Constructed Languages

Day 5 - Syntax
Review of key concepts

1. Morphemes
2. Affixes
3. Ablaut (Apophony / Vowel Gradation / Interweaving)
4. Suppletion
5. Reduplication
6. Paradigm
ConLang Morphology

Take 10 minutes and share the morphology of your ConLang with a partner
Which morphological categories must be explicitly mentioned?
Do you have any categories that are typologically rare/unheard of?
For Today

1. What is syntax?
   a. Basic properties of syntax
   b. Headedness
2. How does overt case affect word order?
What is Syntax?
Give me your best layman’s definition.

- How is Syntax different from Morphology?
- What aspects of Syntax should you consider when making a ConLang (and don’t say “all” - list!)
What is Syntax?

- **Syntax** is the scientific study of the structure of phrases, clauses, and sentences (how parts of a sentence/phrase relate to each other)

- We study two main areas in syntax:
  1. How words are ordered into groups, building up from phrases to sentences.
  2. The rules that govern the formation of sentences.
Four Basic Concepts in Syntax

1. Words belong to **lexical categories**. Words in the same lexical category share similar meanings, forms, and functions.

2. Word order is important in all languages.

3. Words form **constituents**, that is, groups of words that ‘go together’ and function as a unit. • NP, VP, PP, etc.

4. Constituents nest inside one another at different levels to form a **hierarchical structure**.
Lexical Categories: With your neighbor - 5 min

- Identify the lexical categories in the following sentences:
  - *The students in this class love the field of Linguistics.*
  - *The ceiling height depends on cultural norms.*
  - *I heard the visiting scholar’s paper yesterday evening.*
  - *Swimming is better than walking slowly for burning up calories.*
  - *So I’m at the LSA Institute. Because Linguistics.*
Lexical Categories

- What’s the difference between a Noun and a Verb?
- What’s the difference between a Noun and an Adjective?
- What’s the difference between an Adjective and an Adverb? (And do you make a distinction using Morphology in your native dialect?)
Lexical Categories

▪ Are the distinctions between Lexical Categories possibly language-specific?
▪ Ever heard of the noun-verb continuum?

<table>
<thead>
<tr>
<th>Transitory situations</th>
<th>Permanent situations</th>
</tr>
</thead>
<tbody>
<tr>
<td>a X—(verbs)—X—(Adjs)—X—(nouns)—X</td>
<td>(English)</td>
</tr>
<tr>
<td>b X—(verbs)—X—(A₁s)—X—(A₂s)—X—(nouns)—X</td>
<td>(Japanese?)</td>
</tr>
<tr>
<td>c X—(verbs)—X—(nouns)—X</td>
<td>(Chichewa? Quechua?)</td>
</tr>
<tr>
<td>d X—(verbs)—X—(nouns)—X</td>
<td>(Mohawk?)</td>
</tr>
</tbody>
</table>
Lexical Categories: Japanese

a) utskushi-i onna
   beautiful-PRES woman
   ‘a beautiful woman’ (A)

b) hashi-ru onna
   run-PRES woman
   ‘a woman who will run’ (V)

versus

kirei-na Hanako
beautiful-?? Hanako
‘beautiful Hanako’ (AN)
sensei-no (*na) Hanako.
teacher-GEN Hanako
‘Hanako, who is a teacher’ (N)

a) Hanako-wa utskushi-i
   Hanako-TOP beautiful-PRES
   ‘Hanako is beautiful.’ (A)

b) Hanako-wa hashi-ru
   Hanako-TOP run-PRES
   ‘Hanako is running.’ (V)

versus

Hanako-wa kirei-da
Hanako-TOP beautiful-COP
Hanako is beautiful. (AN)
Hanako-ga sensei-da
Hanako-NOM teacher-COP
‘Hanako is a teacher.’ (N)
Lexical Categories: Chinese

那封信是假的
那一封信是假的

nà fēng xìn shì jiǎ de
that CL letter COP fake DET
"that letter is fake"

聪明的姑娘
cōngming de gūniāng
clever DET girl
"clever girl"

Such modifiers marked by 的 de have often been analysed as relative clauses or ‘small clauses’ (as e.g. by Sproat & Shih 1988 and 1991; Den Dikken & Singhapreecha 2004; see the authors quoted in Paul 2010); accordingly, modifiers are analyzed as derived from an underlying predicate (cf. Basciano 2010). So, a sequence such as (10):

(10) 一个聪明的人
yi gè cōngming de rén
one CL intelligent DET person
"an intelligent person"

would be best translated as “a person who is intelligent”, rather than as “an intelligent person” (Paul 2010: 118)

https://g.co/kgs/Wrj2FU Simone & Masini 2014
Lexical Categories: Chinese

When adjectives and verbs are used as modifiers within an NP, a difference emerges; whereas the particle 的 *de* is obligatory when a verb modifies a noun, it is not necessarily always present if the modifier is an adjective (Xu 1988; Paul 2005, 2010), contrarily to what was claimed by Hengeveld (1992, cf. 8;), as shown in (15) with a verb-like adjective and in (16) with a non-verb-like one (exx. adapted from Paul 2005):

(15) 一件漂亮(的)衣服
      *yī jiàn piào liáng (de) yīfu*
      one CL pretty DET dress
      “a pretty dress”

(16) 天然 (的) 珍珠
      *tiānrán (de) zhēnzhū*
      natural DET pearl
      “natural pearls”
Loglan
5 min with Partner - Find Lexical Categories

1. **Da mrenu** X is a man.
2. **Da blanu** X is blue.
3. **Da madzo de** X makes Y (i.e., is a maker of Y).
4. **Da madzo de di** X makes Y out of Z.
5. **Da blanu de** X is bluer than Y.
6. **Da blanu** X is bluer than (... something.)
7. **Da madzo** X is a maker of (... something.)
8. **Da madzo de** X is maker of Y from (... something.)
9. **Da pa madzo de** X made Y.
10. **Da fa godzi de** X will go to Y.
11. **Da na blanu** X is now blue.
12. **Da sucmi** X swims (is a swimmer)
13. **Da cabro** X burns (is flammable)
14. **Da fa va cabro** X will there burn
15. **Da vi madzo de** X here makes Y
16. **Da nu blanu de** X is less blue than Y
17. **Da nu matma de** X is an offspring of mother Y
18. **Da pa nu madzo de** X was made by Y
19. **Da cluva de** X loves Y
20. **De nu cluva da** Y is loved by X
21. **Da nu blanu** X is less blue than (sthg)
22. **Da cluva** X loves (sthg) (X can love)
23. **Da nu cluva de** X is loved by Y
24. **Da nu cluva** X is loved/loveable
25. **Da blanu hasfa** X is a blue house
26. **Da bilti** X is beautiful
27. **Da bilti sucmi** X swims beautifully
Loglan

N, V, A, Adv conflated to “predicates”
http://www.loglan.org/Loglan1/chap3.html
Láadan

Two parts of speech:
https://en.wikibooks.org/wiki/Láadan_Grammar_Reference#Content_Words_and_Function_Words
Four Basic Concepts in Syntax

2. Word order is important.
   - It affects grammaticality and meaning.
     - *John Mary dumped.
     - *Dumped Mary John.
   - Word order is more flexible in some languages compared to English, particularly languages that heavily inflect for case, like Latin
     - What is case?
Word Order

- Languages differ with regard to word order.
- Examples (note: S = Subject, V = Verb, O = Object):
  - SVO (English)
  - SOV (Turkish)
  - VSO (Irish)
  - VOS (Malagasy)
- But almost no languages use OSV or OVS
- EVERY language has some rules about word order -- even if it utilizes case!
Four Basic Concepts in Syntax

3. Words form **constituents**, that is, groups of words that ‘go together’ and function as a unit.

- First, identify the lexical category of each word in the following sentences, and then identify the constituents (NP, VP, PP):
  - The students in my class love the field of Linguistics.
  - The Arcade Fire won the award for Album of the Year at the Grammies.
Four Basic Concepts in Syntax

3. Words form **constituents**, that is, groups of words that ‘go together’ and function as a unit.

- Identify the lexical category of each word in the following sentences, and then identify the constituents (NP, VP, PP):

  - My friends from the small towns of Eastern Kentucky drive across the mountains of Virginia.
Constituency Tests

- How do we know which words form a constituent?
  - We can perform what are called **constituency tests**.
  - One kind of constituency test is a movement test.

- **Movement Test**
  - Constituents move together as a single unit.
  - If a group of words **must** move together, they probably form a constituent.
  - If they **do not** have to move together, they probably do not form a constituent.
Four Basic Concepts in Syntax

4. Constituents nest inside one another at different levels to form a **hierarchical structure**.

- Sentence structure is more than a linear string of words or even constituents.
- We cannot accurately represent sentence structure without a hierarchy!

![Tree diagram showing hierarchical structure](image)
Hierarchy - Practice

- What are the constituents in the following sentence?

The man at the bar requested a drink with no ice.

- Is the PP adjectival or adverbial?
What are the types of constituents?

- NP – Noun Phrase
- PP – Prepositional Phrase
- VP – Verb Phrase
- AP – Adjective Phrase
- IP – Inflectional Phrase (Sentence)
- CP – Complementizer Phrase
 Phrase Structure Rules: NPs

- We’ve seen that a noun is the head of a noun phrase.
  - We like [movies]. (alone)
- Nouns can also co-occur with determiners and/or adjectives and/or prepositional phrases:
  - We like [the movies]. (w/ determiner)
  - We like [scary movies]. (w/ adjective)
  - We like [movies about zombies]. (w/ PP)
  - We like [the scary movies about zombies]. (w/ everything)
- We also learned that pronouns replace whole NPs, like
Phrase Structure Rules: NPs

- We are able to neatly sum up what may occur in a NP with the following Phrase Structure Rule (PSR):

\[ NP \rightarrow (\text{Det}) \quad (\text{AP}) \quad \text{N} \quad (\text{PP}) \]

- Optional elements are always in parentheses. Here only the N or Pro are required.

- The pronouns do not co-occur with any of the other elements, so the horizontal line indicates the either/or option.
Phrase Structure Rules: NPs

- the man with the plan
  - [the man [with [the plan]_{np}]_{pp}]_{np}

```
specifier

head

complement
```
Phrase Structure Rules: PPs

- Let’s move onto PPs:
  - What’s the head of a PP?

```
PP \rightarrow (Deg) P (NP)
```

 specifier -> head -> complement
PP Trees

- Draw trees for:
  - to school
  - on our campus
  - at the University of Kentucky
Wait a minute...
Phrase Structure Rules: VPs

▪ Next up: VPs!
  ▪ Head?

▪ Verbs can occur with:
  ▪ We [ate]. (alone)
  ▪ We [never eat]. (w/ adverb)
  ▪ We [ate the pizza]. (w/ NP)
  ▪ We [ate on the floor]. (w/ PP)
  ▪ We [never ate the pizza on the floor] (w/ all of the above)
Phrase Structure Rules: VPs

- An analysis of these VPs allows us to formulate a PSR like the following:

$$VP \rightarrow (Adv) \ V \ (NP) \ (PP) \ (CP)$$

What do we do with multiple complements?
VP Trees

- Let’s draw trees for:
  - walks the dog
  - always walks to school
  - walks the dog on a leash
  - walks the dog on a short leash with a frayed handle
Phrase Structure Rules: Sentence

- What is a PSR for a sentence?

\[
\text{IP} \rightarrow \text{NP} \quad \text{I} \quad \text{VP}
\]

- This structure reflects the two main components of a sentence that we discussed earlier:
  - the **subject** (what the sentence is about), and
  - the **predicate** (what you want to say about the subject).
Syntactic Universals

• Word Order
  • Frequently described in terms of SVO
    • S = Subject, V = Verb, O = Object
  • Examples:
    • SVO: English, Spanish
    • SOV: Turkish, Japanese
    • VSO: Irish, Tongan
    • VOS: Malagasy, very few others
    • OVS or OVS?
      • Almost non-existent!
Syntactic Universals

• There’s nothing inherently logical about SVO order!
  • Even though you may feel it’s the most logical way of providing information.
  • English doesn’t always follow SVO:
    • left-dislocation
    • fronting
    • wh-movement, etc.

“The girl kicked the ball.”
Syntactic Universals

• In the basic word orders of the languages of the world, however, there is an overwhelming tendency for the subject of a sentence to precede the direct object
  • Languages with S before O are more common (99.999%)
  • SVO, VSO, SOV

• Presumably this is because cognitively subjects take precedence over objects.
SOV – Strong Tendencies

• Postpositions
  • *tomapem* pawi *wie nuwəitt’a*
  • lizard rock on lay
  • ‘The lizard lay on the rock’
SOV – Strong Tendencies

• Adjectives Precede
  • $khin$ *tomapem*
  • ‘big lizard’
SOV – Strong Tendencies

- Possessives Precede Head Nouns
  - *tomapem-*i k’ori
  - ‘lizard’s tail’
SOV – Strong Tendencies

• Relatives Precede
  • *phali*li*il* cap-*in* tomapem
  • fly caught-that lizard
  • ‘the lizard that caught the fly’
SOV – Strong Tendencies

- Verb Final
  - *tomapem*pawi wie nuwǝitt’a
  - lizard rock on lay
  - ‘The lizard lay on the rock’
SOV - Synopsis

= head-final language
Syntactic Universals

• Verb-initial languages (ex. Tongan):
  • **Prepositions:**
    • ki tonga
    • to Tonga
    • “to Tonga”
  • **Possessors:**
    • ko e tuongaʔane ʔo vaka
    • the sister of Vaka
    • “Vaka’s sister”
Overall Patterns of Ordering

- Relative Clauses:
  - ko e tohi [naʔ faʔu ?e hina]CP
  - the book PAST write Subject Hina
  - ‘the book that Hina wrote’

- V + O:
  - naʔe taaʔi ?e hina ?a vaka
  - PAST hit Subject Hina Object Vaka
  - ‘Hina hit Vaka.’
Headedness

head-initial
VSO

head-final
SO
V
• Where do you think adjectives are placed in Tongan?
And SVO languages?

• English:
  • Postpositions or Prepositions?
  • Adj + N or N + Adj.?
  • Poss + N or N + Poss.?
  • CP + N or N + CP?
  • V + O or O + V?

Is English a head-initial or head-final language?
Peterson - Headedness
1. Jano ost hrazef. ‘A dog bit a horse.’
2. Hrazef ost jan. ‘A horse bit a dog.’
3. Jano lajaki ost hrazef. ‘Warrior’s dog bit a horse.’
5. Kisha jadi krazaajoon. ‘We come from the mountain.’
6. Kisha veraki krazaajaan. ‘We are travelling to the
    mountain.’
Inanimate nouns

Sample words: qeso "basket"; os "path"; sondra "dragon glass"; mawizzi "rabbit"; jelli "cheese".

Sondra and mawizzi have accusative affected by epenthesis.

<table>
<thead>
<tr>
<th></th>
<th>Singular and plural</th>
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</thead>
<tbody>
<tr>
<td>Nominative</td>
<td>qeso    os    sondra</td>
</tr>
<tr>
<td>Accusative</td>
<td>qes     os     sondre</td>
</tr>
<tr>
<td>Genitive</td>
<td>qesi    osi   sondri</td>
</tr>
<tr>
<td>Allative</td>
<td>qesan   osaan sondraan</td>
</tr>
<tr>
<td>Ablative</td>
<td>qesoon  osoon sondroon</td>
</tr>
</tbody>
</table>

Animate nouns

Sample words: rizh "son"; ko "bodyguard"; dave "rosemary bush"; mai "mom"

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</tr>
</thead>
<tbody>
<tr>
<td>Nominative</td>
<td>rizh</td>
<td>rizhi</td>
<td>ko</td>
<td>kosi</td>
<td>dave</td>
<td>davesi</td>
<td>mai</td>
<td>maisi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accusative</td>
<td>rizhes</td>
<td>rizhis</td>
<td>koes</td>
<td>kosi</td>
<td>davees</td>
<td>davesesi</td>
<td>mayes</td>
<td>maisa</td>
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<td></td>
</tr>
<tr>
<td>Genitive</td>
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<td>kosi</td>
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<td>davesi</td>
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<td>maisi</td>
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<td>davesea</td>
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<td>maisea</td>
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</tr>
<tr>
<td>Ablative</td>
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<td>rizhoa</td>
<td>kosoon</td>
<td>kosaoa</td>
<td>davesoon</td>
<td>davesoa</td>
<td>maisoon</td>
<td>maisoa</td>
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</tr>
</tbody>
</table>
Example: Heptapod
For Next Time - Writing Systems

1. Create an original writing system for your language.
2. It may be an:
   a. Alphabet
   b. Abjad
   c. Alphasyllabary
   d. Logographic System
   e. Hybrid
   f. Something else??????