



# Syntax & Semantics WS2019/2020

## Lecture 1: Introduction

21/10/2019, Christian Bentz



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# Overview

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# Campus Portal

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Syntax and Semantics - Einzelansicht

Funktionen: [markierte Termine vormerken](#)

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**Grunddaten**

Veranstaltungsart	Proseminar		
Veranstaltungsnummer		Kurztext	
Semester	WS 19/20	SWS	4
Erwartete Teilnehmer/-innen		Max. Teilnehmer/-innen	
Rhythmus	jedes 2. Semester	Studienjahr	
Hyperlink			
Sprache	englisch		

**Termine Gruppe: 1-Gruppe**

	Tag	Zeit	Rhythmus	Dauer	Raum	Lehrperson	Status	Kurzbemerkung	fällt aus am	Max. Teilnehmer/-innen
→	Mo.	14 c.t. - 16	wöch.	21.10.2019 bis 03.02.2020	VG Wilhelmstraße - Hörsaal 0.02		findet statt			
→	Fr.	12 c.t. - 14	wöch.	25.10.2019 bis 07.02.2020	VG Wilhelmstraße - Hörsaal 0.02		findet statt			

Gruppe 1-Gruppe:  markieren

**Termine Gruppe: 2-Gruppe**

	Tag	Zeit	Rhythmus	Dauer	Raum	Lehrperson	Status	Kurzbemerkung	fällt aus am	Max. Teilnehmer/-innen
→	Mo.	12 c.t. - 14	wöch.	21.10.2019 bis 03.02.2020	Neuphilologicum - Seminarraum 035		findet statt	Tutorium		
→	Di.	08 c.t. - 10	wöch.	22.10.2019 bis 04.02.2020	VG Wilhelmstraße - Seminarraum [Sprachw.] 1.13		findet statt	Tutorium		
→	Do.	10 c.t. - 12	wöch.	24.10.2019 bis 06.02.2020	VG Wilhelmstraße - Seminarraum [Sprachw.] 1.13		findet statt	Tutorium		
→	Fr.	10 c.t. - 12	wöch.	25.10.2019 bis 07.02.2020	Neuphilologicum - Seminarraum 035		findet statt	Tutorium		

**Note: Tutorials start on Monday 28 October!**



## Course Credits

- ▶ Exam on 7th February 2020: **6 ECTS**
- ▶ Regular attendance of Tutorials (i.e. missing not more than twice): **3 ECTS**

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## Updated Schedule (2019/2020)

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21/10/2019	<b>Lecture 1</b>	Introduction
25/10/2019	<b>Lecture 2</b>	Basic Concepts I: Constituency
28/10/2019	<b>Lecture 3</b>	Basic Concepts II: Valence
01/11/2019		Allerheiligen (holiday)
04/11/2019	<b>Lecture 4</b>	Dependency Grammar
08/11/2019	<b>Lecture 5</b>	Phrase Structure Grammar
11/11/2019	<b>Lecture 6</b>	Government & Binding Theory I (X-bar Theory)
15/11/2019	<b>Lecture 7</b>	Government & Binding Theory II
18/11/2019	<b>Lecture 8</b>	Generalized Phrase Structure Grammar
22/11/2019	<b>Lecture 9</b>	Intermediate Summary: Syntax
25/11/2019	<b>Lecture 10</b>	Lexical Functional Grammar I
29/11/2019	<b>Lecture 11</b>	Lexical Functional Grammar II
02/12/2019	<b>Lecture 12</b>	Head-Driven Phrase Structure Grammar I
06/12/2019	<b>Lecture 13</b>	Head-Driven Phrase Structure Grammar II
09/12/2019	<b>Lecture 14</b>	Construction Grammar



## Updated Schedule (2019/2020)

13/12/2019	<b>Lecture 15</b>	Minimalism
16/12/2019	<b>Lecture 16</b>	The Evolution of Syntax
20/12/2019	<b>Lecture 17</b>	Intermediate Summary: Syntax
<b>Winter Break</b>		
10/01/2020		No Lecture
13/01/2020	<b>Test Exam Syntax</b>	
17/01/2020	<b>Lecture 18</b>	Semantics Introduction
20/01/2020	<b>Lecture 19</b>	Word Meaning
24/01/2020	<b>Lecture 20</b>	Propositional Logic
27/01/2020	<b>Lecture 21</b>	Predicate Logic
31/01/2020	<b>Lecture 22</b>	Combining Syntax and Semantics
03/02/2020	<b>Lecture 23</b>	Recapitulation of Semantics
07/02/2020	<b>Exam</b>	

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# Tutorials

Tutorial 1: Hebah Ahmed, SFS Wilhelmstraße 19-23, Room 1.13

Tutorial 2: Samantha Link, Brechtbau Wilhelmstraße 50, Room 0.35

	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>
8-10		Tutorial 1			
10-12				Tutorial 1	Tutorial 2
12-14	Tutorial 2				

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# Tutorials

Week 1: 28/10-01/11/2019

Week 2: 04/11-08/11/2019

Week 3: 11/11-15/11/2019

Week 4: 18/11-22/11/2019

Week 5: 25/11-29/11/2019

Week 6: 03/12-06/12/2019

Week 7: 09/12-13/12/2019

Week 8: 16/12-20/12/2019

Week 9: 20/01-24/01/2020

Week 10: 27/01-31/01/2020

Week 11: 03/02-06/02/2020

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## Notes:

- ▶ No tutorial on Friday 01/11/2019.
- ▶ The first two weeks after the term break (07/01-19/01/2020) there are no tutorials.
- ▶ The last week before the exam (03/02-06/02/2020) we can have optional Q&A tutorials.



# Moodle

Please go to moodle and sign up for one of the tutorials  
(possible between today 5pm and sunday 27th October 12pm).

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moodle Uni Tübingen Deutsch (de)

**Syntax & Semantics**

- Teilnehmer/innen
- Kompetenzen
- Bewertungen
- Allgemeines
- Tutorial 1 (Hebah Ahmed, Tuesdays 8-10am)
- Tutorial 1 (Hebah Ahmed, Thursdays 10-12am)
- Tutorial 2 (Samantha Link, Mondays 12-14pm)
- Tutorial 2 (Samantha Link, Fridays 10-12am)
- Thema 5
- Thema 6
- Thema 7
- Thema 8
- Thema 9
- Thema 10
- Startseite
- Dashboard

**Ankündigungen**

**Tutorial 1 (Hebah Ahmed, Tuesdays 8-10am)**  
First option for the Tutorial 1 by Hebah Ahmed. This takes place on Tuesdays (8-10am) at the SFS in Wilhelmstraße 19-23, Room 1.13.

**Tutorial 1 (Tuesdays)**

**Tutorial 1 (Hebah Ahmed, Thursdays 10-12am)**  
Second option for the Tutorial 1 by Hebah Ahmed. This takes place on Thursdays (10-12am) at the SFS in Wilhelmstraße 19-23, Room 1.13.

**Tutorial 1 (Thursdays)**

**Tutorial 2 (Samantha Link, Mondays 12-14pm)**  
First option for the Tutorial 2 by Samantha Link. This takes place on Mondays (12-14pm) in the Brechtbau, Wilhelmstraße 50, Room 0.35.

**Tutorial 2 (Mondays)**

**Tutorial 2 (Samantha Link, Fridays 10-12am)**  
Second option for the Tutorial 2 by Samantha Link. This takes place on Fridays (10-12am) in the Brechtbau, Wilhelmstraße 50, Room 0.35.

**Tutorial 2 (Fridays)**



# Course Webpage

[http://www.christianbentz.de/teaching\\_SyntaxSemantics2019.html](http://www.christianbentz.de/teaching_SyntaxSemantics2019.html)

Lecture	Date	Topic	Slides	Tutorials
01	Oct 21, 2019	Introduction	<a href="#">slides01</a>	
02	Oct 25, 2019	Basic Concepts	<a href="#">slides02</a>	<a href="#">tutorial01</a>

home | cv | publications | book | teaching | tutorial

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- ▶ Lecture slides are uploaded right before the respective lecture.
- ▶ Tutorial exercises (for the next week) are given at the end of friday lectures.



# Learning Strategy

- ▶ Aim to read the corresponding chapter (if possible) before the lecture.
- ▶ Go to the lecture :-)
- ▶ Go through the lecture slides again.
- ▶ Do the exercises (if possible) before the tutorial.
- ▶ Go to the tutorial :-)

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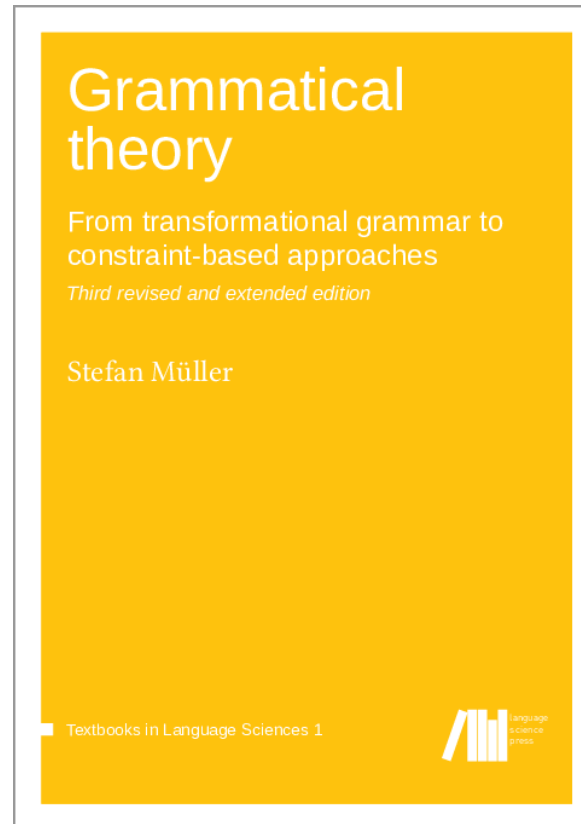
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## **Section 2: Literature**



# Syntax

Müller, Stefan. 2019. *Grammatical theory: From transformational grammar to constraint-based approaches. Third revised and extended edition. Volume I*. Berlin: Language Science Press.



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download at: <http://langsci-press.org/catalog/book/255>



## Further Introductions

- ▶ Adger, D. (2003). *Core Syntax. A minimalist approach*. Oxford: Oxford University Press.
- ▶ Carnie, A. (2013). *Syntax. A generative introduction*. Oxford: Wiley-Blackwell.
- ▶ Müller, Stefan. 2019. *Grammatical theory: From transformational grammar to constraint-based approaches. Third revised and extended edition. Volume II*. Berlin: Language Science Press.
- ▶ Radford, A. (2004). *English Syntax. An introduction*. Cambridge: Cambridge University Press.

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## Some notes on Müller (2019)

- ▶ Volume I of Müller (2019) (i.e. pages 1-439) gives an extensive overview of a wide variety of grammatical frameworks from the early 20th century to the latest developments.
- ▶ Volume II (i.e. page 444 onwards) discusses further more general topics such as the “innateness of linguistic knowledge”, “The competence/performance distinction”, “Language acquisition”, etc.
- ▶ It is for free (!)

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## However:

- ▶ Not all of the frameworks presented in the book are discussed in the lecture series (e.g. Categorical Grammar, Tree Adjoining Grammar, etc.).
- ▶ The order in the lecture series diverges from the order of chapters in the book. This is because the lecture series considers different grammatical theories in (roughly) chronological order (e.g. starting with Dependency Grammar of the early 20th century).
- ▶ Müller (2019) gives mainly German and English example sentences. The lecture series will aim to give examples from a wider variety of languages across the world.
- ▶ Theories, and parts of theories, that are only applicable to German syntax are not considered here.

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## **Section 3: Introduction**



## Form and Meaning

“Every linguistic expression we utter has a meaning. We are therefore dealing with what has been referred to as form-meaning pairs (de Saussure 1916b). A word such as *tree* in its specific orthographical form or in its corresponding phonetic representation is assigned the meaning *tree*' [read: “tree prime”]. Larger linguistic units can be built up out of smaller ones: words can be joined together to form phrases and these in turn can form sentences.”

Müller (2019). Grammatical theory, p. 3.

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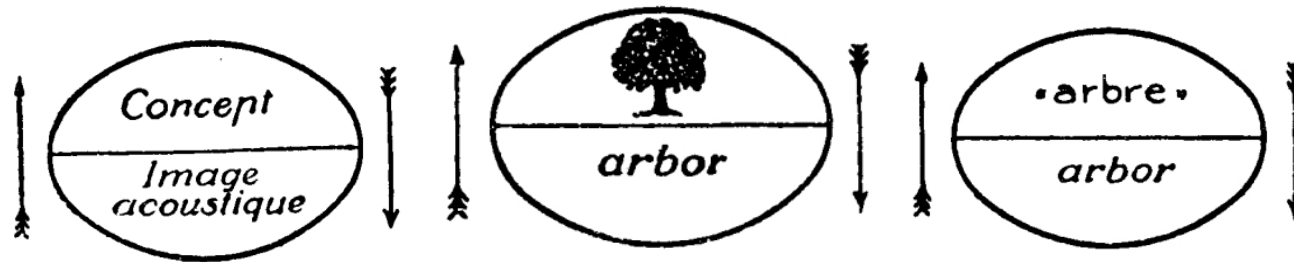
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# The Roots

“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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# Notational Format

German (deu, Indo-European)<sup>1</sup>

- (1) phonemic: /baʊm/  
orthography: Baum  
glossing: tree.NOM.SG<sup>2</sup>  
part-of-speech: NOUN<sup>3</sup>  
translation: “tree”  
meaning: *tree*<sup>4</sup>

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<sup>1</sup>The language name is given with the ISO-639-3 code and the language family according to Glottolog (<https://glottolog.org/>).

<sup>2</sup>see Leipzig glossing rules at <https://www.eva.mpg.de/lingua/resources/glossing-rules.php>.

<sup>3</sup>Part-Of-Speech. The exact denotations e.g. *NOUN* vs. just *N* can vary according to the syntactic framework. In this lecture I use the POS tags of the Universal Dependencies Project, see <https://universaldependencies.org/u/pos/index.html>.

<sup>4</sup>Following Müllers' notation.



## Simple Example

(2) /baʊm/  
Baum  
tree.NOM.SG  
NOUN  
“tree”  
*tree'*

Explanation: The phonemic transcription of a string of sounds is reflected in an orthographic representation (to some degree). The German orthographic word <Baum> is then analyzed morphosyntactically as a nominative singular noun, which is a translational equivalent to “tree” in the meta-language English. The meaning *tree'* is (supposedly) more abstract and universal across languages.

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# Syntax

(3) /baʊm/  
Baum  
tree.NOM.SG  
NOUN  
“tree”  
*tree'*

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Syntax typically deals with the morphosyntactic and POS level.



# Semantics

- (4) /baʊm/  
Baum  
tree.NOM.SG  
NOUN  
“tree”  
*tree'*

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Semantics typically deals with the mapping of utterances to the “real world”, translation into another language (“what does x mean in language y?”), and with translation into a universally valid logical form.





## Interlude: Chomsky's Green Ideas

- (5) Farblos-e                      grün-e                      Idee-n  
colorless-NOM.PL green-NOM.PL ideas-NOM.PL  
schlaf-en                      furios.  
sleep-PRS.3PL furiously  
[[[ADJ ADJ NOUN] VERB] ADV]  
“Colorless green ideas sleep furiously.”  
Meaning ???

Chomsky (1957, p. 15) has famously argued that syntax and semantics are independent of one another, since sentences as the one above can be syntactically analyzed and are grammatically correct, while deriving a meaning is impossible. Is it? ...

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# The Stanford Christmas Challenge

“It can only be the thought of verdure to come, which prompts us in the autumn to buy these dormant white lumps of vegetable matter covered by a brown papery skin, and lovingly to plant them and care for them. It is a marvel to me that under this cover they are labouring unseen at such a rate within to give us the sudden awesome beauty of spring flowering bulbs. While winter reigns the earth reposes but these *colourless green ideas sleep furiously*.”

source: <https://linguistlist.org/issues/2/2-457.html#2>

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# Combinatoriality/Compositionality

Amharic (amh, Afro-Asiatic)

(6) zaf                      təlləq' nāw<sup>5</sup>  
tree.NOM.SG big    be.N.3SG  
[NOUN ADJ VERB]

“The tree is big.”

*big'(tree')*<sup>6</sup>

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

<sup>5</sup>Amharic is normally written in Ge'ez script. This is a transliteration into Latin script based on Leslau (1995).

<sup>6</sup>This is the notation in Müller (2019). The notation in Kroeger (2019) for this example would be BIG(t) – this notation will be used in the semantics part of this course.

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## Combinatoriality in Semantics

- (7) Kim sieh-t                      ein-en                      groß-en  
kim see\-PRS.3SG DET.INDF-ACC.SG big-ACC.SG  
Baum  
tree.ACC.SG  
“Kim sees a big tree”  
 $\exists x[\text{TREE}(x) \wedge \text{SEE}(k,x)]^7$

In the example above, the meaning of the overall sentence arguably derives as a *combination* of the meanings of the individual parts. Importantly, this is not always the case...

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<sup>7</sup>This is predicate logic notation as used in the semantics part of this lecture series.



## Problem: Idioms

- (8) 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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# Combinatoriality in Syntax

- (9) Kim sieht einen großen Baum  
[PROPN [VERB [DET [ADJ NOUN]]]]  
“Kim sees a big tree”

In the example above, the elements of the sentence which combine to larger phrases (e.g. adjective and noun, determiner and noun phrase, etc.) are *adjacent* to one another. However, this is not always the case...

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## Problem: Non-Adjacency

- (10) Kim **hat** den Wald vor lauter Bäumen nicht **gesehen**  
... [AUX ... .. VERB]  
“Kim hasn’t seen the forest because of all the trees.”

The term *non-adjacency* refers to the fact that elements of a sentence which depend on each other, do not necessarily occur next to each other in linear order. This is also sometimes referred to as the *non-linearity* of syntax, or *long-distance dependency*.

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# Combinatoriality: Summary

Every syntactic and semantic theory (or both combined) have to deal with the **combinatoriality**, and also, importantly, with the problems of **non-linearity** and **non-adjacency** of meaning and form.

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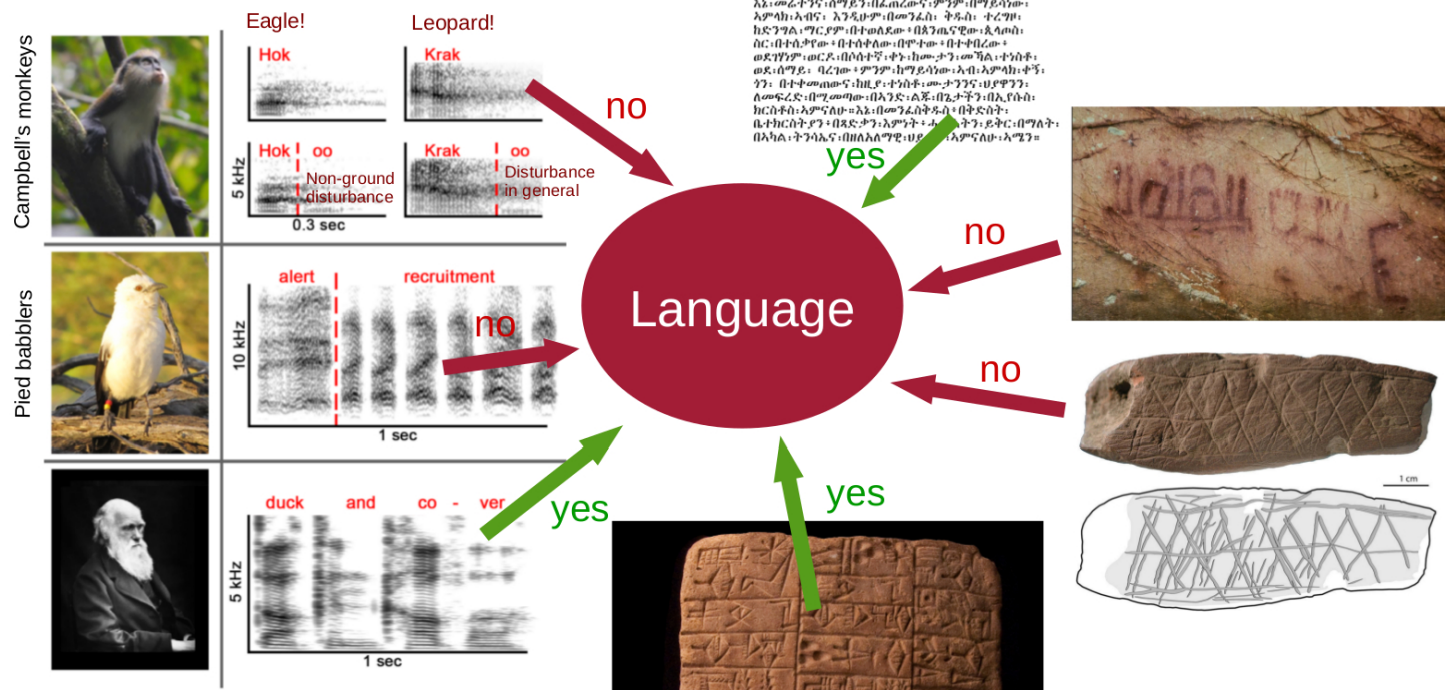
# The Evolution of Combinatoriality/Compositionality

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Townsend et al. (2018). Compositionality in animals and humans.



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## References



# References

Chomsky, N. (1957). *Syntactic structures*. The Hague: Mouton.

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

Müller, Stefan. 2019. *Grammatical theory: From transformational grammar to constraint-based approaches. Third revised and extended edition. Volume I*. Berlin: Language Science Press.

de Saussure, Ferdinand (1995). *Cours de linguistique générale*. Publié par Charles Bailly et Albert Sechehaye avec la collaboration de Albert Riedlinger. Édition critique préparé par Tullio de Mauro. Paris: Payot.

Townsend, S. W., Engesser, S., Stoll, S., Zuberbühler, K., Bickel, B. (2018). Compositionality in animals and humans. PLOS Biology.

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# Thank You.

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