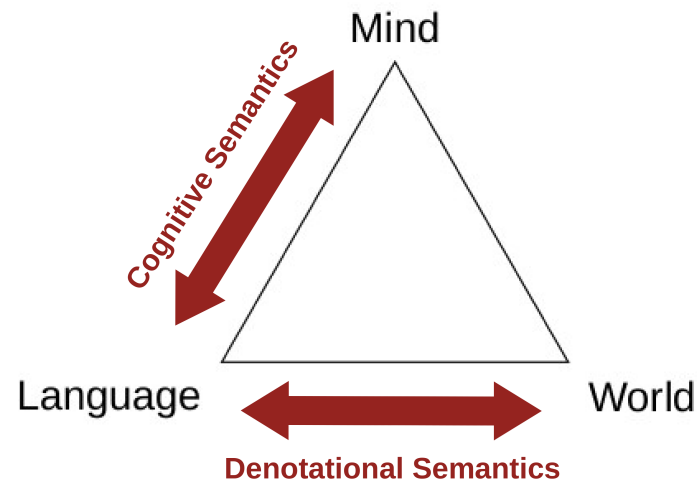
Kroeger (2019). Analyzing meaning, p. 17.

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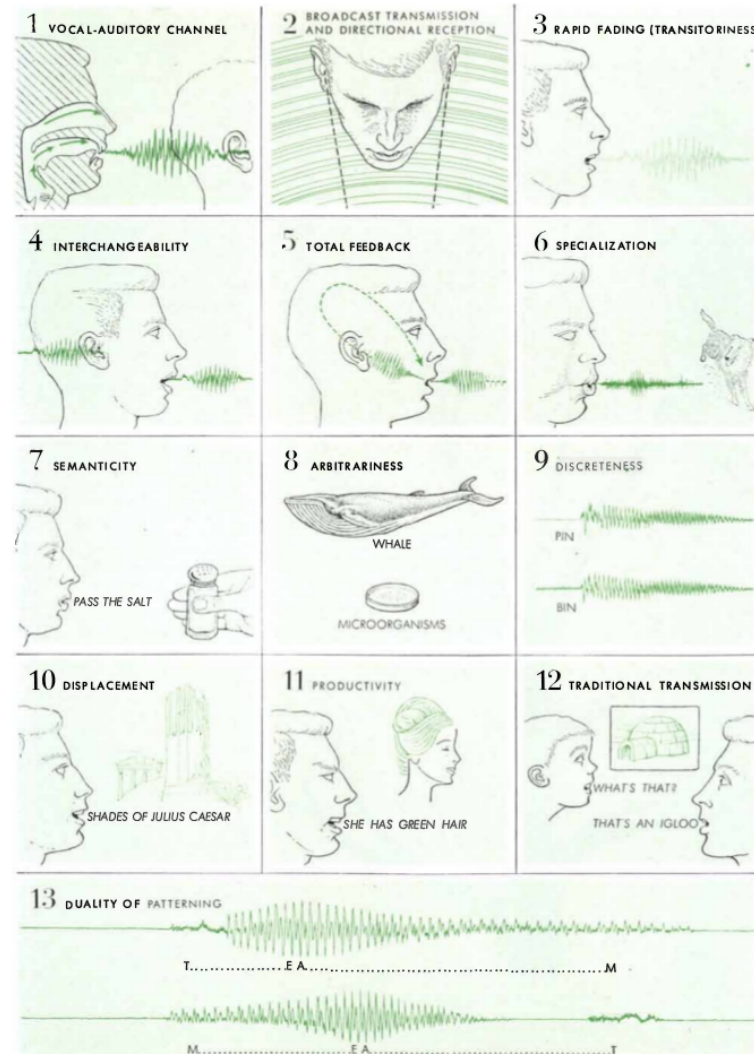
Combinatoriality and Compositionality



The Design Features of Human Language

“A set of 13 design-features is presented in the illustration on the opposite page. There is solid empirical justification for the belief that all the languages of the world share every one of them.”

Hockett (1960). The origin of speech, p. 90.



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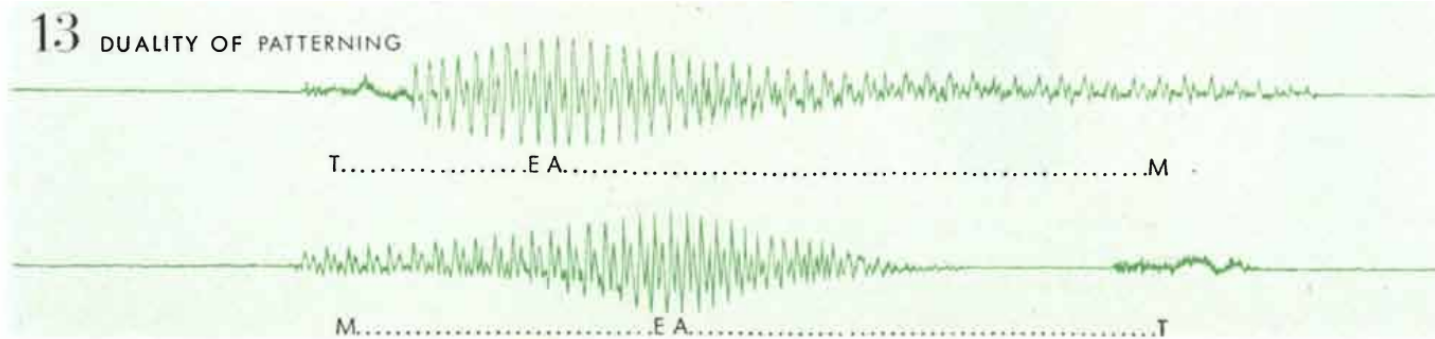
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Duality of Patterning



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“The **meaningful** elements in any language [...] constitute an enormous stock. Yet they are represented by small arrangements of a relatively very small stock of distinguishable sounds which are themselves wholly **meaningless.**”

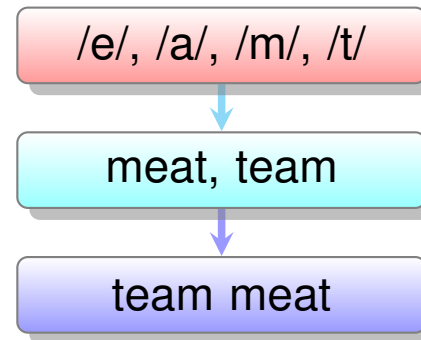
Hockett (1960). The origin of speech, p. 90.



Duality of Patterning

“Language is structured on at least two levels (Hockett, 1960). On one level, a small number of **meaningless building blocks** (phonemes, or parts of syllables for instance) are combined into an **unlimited set of utterances** (words and morphemes). This is known as **combinatorial structure**. On the other level, meaningful building blocks (words and morphemes) are combined into **larger meaningful utterances** (phrases and sentences). This is known as **compositional structure**.”

Little et al. (2017), p. 1.



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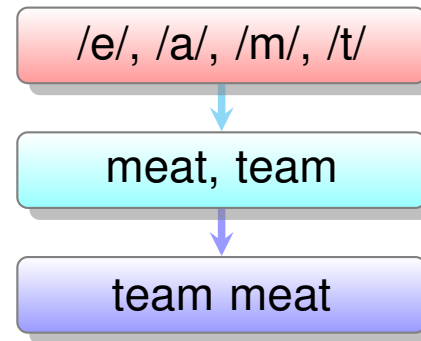
References



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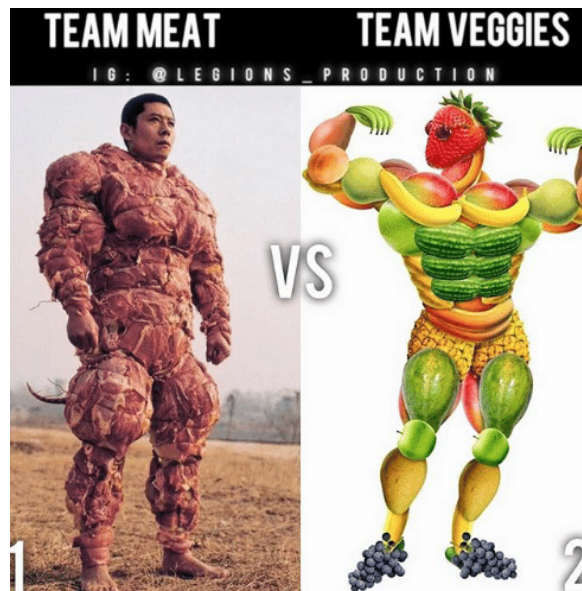


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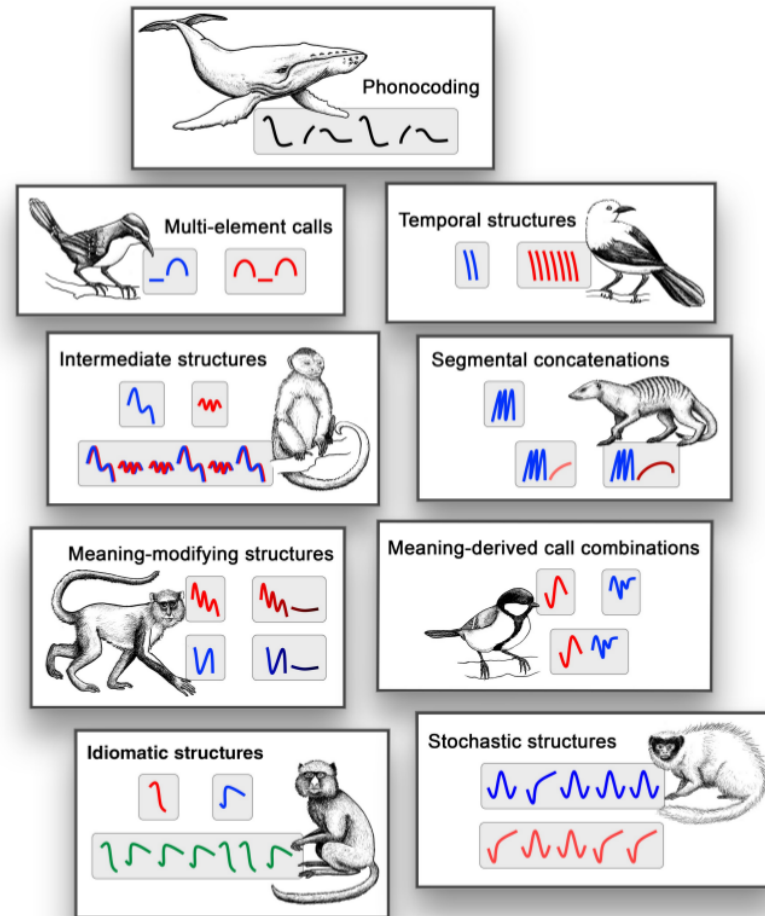


Combinatoriality in Animal Communication

“Graphical illustration of combinatorial structures in nonhuman vocal systems. Shapes distinguish sound elements, colors distinguish meaning (black indicates absence of functional- or context-specific meaning).”

- ▶ **Phonocoding:** combination of meaningless elements into sequence that lacks functional- or context-specific meaning (e.g., whales, songbirds).
- ▶ **Multi-element calls:** combination and reuse of meaningless elements to generate context-specific/functionally meaningful calls (e.g., chestnut-crowned babblers).
- ▶ **Temporal structures:** meaning-differentiating temporal variation (e.g., number of element repetitions) within a string of repeated sounds (e.g., pied babblers, Mexican free-tailed bats).
- ▶ **Intermediate structures:** combination of meaningful calls into sequence reflecting intermediate stages experienced by the caller (e.g., wedge-capped capuchins, gorillas).
- ▶ **Segmental concatenations:** concatenation of invariable, stand-alone segment (generally identity-encoding) with variable, bound segment (generally motivation/behavior-encoding) (e.g., banded mongooses, Diana monkeys).
- ▶ **Meaning-modifying structures:** combination of individually meaningful (variable) call with (invariable) meaning-modifying affix (e.g., Campbell's monkeys).
- ▶ etc.

Engesser & Townsend (2018).



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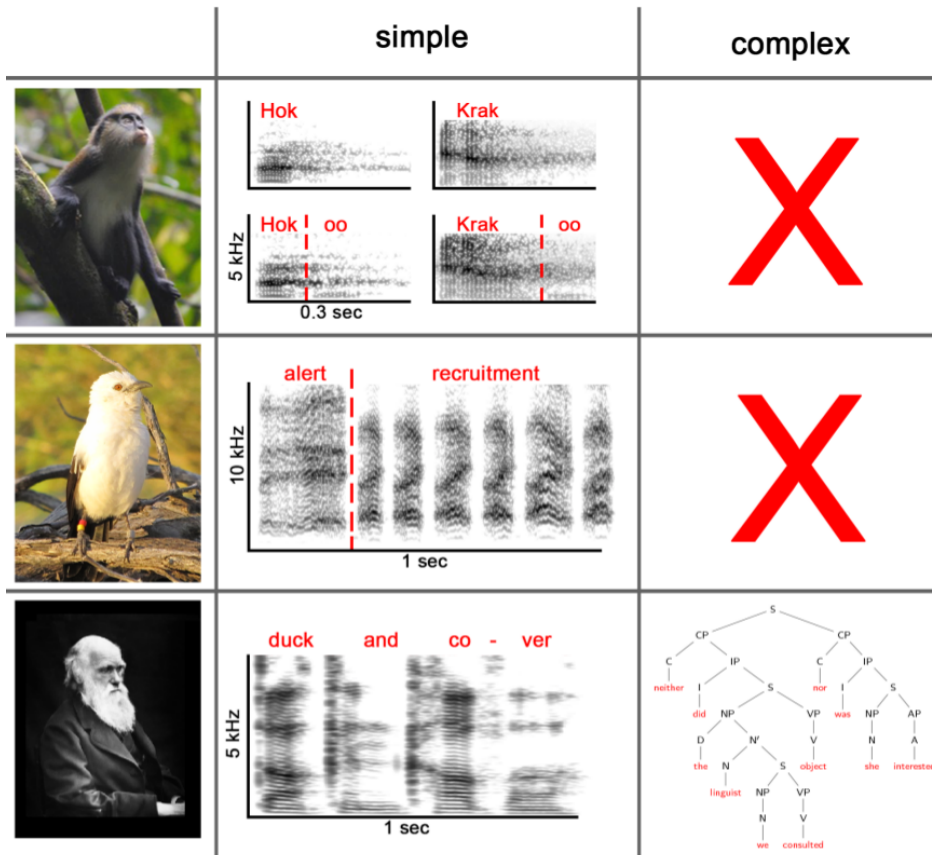
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Compositionality in Animal Communication

- ▶ a) **Compositionality in primates:** Male Campbell's monkeys produce 'krak' alarms (to leopards) and 'hok' alarms (to eagles), but both calls can also be merged with an '-oo' suffix to generate 'krak-oo' (to a range of disturbances) and 'hok-oo' (to non-ground disturbances) [...]
- ▶ b) **Compositionality in birds:** Pied babblers produce 'alert' calls in response to unexpected but low-urgency threats and 'recruitment' calls when recruiting conspecifics to new foraging sites. When encountering a terrestrial threat that requires recruiting group members (in the form of mobbing), pied babblers combine the two calls into a larger structure, and playback experiments have indicated that receivers process the call combination compositionally by linking the meaning of the independent parts.
- ▶ c) **Compositionality in humans:** humans are capable of producing both simple, nonhierarchical compositions (e.g., 'Duck and cover!') and complex hierarchical compositions and dependencies.



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Townsend et al. (2018), p. 4.



Human Language

Amharic (amh, Afro-Asiatic)

- (1) zaf-u təlləq' nāw¹
tree.NOM.SG-DEF big be.N.3SG
“The tree is big.”
BIG(t)²

Two words might be productively combined (*zaf-u təlləq'*) to yield a new meaning. *Compositionality* is a hallmark of human language (and other communication systems) as it enables the *infinite use of finite means*.

¹Amharic is normally written in Ge'ez script. This is a transliteration into Latin script based on Leslau (1995).

²This is the predicate logic notation in Kroeger (2019)

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Problem: Compounds

(2) 笔记本 电 脑
bǐ jì běn diàn nǎo

writing.brush record root/basis electricity brain³

“?”

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³This was glossed using <https://www.mdbg.net>.



Problem: Compounds

- (4) 笔记本 电 脑
bǐ jì běn diàn nǎo
writing.brush record root/basis electricity brain³
“?”
- (5) 笔记本 电脑
bǐjìběn diànnǎo
notebook computer
“laptop”

The combination of single meaning bearing elements to larger meaning bearing chunks is often not straightforward. Especially across different languages this is a difficult task for learners (both human and machine).

³This was glossed using <https://www.mdbg.net>.

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Problem: Idioms

- (6) Kim ha-t de-n Wald vor lauter
kim have-PRS.3SG ART-ACC.SG forest because.of all.the
Bäum-en nicht ge-seh-en
tree\ -DAT.PL not PTCP-see-PTCP
literal translation: “Kim hasn’t seen the forest because of all the
trees.”
actual meaning: Kim was so concerned with the details that s/he
didn’t see the overall picture.

In the case of idioms (e.g. *kicking the bucket*), the intended meaning of the sentence is not a *linear combinatorial* derivation of its parts. Rather, a complex meaning is assigned to the whole phrase.

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Three “levels” of meaning

1. **Word meaning:** Meaning assigned to individual words.
Example: *kick*; *bucket*
2. **Sentence meaning:** Meaning derived via combination of word meanings (compositional). “The term **sentence meaning** refers to the semantic content of the sentence: the meaning which derives from the words themselves, regardless of context.”
Example: KICK(j,b), literally “John kicks the bucket.”
3. **Utterance meaning** (“speaker” meaning): “The term **utterance meaning** refers to the semantic content plus any pragmatic meaning created by the specific way in which the sentence gets used.” Another definition is: “The totality of what the speaker intends to convey by making an utterance.”
Example: *John dies*.

Kroeger (2019). *Analyzing meaning*, p.5.

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Three “levels” of meaning

Teochew (Southern Min Chinese, Sino-Tibetan)

- (7) Lw chya? pa bɔy?
you eat full not.yet
“Have you already eaten?”

Sentence meaning: “Have you already eaten or not?”, i.e. a request for information.

Utterance meaning: Greeting like “hello” or “how are you” in English.

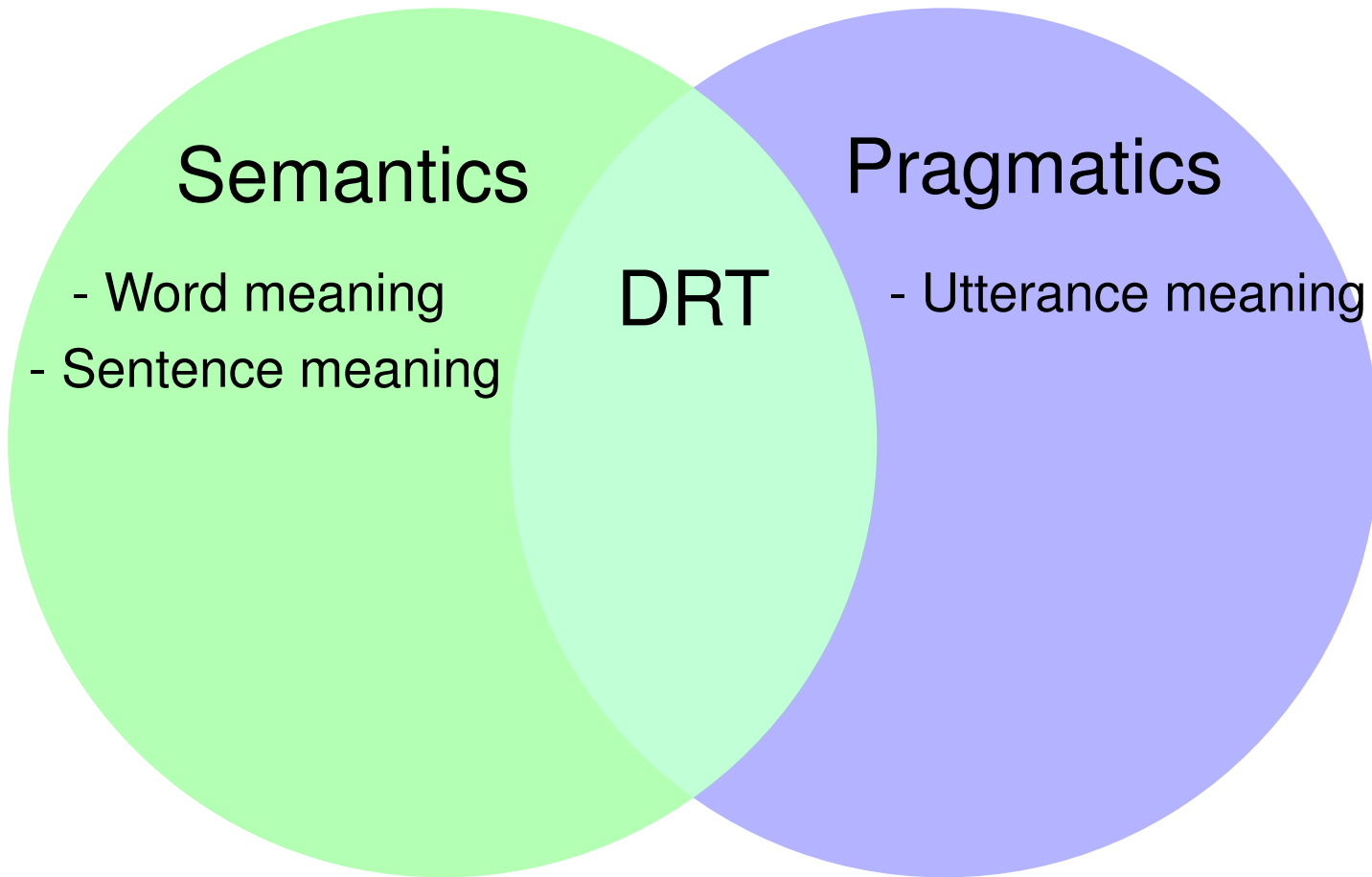
Kroeger (2019). Analyzing meaning, p. 5-6.

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DRT: Discourse Representation Theory



Summary

Every syntactic, semantic and pragmatic theory (or all combined) have to deal in some way with

1. the **compositionality** of meaning and form,
2. the **mapping** between meaning and form.

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References

Hockett, Charles F. (1960). The origin of speech. *Scientific American*, Vol. 203, No. 3, pp. 88-97.

Leslau, Wolf (1995). *Reference grammar of Amharic*. Wiesbaden: Harrassowitz.

Little, Hannah, Eryilmaz, Kerem, & De Boer, Bart (2017). Signal dimensionality and the emergence of combinatorial structure. *Cognition*, No. 168, p. 1-15.

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Section 1:
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Section 2:
Literature

Section 3:
Introduction

References



Thank You.

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